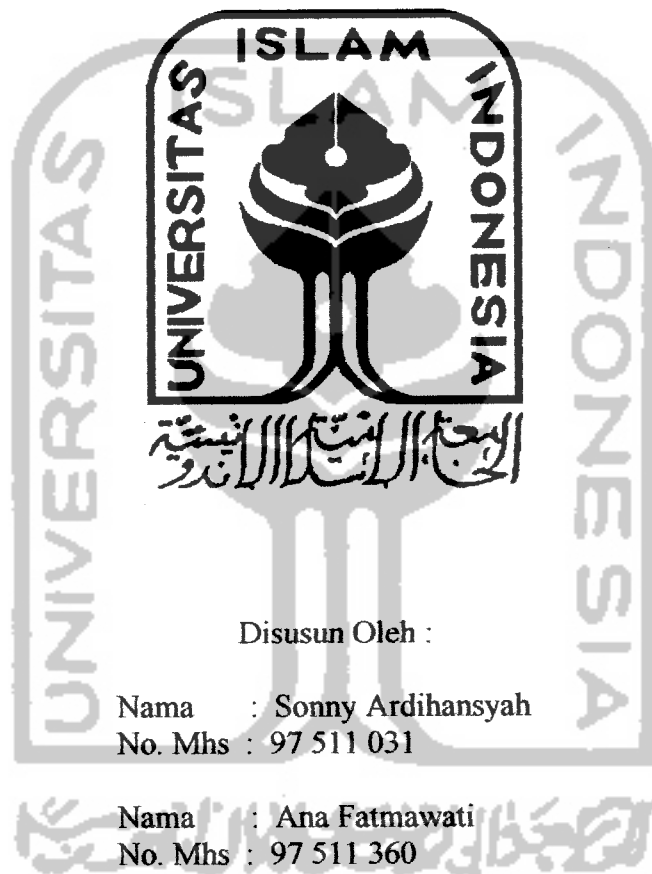


TUGAS AKHIR

**REDESAIN STRUKTUR GEDUNG D3 EKONOMI BLOK-B
UNIVERSITAS ISLAM INDONESIA**



**JURUSAN TEKNIK SIPIL
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
JOGJAKARTA
2003**

PERSEMBAHAN

Tugas Akhir yang kami buat bersama, mulai dari awal yang berupa gambar rencana dan berbekal sedikit ilmu dan pengetahuan, kami berusaha menyelesaikan tugas akhir hingga terwujud sebuah laporan tertulis, sebagai bukti bahwa kami memang mahasiswa yang berusaha untuk memenuhi persyaratan dalam menyelesaikan studi kesarjanaan strata 1.

Semua itu kami upayakan dengan segala daya pikir, tenaga dan psikologis yang kami punya seiring berjalannya sang waktu, bergantinya siang dan malam, hingga bumi mengelilingi matahari, sekalilagi manusia hanyalah tempat untuk berusaha, tapi Allah SWT yang menentukan. Berusaha dan berusaha untuk selalu menjadikan yang baik daripada yang telah lalu adalah suatu kebijakan yang arif, tetapi tetaplah kesempurnaan dalam sebuah karya adalah milik Yang Maha Agung, yang menguasai alam pikiran manusia dan segala yang dipikirkan manusia, yang kita sembah hingga seluruh tubuh berubah jadi debu, yang kita junjung tinggi keEsaan-Nya sampai darah mongering dalam tubuh.

Keberadaan karya kami di muka bumi adalah berkat kesempatan yang diberikan kepada kami dari yang Maha Memberi Kesempatan. Kesempatan itu akan sia-sia, jika kami seorang yang egois, yang tidak mau membuka mata bahwa disamping kita ada kamu, dia mereka dan beliau semua.

Untuk itulah kami ingin mempersembahkan karya ini, karena memang inilah yang dapat kami berikan, kepada :

1. Yang sangat kami cintai kedua Orang tua dirumah yang selalu berusaha memberikan dan mendoakan yang terbaik buat anak-anaknya
2. saudara-saudara kami dimanapun mereka berada, selalu memberikan dorongan dan semangat yang tiada hentinya.
3. Saudara-saudara kami yang seiman dan seagama yang senan tiasa selalu saling mendoakan satu sama lain.

KATA PENGANTAR

Bismillaahirrahmaannirrahiim,

Assalamu'alaikum Wr.Wb.

Puji syukur penyusun panjatkan kehadiran Allah SWT yang telah melimpahkan rahmat dan hidayah-Nya berupa keimanan, kekuatan, kesabaran dan kelancaran selama penyusunan Tugas Akhir hingga dapat terselesaikan. Shalawat serta salam tercurah kepada panutan kita Nabi Muhammad SWT beserta keluarga dan para pengikutnya.

Untuk menyelesaikan laporan ini dibutuhkan pemikiran dan kerja keras dalam waktu yang panjang, selama proses yang panjang itu banyak pihak yang ikut membantu dalam penyusunan dan penyempurnaan ini sehingga pada kesempatan ini penyusun mengucapkan terima kasih kepada:

1. Bapak Ir Tri Fajar Budiono, MT., selaku dosen pembimbing I.
2. Bapak Ir. H. Suharyatmo, MT., selaku dosen pembimbing II.
3. Bapak Prof. Ir . H. Widodo, MSCE, Ph.D, selaku Dekan Fakultas Teknik Sipil dan Perencanaan.
4. Bapak Ir Helmi Akbar Bale, MT., selaku dosen tamu.
5. Dosen dan karyawan Jurusan Teknik Sipil, Fakultas Teknik Sipil dan Perencanaan, Universitas Islam Indonesia.

6. Yang tercinta bapak, ibu, dan saudaraku yang senantiasa memberikan semangat dan doa-nya.
7. Buat Teman-teman di Pondok Kenaga Enam, Zapar, Ateng, makasih Prinernya dan Teman-teman yang lain *thanks alot for your support*.
8. Semua pihak yang tidak dapat disebutkan satu persatu.

Penyusun menyadari sepenuhnya bahwa penyusunan tugas akhir ini masih jauh dari sempurna, oleh karena itu segala kritik dan saran yang sifatnya membangun selalu penyusun harapkan. dan semoga Tugas Akhir ini, dapat bermanfaat bagi penyusun kesusnya dan bagi mahasiswa yang membutuhkan umumnya. Akhir kata, semoga Allah SWT selalu melimpahkan rahmat serta hidayah-Nya kepada kita semua, Amin ya robbal 'alamin.

Billahi taufik walhidayah, Wassalamu 'alaikum Wr. Wb.

Yogyakarta, Oktober 2003

Penyusun

DAFTAR ISI

LEMBAR JUDUL	i
LEMBAR PENGESAHAN	ii
LEMBAR PERSEMBAHAN	iii
KATA PENGANTAR	iv
DAFTAR ISI	vi
DAFTAR TABEL	x
DAFTAR GAMBAR	xiii
BAB I PENDAHULUAN.....	1
1.1 Latar Belakang	1
1.2 Gambaran Umum dan Lokasi Gedung.....	2
1.3 Rumusan Masalah	4
1.4 Tujuan.....	4
1.5 Manfaat.....	4
1.6 Batasan Masalah	4
BAB II TINJAUAN PUSTAKA	6
BAB III LANDASAN TEORI.....	8
3.1 Tingkat Daktilitas	8

3.2	Dasar Perencanaan Struktur Rangka Baja.....	10
3.2.1	Peraturan-peraturan	10
3.2.1	Analisis Struktur	10
3.2.2	Perencanaan Struktur Baja	11
3.3	Dasar Perencanaan Struktur Beton Bertulang	21
3.3.1	Peraturan-peraturan.....	21
3.3.2	Pembebanan	22
3.3.3	Analisis Struktur.....	25
3.3.4	Perencanaan Pelat.....	25
3.3.5	Perencanaan Struktur Portal Beton Bertulang dengan Daktilitas Penuh.....	27
3.3.6	Penulangan Balok.....	23
3.3.7	Penulangan Kolom.....	46
BAB IV	PERENCANAAN ATAP.....	55
4.1	Perencanaan Gording	56
4.1.1	Pembebanan Gording	56
4.1.2	Pendimensian Gording	57
4.2	Perencanaan Sagrot	61
4.2.1	Pembebanan Sagrot.....	61
4.2.2	Pendimensian Sagraot.....	62

4.3	Perencanaan Kuda-kuda Rangka Baja	62
4.3.1	Perencanaan Pembebanan Kuda-kuda.....	63
4.3.2	Pendimensian Kuda-kuda Rangka Baja	68
4.4.	Perencanaan Sambungan Baut	81
BAB V	PERENCANAAN PLAT DAN TANGGA.....	83
5.1	Perencanaan Plat Lantai	83
5.1.1	Pembebanan Plat Lantai	84
5.1.2	Penulangan Plat Lantai.....	85
5.2	Perencanaan Plat Tangga.....	97
5.2.1	Perencanaan Optrede dan Antrede	97
5.2.2	Pembebanan Plat Tangga dan Bordes	98
5.2.3	Analisis Struktur Tangga dan Bordes.....	99
5.2.4	Penulangan Plat Tangga dan Bordes.....	99
BAB VI	PERENCANAAN STRUKTUR PORTAL BETON	
	BERTULANG.....	102
6.1	Perhitungan Pembebanan Portal	103
6.2	Desain Balok	111
6.2.1	Momen Rencana Balok	111
6.2.2	Penulangan Lentur Balok dan	112

6.2.3	Gaya Geser Rencana Balok.....	118
6.2.4	Penulangan Geser Balok.....	121
6.3	Desain Kolom	127
6.3.1	Momen Rencana Kolom	127
6.3.2	Gaya Aksial Rencana Kolom.....	134
6.3.3	Perhitungan Diagram Interaksi Kolom	140
6.3.4	Perhitungan Kelangsingan Kolom dan Faktor Perbesaran Momen	161
6.3.5	Analisis Keruntuhan Kolom	165
6.3.6	Gaya Geser Rencana Kolom.....	168
6.3.7	Penulangan Geser Kolom	172
6.4	Desain Pertemuan Balok Kolom	175
BAB VII KESIMPULAN.....		179
DAFTAR PUSTAKA		
LAMPIRAN		

DAFTAR TABEL

Tabel 3.1	Beban Mati.....	22
Tabel 4.1	Pembebanan dan Arah Momen Sumbu-X dan Sumbu-Y	
	Gording.....	57
Tabel 4.2	Kombinasi Momen AISC-LRFD 93.....	58
Tabel 4.3	Beban Mati Kuda-kuda I.....	65
Tabel 4.4	Beban Angin Kuda-kuda I.....	66
Tabel 4.5	Beban Mati Kuda-kuda II.....	67
Tabel 4.6	Beban Angin Kuda-kuda II.....	67
Tabel 4.7	Batang Tarik Rangka Kuda-kuda I.....	71
Tabel 4.8	Batang Tekan Rangka Kuda-kuda I.....	74
Tabel 4.9	Batang Tarik Rangka Kuda-kuda II.....	78
Tabel 4.10	Batang Tekan Rangka Kuda-kuda II.....	79
Tabel 5.1	Pelat Satu Arah	89
Tabel 5.2	Pelat Dua Arah	94
Tabel 6.1	Reaksi Tumpuan Kuda-kuda I.....	107
Tabel 6.2	Reaksi Tumpuan Kuda-kuda II.....	108
Tabel 6.3	Reaksi Tumpuan Tangga	108
Tabel 6.4	Distribusi Gaya Geser Gempa	110

Tabel 6.5	Penulangan Lentur dan Penulangan Momen Nominal Aktual	
	Balok	115
Tabel 6.6	Gaya Geser Rencana Balok, Gaya Geser Maksimum Balok, dan	
	Gaya Geser Terpakai Balok.	119
Tabel 6.7	Penulangan Geser Balok.....	123
Tabel 6.8	Momen Rencana Kolom	131
Tabel 6.9	Momen Rencana Maksimum Kolom.....	132
Tabel 6.10	Momen Terpakai Kolom	133
Tabel 6.11	Gaya Aksial Rencana Kolom	137
Tabel 6.12	Gaya Aksial Maksimum Kolom.....	138
Tabel 6.13	Gaya Aksial Terpakai Kolom	139
Tabel 6.14	Interaksi Kolom 1K 50 X 50.....	142
Tabel 6.15	Interaksi Kolom KB 45 X 50	145
Tabel 6.16	Interaksi Kolom 3KB 45 X 45	148
Tabel 6.17	Interaksi Kolom 4KB 30 X 30	151
Tabel 6.18	Interaksi Kolom 5K 30 X 25.....	154
Tabel 6.19	Interaksi Kolom 6B 30 X 50	157
Tabel 6.20	Pehitungan Kelangsingan Kolom dan Faktor Perbesaran	
	Momen.....	164
Tabel 6.21	Analisis Keruntuhan Kolom	167

Tabel 6.22 Gaya Geser Kolom Rencana	169
Tabel 6.23 Gaya Geser Kolom Maksimum	170
Tabel 6.24 Gaya Geser Kolom Terpakai.....	171
Tabel 6.25 Penulangan Geser Kolom.....	174
Tabel 6.26 Penulangan Geser Horizontal dan Vertikal pada Pertemuan Balok Kolom.....	178



DAFTAR GAMBAR

Gambar 1.1 Peta lokasi gedung D3 Ekonomi Universitas Islam Indonesia.....	3
Gambar 3.1 Kurva hubungan beban dan difleksi lateral suatu struktur (Kusuma dan Andriono, 1997).....	8
Gambar 3.2 Ukuran Las Sudut.....	19
Gambar 3.3 Efek Lubang tak Segaris Terhadap Luas Bersih	21
Gambar 3.4 Daerah Yang Disarsir Dapat Terjadi Kegagalan Robekan.....	23
Gambar 3.5 Hubungan Koefisien Gempa Gasar dengan Waktu Getar Struktur (PPKGURDG, 1987).....	23
Gambar 3.6 Pembebanan Gempa Menurut PPKGRUDG 1987.....	24
Gambar 3.7 Analisis Balok Bertulang Sebelah	27
Gambar 3.8 Balok Portal Dengan Sendi Pistis pada Kedua Ujungnya	30
Gambar 3.9 Pertemuan Balok Kolom Dengan Sendi Plastis pada Kedua Ujung	33
Gambar 3.10 Kolom Lantai Dasar dan Kolom Lantai Atas Dengan $M_{u,k}$ yang Ditetapkan Berdasar Kapasitas Sendi Plastis Balok.....	35
Gambar 3.11 Panel pertemuan balok dan kolom portal dalam kondisi terjadinya sendi-sedi plastis pada kedua ujung balok	36
Gambar 3.12 Analisis balok beton bertulang tumpuan momen negatif.....	44
Gambar 3.13 Analisis balok beton bertulang tumpuan momen positif.....	45
Gambar 3.14 Penampang dengan tulangan terdistribusi merata pada keempat sisinya.....	45

Gambar 4.1 Rangkaian Profil Kuda – Kuda I	55
Gambar 4.2 Rangkaian Profil Kuda – Kuda II	56
Gambar 4.3 Arah pembebanan gording	57
Gambar 4.4 Rencana pembebanan kuda-kuda I	63
Gambar 4.5 Rencana pembebanan kuda-kuda II	64
Gambar 5.1 Denah Plat Lantai I	83
Gambar 5.2 Denah Plat Lantai Atap	84
Gambar 5.3 Tangga Tampak Atas	97
Gambar 6.1 Distribusi bebam merata pada bentang pendek	104
Gambar 6.2 Distribusi beban merata pada bentang panjang	105
Gambar 6.3 Distribusi beban terpotong	106
Gambar 6.4 Pembagian beban amplop pada balok	106
Gambar 6.5 Grafik $P_n - M_n$ 1K 50 x 50	144
Gambar 6.6 Grafik $P_n - M_n$ KB 50 x 45	147
Gambar 6.7 Grafik $P_n - M_n$ 3KB 45 x 45	150
Gambar 6.8 Grafik $P_n - M_n$ 4KB 30 x 30	153
Gambar 6.9 Grafik $P_n - M_n$ K 30 x 25	156
Gambar 6.10 Grafik $P_n - M_n$ 6K 30 x 50	160

Gambar 6.7 Grafik Pn Mn 3KB 45 x 45.....	150
Gambar 6.8 Grafik Pn Mn 4KB 30 x 30.....	153
Gambar 6.9 Grafik Pn Mn K 30 x 25.....	156
Gambar 6.10 Grafik Pn Mn 6K 30 x 50.....	160



BAB I

PENDAHULUAN

1.1 Latar Belakang

Seiring pesatnya pembangunan konstruksi di Indonesia menuntut para lulusan sarjana agar mampu mengaplikasikan ilmunya secara maksimum di lapangan bukan hanya memiliki kemampuan secara teoritis saja.

Majunya perkembangan perangkat lunak komputer dalam analisis struktur seperti SAP 2000, ETAB dan STAAD yang mampu menghitung secara cepat dan tepat. Dan dalam pengerjaannya lebih mudah dan mampu menganalisis tiga dimensi. Program komputer analisis tersebut telah banyak digunakan dalam menghitung struktur di proyek-proyek di dunia. Maka dari itu setiap sarjana teknik sipil dituntut untuk menguasainya.

Untuk mengaplikasikan permasalahan ini penulis mengambil tugas akhir tentang perencanaan Gedung Kampus D-3 Ekonomi Universitas Islam Indonesia sebagai penerapan ilmu yang didapat di bangku kuliah untuk merencanakan suatu bangunan sebagai bekal untuk mempersiapkan diri dalam dunia kerja yang akan dijalani.

Lokasi gedung berada di Kompleks Kampus Terpadu Jl. Kaliurang Km. 14,4 Sleman Yogyakarta. Menurut Pedoman Perencanaan Ketahanan Gempa untuk Rumah dan Gedung, 1987, Daerah Istimewa Yogyakarta berada dalam wilayah gempa 3 yang memiliki resiko gempa cukup tinggi. Berdasarkan hal tersebut struktur utama gedung perlu dirancang tahan terhadap gempa, untuk mengurangi resiko kerusakan dan korban akibat gempa.

Perencanaan struktur beton bertulang tahan gempa, berdasarkan SK-SNI T-15-1991-03 menetapkan tingkatan daktilitas rencana, yang dibagi dalam tiga kelas yaitu tingkatan daktilitas 1 (elastis), tingkat daktilitas 2 (daktilitas terbatas), dan tingkat daktilitas 3 (daktilitas penuh). Pada tugas akhir ini struktur gedung ruang kuliah dan kantor kampus D3 Fakultas Ekonomi Universitas Islam Indonesia Yogyakarta. Direncanakan dengan daktilitas penuh.

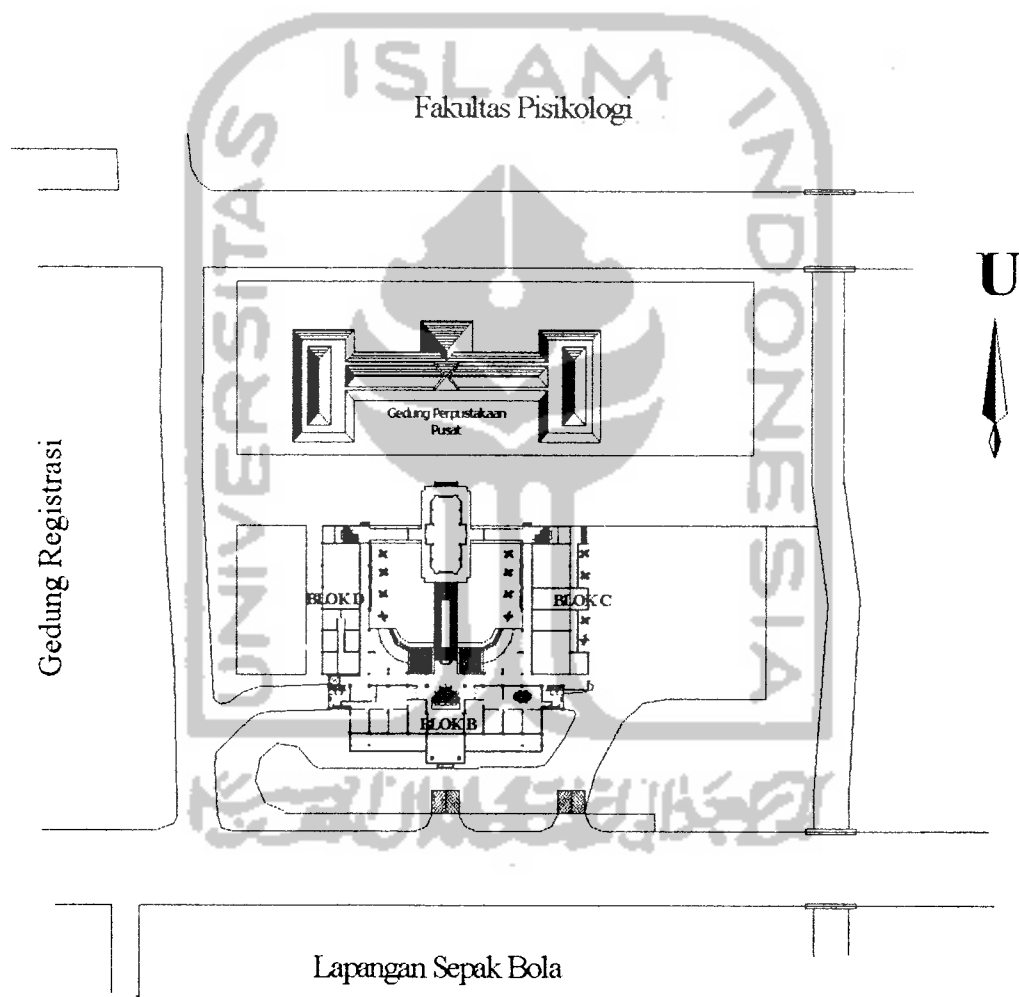
1.2 Gambaran Umum dan Lokasi Gedung

Gedung kampus D3 Fakultas Ekonomi Universitas Islam Indonesia Yogyakarta terdiri dari 4 lantai dan 1 basement. Struktur utama gedung adalah beton bertulang, dan struktur rangka atap adalah baja. Luas keseluruhan gedung adalah 5.550 m³.

Lokasi gedung Kampus D3 Fakultas Ekonomi Universitas Islam Indonesia terletak di Komplek Kampus Terpadu Jl. Kaliurang Km. 14,4 Sleman Yogyakarta.

Adapun batas-batas lokasi gedung dijelaskan pada Gambar 1.1 (peta lokasi gedung) sebagai berikut :

- a) Sebelah utara : Gedung Perpustakaan Terpadu Universitas Islam Indonesia
- b) Sebelah timur : Lahan Kosong
- c) Sebelah selatan : Lapangan Sepak bola
- d) Sebelah barat : Gedung Registrasi



Gambar 1.1 Peta Lokasi Gedung D3 Ekonomi UII

1.3 Rumusan Masalah

Rumusan masalah tugas akhir ini adalah struktur beton bertulang tahan gempa yang memerlukan pendetailan khusus pada penulangan sehingga dapat berperilaku menahan gempa dengan baik. Perencanaan dengan daktilitas penuh.

1.4 Tujuan

Merencanakan struktur rangka baja atap dan struktur beton bertulang dengan SAP 2000 dan hitungan manual, sehingga dihasilkan perencanaan struktur yang stabil, efisien, aman, dan berguna sesuai dengan fungsi yang diharapkan,

1.5 Manfaat

Perencanaan ulang ini dimaksudkan untuk, memberikan tambahan pengetahuan tentang tahapan perencanaan dan kesulitan dalam menganalisis perencanaan pada suatu konstruksi bangunan gedung bertingkat.

1.6 Batasan Masalah

Batasan masalah perencanaan tugas akhir ini adalah :

- a) Desain ulang berupa desain struktur gedung kampus D3 ekonomi Universitas Islam Indonesia
- b) Perencanaan meliputi :
 - Struktur rangka baja atap.
 - Struktur pelat lantai dan pelat tangga
 - Struktur portal beton bertulang terdiri dari ; balok dan kolom.

- c) Data teknis, spesifikasi, dan persyaratan teknis perencanaan ditentukan terlebih dahulu.
- d) Perencanaan struktur portal menggunakan daktilitas penuh.



BAB II

TINJAUAN PUSTAKA

Desain struktur dapat didefinisikan sebagai suatu paduan dari sains dan seni yang mengkombinasikan mengenai perilaku struktur dengan pengetahuan yang mendalam mengenai prinsip-prinsip statika, dinamika, mekanika bahan, dan analisis struktural, untuk menciptakan suatu stuktur yang aman dan ekonomis sehingga dapat berfungsi sesuai yang diharapkan. (Salmon dan Johson, 1992)

Setiap struktur merupakan perpaduan antara arsitektur dan teknik (rekayasa) sehingga memenuhi fungsi tertentu. Bentuk dan fungsi sangat erat kaitannya dan sistem struktur terbaik adalah salah satunya memenuhi kebutuhan calon pemakai disamping menarik, dan ekonomis. (Nawy, 1985)

Perencanaan struktur baja dengan metoda Load and Resistance Factor Design menggunakan beban-beban terfaktor serta membandingkan kekuatan yang diperoleh terhadap beban. Dalam kasus manapun, kekuatan tergantung pada keadaan batas atau modus kegagalan, seperti leleh, retak, dan tekuk. (Salmon dan Johson, 1992)

Beton bertulang adalah merupakan gabungan logis dari dua jenis bahan : beton polos, yang memiliki kekuatan tekan yang tinggi akan tetapi kekuatan tarik yang

rentan, batangan-batangan baja yang ditanamkan di dalam beton dapat memberikan kekuatan tarik yang diperlukan. (Wang dan Salmon, 1993)

Struktur yang direncanakan dengan peraturan-peraturan pembebanan gempa dapat menahan gaya gempa lebih besar, karena struktur tersebut direncanakan dan didesain dengan baik agar dapat berdeformasi sampai keadaan elastisnya tanpa menunjukkan keruntuhan. (Kusuma dan Andriono, 1997)

Daktilitas struktur pada hakikatnya adalah perbandingan antara simpangan maksimum rencana dengan simpangan luluh awal pada komponen struktur yang ditinjau. Standar SK SNI T-15-1991-03 menetapkan tingkatan daktilitas rencana untuk struktur beton bertulang yang dibagi dalam tiga kelas yaitu daktilitas penuh, daktilitas terbatas, dan elastis. (Dipohusodo, 1996)

Daktilitas berarti kemampuan suatu batang saat mengalami pembebanan bolak-balik di atas titik lelehnya tanpa mengalami pengurangan dalam kemampuan kapasitas penampangnya. (Kusuma dan Andriono, 1997)

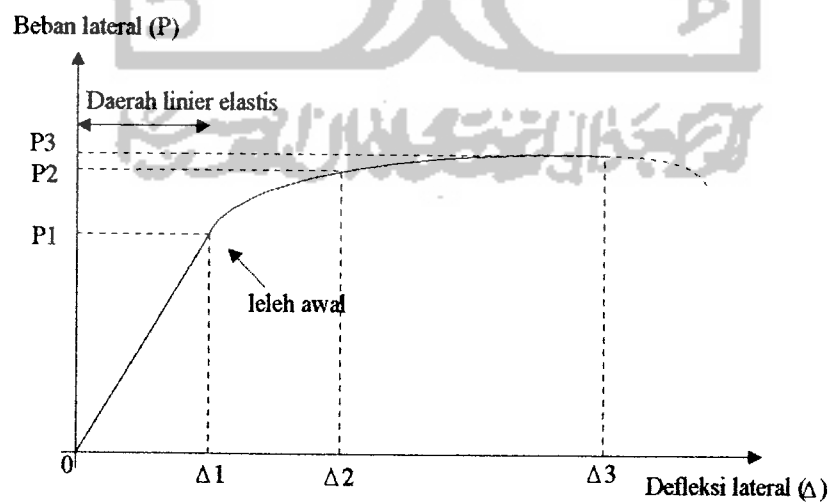
BAB III

LANDASAN TEORI

Landasan teori meliputi uraian mengenai tingkat daktilitas, dasar perencanaan struktur rangka baja dan dasar perencanaan struktur beton bertulang.

3.1 Tingkat Daktilitas

Daktilitas struktur pada hakikatnya adalah perbandingan antara simpangan maksimum rencana dengan simpangan luluh awal pada komponen struktur yang ditinjau, ditunjukkan pada Gambar 3.1 Kurva hubungan beban dan defleksi lateral suatu struktur, sebagai berikut. (Kusuma dan Andriono, 1997)



Gambar 3.1 Kurva hubungan beban dan defleksi lateral suatu struktur
(Kusuma dan Andriono, 1997)

- Daktilitas tingkat 1 (elastis) : daktilitas simpangan struktur, $\mu = \Delta_1/\Delta_1 = 1$
- Daktilitas tingkat 2 (terbatas) : daktilitas simpangan stuktur, $\mu = \Delta_2/\Delta_1 = 2$
- Daktilitas tingkat 3 (penuh) : daktilitas simpangan stuktur, $\mu = \Delta_3/\Delta_1 = 4$

Standar SK SNI T-15-1991-03 menetapkan tingkatan daktilitas rencana untuk struktur beton bertulang, yang dibagi dalam tiga kelas sebagai berikut. (Kusuma dan Andriono, 1997) :

a) Tingkat daktilitas 1 (elastis)

Struktur beton bertulang diproposikan sedemikian rupa sehingga ketentuan tambahan atas penyelesaian detail struktur hanya sedikit. Struktur sepenuhnya berperilaku elastis, $\mu = 1$ (dimana μ adalah daktilitas simpangan struktur). Beban gempa rencana harus dihitung berdasarkan faktor $K = 4$, (K adalah faktor jenis strukur, suatu konstanta yang menggambarkan kemampuan respons inelastik struktur akibat bekerjanya beban gempa. Merupakan fungsi tipe struktur dan kemampuan daktilitas bahan .Semakin tinggi nilai K , semakin rendah kemampuan daktilitasnya.

b) Tingkat daktilitas 2 (terbatas) :

Struktur beton bertulang diproporsikan berdasarkan suatu ketentuan penyelesaian detail khusus yang memungkinkan struktur memberikan respons inelastik terhadap beban siklis yang bekerja tanpa mengalami keruntuhan getas, $\mu = 2$. Kondisi demikian dinamakan juga sebagai daktilitas terbatas. Dalam hal ini beban gempa rencana harus diperhitungkan dengan menggunakan faktor K minimum = 2.

c) Tingkat daktilitas 3 (penuh)

Struktur beton bertulang diproporsikan berdasarkan suatu ketentuan penyelesaian detail khusus yang memungkinkan struktur memberikan respons inelastik terhadap beban siklis yang bekerja dan mampu menjamin pengembangan mekanisme terbentuknya sendi-sendi plastis dengan kapasitas energi yang diperlukan tanpa mengalami keruntuhan, $\mu = 4$. Kondisi ini dinamakan juga sebagai daktilitas penuh. Dalam hal demikian beban gempa rencana harus diperhitungkan dengan menggunakan nilai faktor K minimum = 1.

3.2 Dasar Perencanaan Struktur Rangka Baja

Dasar perencanaan struktur rangka baja, pada struktur meliputi, peraturan-peraturan, dan perencanaan struktur baja.

3.2.1 Peraturan-Peraturan

Peraturan-peraturan yang digunakan dalam perencanaan antara lain sebagai berikut :

- a) Tata Cara Perencanaan Struktur Baja Untuk Bangunan Gedung (AISC-LRFD93).
- b) Pedoman Perencanaan Pembebanan Untuk Rumah dan Gedung 1987.

3.2.2 Analisis Struktur

Analisis struktur menggunakan program aplikasi komputer SAP2000, dengan input data-data koordinat-koordinat titik nodal sesuai bentuk dan ukuran struktur rangka atap, luas penampang profil, inersia profil, modulus elastisitas

baja $E = 200000$ Mpa sebagai data elemen-elemen batang, dan beban titik pada tiap titik buhul. Data-data keluaran program berupa reaksi dukungan dan gaya-gaya batang untuk kepentingan perencanaan.

3.2.3 Perencanaan Struktur Baja

Perencanaan struktur baja menurut Tata Cara Perencanaan Struktur Baja Untuk Bangunan Gedung (AISC-LRFD93) meliputi kombinasi pembebanan, perencanaan untuk lentur, perencanaan akibat gaya tekan, perencanaan akibat gaya tarik, perencanaan sambungan las dan baut.

1. Kombinasi Momen

Pembebanan menurut *Load and Resistance Factor Design* (AISC-LRFD93) dengan kombinasi pembebanan dibawah ini :

$$1,4 M_D \quad (3-1)$$

$$1,2 M_D + 1,6 M_L \quad (3-2)$$

$$1,2 M_D + 0,5 M_L + 1,3 M_W \quad (3-3)$$

$$1,2 M_D + 0,5 M_L - 1,3 M_W \quad (3-4)$$

$$0,9 M_D + 1,3 M_W \quad (3-5)$$

$$0,9 M_D - 1,3 M_W \quad (3-6)$$

dengan :

M_D = Momen akibat beban mati (beban dari elemen-elemen struktural dan tempelan permanen), Nmm

M_L = Momen akibat beban hidup (beban peralatan yang dapat bergerak), Nmm

M_W = Momen akibat beban angin, Nmm

2. Perencanaan Untuk Lentur

Perencanaan untuk lentur terdapat pada perencanaan gording, komponen struktur yang memikul lentur harus memenuhi kekuatan :

$$Mu \leq \phi . Mn \quad (3-7)$$

dengan :

Mu = momen lentur terfaktor, Nmm

ϕ = 0,9 (faktor reduksi)

Mn = kuat nominal dari momen lentur penampang, Nmm

Kuat nominal ditentukan menurut penampang kompak, penampang tidak kompak, dan penampang langsing dengan ketentuan batas maksimal sebagai berikut :

- penampang kompak : $\lambda \leq \lambda_p$
- penampang tidak kompak : $\lambda_p < \lambda \leq \lambda_r$

dengan

- untuk pelat sayap

$$\lambda = \frac{b_f}{t_f} \leq \lambda_p = \frac{170}{\sqrt{f_y}}$$

- untuk pelat badan

$$\lambda = \frac{h_c}{t_w} \leq \lambda_p = \frac{1680}{\sqrt{f_y}}$$

dengan :

- Penampang kompak

Kekuatan nominal Mn untuk penampang kompak, adalah :

$$Mn = Mp \quad (3-8)$$

dengan :

M_p = kekuatan momen plastik = $Z \cdot f_y$, Nmm

Z = modulus plastik

f_y = tegangan leleh yang ditentukan, Mpa

- Penampang tidak kompak

Kekuatan nominal M_n untuk penampang tidak kompak, adalah :

$$M_n = M_p - (M_p - M_r) \frac{(\lambda - \lambda_p)}{(\lambda_r - \lambda_p)} \quad (3-9)$$

a. Kontrol tegangan

$$\frac{f_{b_x}}{0,66 \cdot f_y} + \frac{f_{b_y}}{0,75 \cdot f_y} \leq 1,0 \quad (3-10)$$

dengan :

$$f = \frac{M}{Z}$$

f = tegangan yang terjadi, MPa

M = momen lentur terfaktor, Nmm

Z = modulus plastis, mm³

f_{b_x} = tegangan pada arah - x

f_{b_y} = tegangan pada arah - y

b. Kontrol lendutan

$$\Delta = \frac{5}{384} \cdot \frac{q \cdot L^4}{E \cdot I} + \frac{1}{48} \cdot \frac{P \cdot L^3}{E \cdot I} \leq \frac{L}{360} \quad (3-11)$$

dengan :

q = beban merata, N/mm

P = beban terpusat, N

E = modulus elatis baja, MPa

I = inersia profil, cm^3

3. Kontrol berat

$$W < W_{\text{taksiran}} \quad (3-12)$$

Dengan :

W = berat profil yang digunakan

W_{taksiran} = berat profil yang ditaksir

3. Perencanaan Akibat Gaya Tarik Aksial

a) Kuat tarik rencana

Komponen struktur yang memikul gaya tarik aksial terfaktor P_u , harus memenuhi

$$\frac{P_u}{\phi \cdot P_n} \leq 1 \quad (3-13)$$

dengan :

$$\phi = 0,9 \text{ untuk } P_n = A_g \cdot f_y$$

$$\phi = 0,75 \text{ untuk } P_n = A_{nt} \cdot f_u$$

A_g = luas penampang brutto, mm^2

A_{nt} = luas penampang netto, mm^2

f_y = tegangan ijin leleh, MPa

f_u = tegangan tarik putus, Mpa

- b) Syarat angka perbandingan kelangsingan batang tarik

$$\frac{k.L}{r} < 240 \quad (3-14)$$

dengan :

$k = 1$, faktor panjang tekuk

L = panjang batang tarik, mm

r = jari-jari girasi profil, mm

4. Perencanaan Akibat Gaya Tekan Aksial

Suatu komponen struktur yang mengalami gaya tekan konsentrasi akibat beban terfaktor, N_u , harus memenuhi persyaratan kelangsingan sebagai berikut :

- a) Syarat angka perbandingan kelangsingan batang tekan

$$\frac{k.L}{r} < 200 \quad (3-15)$$

dengan : $k = 1$, faktor panjang tekuk L = panjang batang, mm

r = jari-jari girasi profil terkecil, mm

- b) Syarat kuat tekan nominal terfaktor

$$\frac{P_u}{\phi.P_n} \leq 1 \quad (3-16)$$

dengan :

$\phi = 0,85$

P_n = kuat tekan nominal, N

P_u = gaya batang tekan hasil kombinasi faktor beban terbesar, N

c) Kuat tekan nominal dihitung sebagai berikut

$$\phi.Pn = \phi.Ag.(fy/\omega) \quad (3-17)$$

dengan :

untuk $\lambda_c \leq 0,25$ maka $\omega = 1$

untuk $0,25 < \lambda_c < 1,2$ maka $\omega = 1,43/(1,6-0,67\lambda_c)$

untuk $\lambda_c \geq 1,2$ maka $\omega = 1,25 \lambda^2$

Keterangan :

Ag = luas penampang brutto, mm²

f_{cr} = tegangan kritis penampang, MPa

fy = tegangan leleh baja, Mpa

$$\lambda_c = \frac{k.L}{\pi.r} \sqrt{\frac{fy}{E}} \quad (3-18)$$

dengan :

λ_c = parameter kelangsingan batang tekan

k = 1, faktor panjang tekuk

L = panjang batang, mm

r = jari-jari girasi terkecil dari profil, mm

fy = tegangan leleh baja, Mpa

E = modulus elastisitas baja, Mpa

6. Perencanaan Sambungan Baut

a) Kekuatan baut

Suatu baut yang memikul gaya terfaktor, R_u , harus memenuhi

$$R_u \leq \phi . R_n \quad (3-19)$$

dengan :

ϕ = faktor reduksi kekuatan

R_n = kuat nominal baut

b) Baut dalam geser

Kuat geser rencana dari satu baut dihitung sebagai berikut :

$$V_d = \phi_f V_n = \phi_f r_1 f_u^b A_b \quad (3-20)$$

dengan :

$r_1 = 0,5$ untuk baut tanpa ulir pada bidang geser

$r_1 = 0,4$ untuk baut dengan ulir pada bidang geser

$\phi_f = 0,75$ (faktor reduksi kekuatan untuk faktor)

f_u^b = tegangan tarik putus baut

A_b = luas brutto penampang baut pada daerah tak berulir

Kekuatan geser nominal baut yang mempunyai beberapa geser (bidang geser majemuk) adalah jumlah kekuatan masing-masing yang dihitung untuk setiap bidang geser.

c) Baut yang memikul gaya tarik

Kuat tarik rencana satu baut dihitung sebagai berikut :

$$T_d = \phi_f T_n = \phi_f r_1 f_u^b A_b \quad (3-21)$$

dengan :

$\phi_f = 0,75$ = faktor reduksi kekuatan untuk fraktur

f_u^b = tegangan tarik putus

A_b = luas bruto penampang baut pada daerah tak berulir

d) Kuat tumpu

Kuat tumpu rencana bergantung pada yang terlemah dari baut atau komponen pelat yang disambung. Apabila jarak lubang tepi terdekat dengan sisi pelat dalam arah kerja gaya lebih dari pada 1,5 kali diameter lubang, jarak antar lubang lebih besar daripada 3 kali diameter lubang, dan ada lebih dari satu baut dalam arah kerja gaya, maka kuat rencana tumpu dapat dihitung sebagai berikut,

$$R_d = \phi_f \cdot R_n = 2,4 \cdot \phi_f \cdot d_b \cdot t_p \cdot f_u \quad (3-22)$$

dengan :

$\phi_f = 0,75$ = faktor reduksi kekuatan untuk fraktur

d_b = diameter baut normal pada daerah tak berulir

t_p = tebal pelat

f_u = tegangan tarik putus yang terendah dari baut atau pelat

e) Tata letak baut

Tata letak baut harus memenuhi persyaratan :

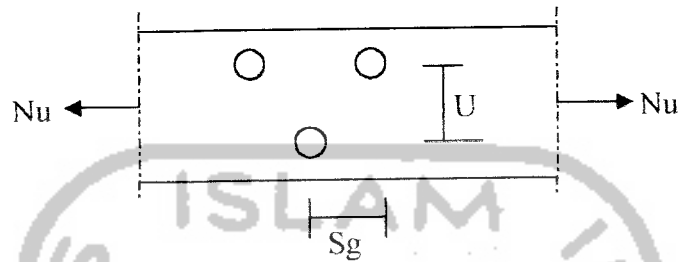
- Jarak antar pusat baut tidak boleh kurang dari 3 kali diameter nominal baut
- Jarak antara pusat pengencang tidak boleh melebihi $15 t_p$ (t_p = tebal lapis tertipis didalam sambungan)
- Jarak tepi minimum : $1,75 \cdot d_b$ (tepi dipotong dengan tangan), $1,50 \cdot d_b$ (tepi dipotong dengan mesin) dan $1,25 \cdot d_b$ (tepi profil bukan hasil potongan)

dengan d_b = diameter nominal baut

- Jarak tepi maksimum : $15 \cdot t_p$ dan 150 mm

f) Efek lubang baut terhadap luas netto penampang profil

Efek lubang baut mempengaruhi luas bersih penampang profil, dijelaskan pada Gambar 3.3



Gambar 3.3 Efek lubang-lubang tak segaris terhadap luas bersih

$$A_n = A_g - n.d.t + \frac{\sum S_g^2 . t}{4.u} \quad (3-23)$$

dengan :

A_n = penampang neto, mm²

A_g = penampang brutto, mm²

t = tebal penampang, mm

d = diameter lubang, mm

n = banyaknya lubang dalam garis potongan

S_g = jarak antara sumbu lubang pada arah sejajar sumbu komponen struktur, mm

u = jarak antara sumbu lubang pada arah tegak lurus sumbu komponen struktur, mm

7. Kegagalan Robekan pada Lubang Baut

Bila material yang direkatkan oleh baut tersebut cukup tipis, keadaan batas kegagalan robekan, yang dikenal sebagai geser balok, dapat mempengaruhi kekuatan suatu batang tarik seperti sambungan pada ujung suatu batang. Persamaan berikut ini dapat digunakan untuk mewakili kekuatan nominal T_n (Salmon dan Johnson, 1992).

a) Pelelehan geser-retakan tarik

$$T_n = 0,6.f_y.Avg + f_u.Ant \quad (3-24)$$

b) Retakan geser-pelelehan tarik

$$T_n = 0,6.f_u.Ans + f_y.Atg \quad (3-25)$$

dengan :

Avg = luas bruto yang mengalami pelelehan geser

= (panjang b-c) x tebal (lihat gambar 3.3)

Ant = luas bersih yang mengalami retakan tarik

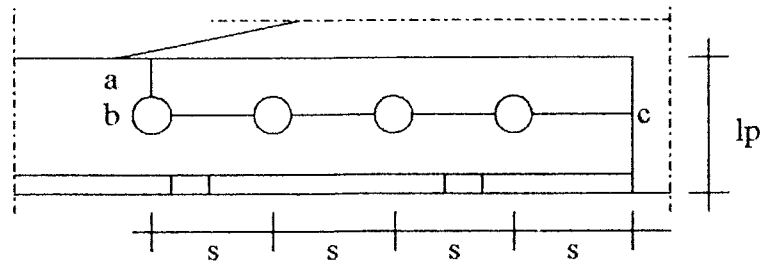
= (panjang a-b - luas lubang) x tebal (lihat gambar 3.1)

Ans = luas bersih yang mengalami retakan geser

= (panjang b-c - luas lubang) x tebal (lihat gambar 3.3)

Atg = luas brutto yang mengalami pelelehan tarik

= (panjang a-b) x tebal (lihat gambar 3.3)



Gambar 3.4 Daerah yang diarsir dapat terjadi kegagalan robekan

3.3 Dasar Perencanaan Struktur Beton Bertulang

Dasar perencanaan struktur beton bertulang meliputi, peraturan-peraturan, analisis struktur, perencanaan pelat, perencanaan struktur portal dengan daktilitas penuh dan terbatas, penulangan balok, dan penulangan kolom.

3.3.1 Peraturan-Peraturan

Peraturan-peraturan yang digunakan antara lain :

- Tata Cara Perhitungan Struktur Beton Untuk Bangunan Gedung SK SNI T-15-1991-03.
- Petunjuk Perencanaan Beton Bertulang dan Struktur Dinding Bertulang Untuk Rumah dan Gedung 1987.
- Pedoman Perencanaan Pembebanan Untuk Rumah dan Gedung 1987.
- Pedoman Perencanaan Ketahanan Gempa Untuk Rumah dan Gedung 1987.
- Pedoman Beton Indonesia 1971.

3.3.2 Pembebanan

a) Beban mati

Beban mati sesuai dengan PPURDG 1987, ditetapkan seperti tercantum pada Tabel 3.1

Tabel 3.1 Beban Mati

No.	Jenis Material	Beban
1.	Beton bertulang	24 KN/m ³
2.	Tegel per	24 KN/m ³
3.	Spesi	21 KN/m ³
4.	Plafond	0,18 KN/m ³
5.	Aspal	14 KN/m ³
6.	Tembok	2,5 KN/m ³

b) Beban hidup

Beban hidup menurut PPURDG 1987, untuk ruang kuliah ditetapkan = 1,5 KN/m² dan beban hidup pekerja atap ditetapkan = 1 KN/m².

c) Beban gempa

Pembebanan gempa khusus pada portal, ditentukan berdasarkan persyaratan dan analisis gaya-gaya dalam struktur dalam batas elatisitas dengan pembebanan gempa menurut PPKGURDG 1987

$$V_b = C.I.K.W_t \quad (3-26)$$

dengan :

$$V_b = \text{gaya gempa dasar}$$

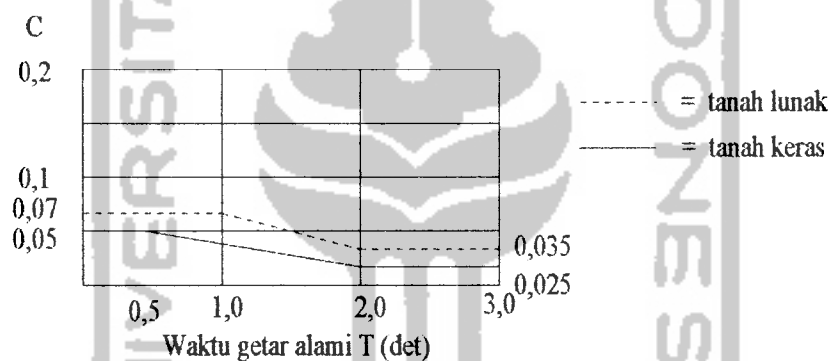
C = koefisien gempa dasar

I = faktor keutamaan struktur = 1,5 (bangunan sekolah)

K = faktor jenis struktur = 1,0 (portal daktil beton bertulang)

Wt = berat kombinasi beban mati keseluruhannya dan beban hidup vertikal yang direduksi

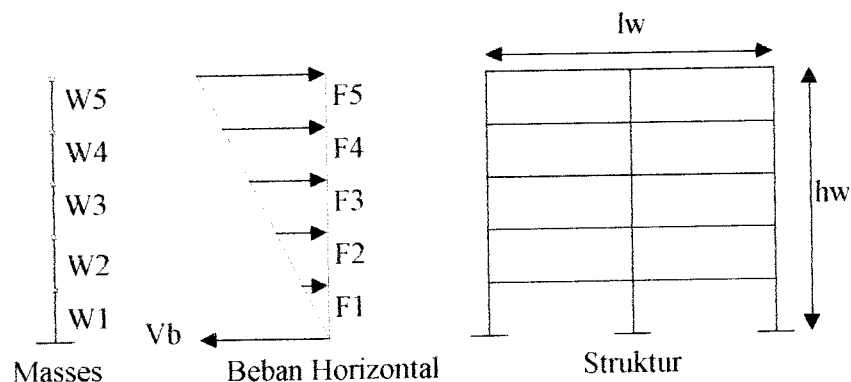
Koefisien gempa dasar ditentukan dari Gambar 3.4 untuk wilayah gempa 3 dengan memakai waktu getar alami struktur.



Gambar 3.5 Hubungan Koefisien gempa dasar dengan waktu getar struktur (PPKGURDG 1987)

Waktu getar alami (T) asumsi awal ditentukan untuk portal beton dengan rumus :

$$T = 0,06 H^{3/4} \quad \text{dengan } H = \text{tinggi struktur}$$



Gambar 3.6 Pembebanan Gempa menurut PPKGURDG 1987

$$F_i = \frac{W_i \cdot h_i}{\sum W_i \cdot h_i} \cdot V_b, \text{ untuk } \frac{h_w}{l_w} < 3,0 \quad (3-27)$$

$$F_i = 0,9 \cdot \frac{W_i \cdot h_i}{\sum W_i \cdot h_i} \cdot V_b + (0,1 \cdot V_b \text{ dipuncak}), \text{ untuk } \frac{h_w}{l_w} < 3,0 \quad (3-28)$$

dengan :

F_i = gaya gempa lantai ke-i

W_i = berat lantai ke-i

h_i = tinggi struktur setiap lantai dari penjepit lateral

Distribusi ini mendekati ragam satu dengan suatu penyesuaian apabila ragam kedua atau ragam yang lebih besar mempengaruhi respon dinamis struktur dengan rasio tinggi dan lebar $\geq 3,0$

Perhitungan waktu getar struktur dengan *T Rayleigh*, dihitung dengan rumus :

$$T = 6,3 \cdot \sqrt{\frac{\sum W_i \cdot d_i^2}{g \cdot \sum F_i \cdot d_i}} \quad (3-29)$$

dengan :

W_i = berat lantai ke-i

F_i = gaya gempa lantai ke- i

d_i = deformasi lateral total akibat F_i yang terjadi pada lantai $j-i$ dari hasil perhitungan analisa struktur

g = percepatan gravitasi = $9,81 \text{ m/dt}^3$

3.3.3 Analisis Struktur

Analisis struktur menggunakan program aplikasi komputer SAP 2000, dengan input data-data koordinat-koordinat titik nodal sesuai bentuk dan ukuran portal, ukuran penampang balok dan kolom, modulus elastisitas beton $E = 25700 \text{ Mpa}$ sebagai data-data elemen, dan pembebanan titik dan merata. Data-data keluaran program berupa momen lentur, gaya geser, gaya aksial untuk kepentingan perencanaan balok dan kolom. (Wilson dan Habinullah, 1990).

3.3.4 Perencanaan Pelat

Perencanaan pelat dengan sistem pelat 2 arah ($L_x/L_y < 2$) dan system pelat 1 arah ($L_x/L_y \geq 2$), dengan ketentuan sebagai berikut.

- a) Besar momen lentur dalam arah bentang pendek dan bentang panjang (PBI, 1971)

$$M = x.W_u.L_x^2 \quad (3-30)$$

dengan :

W_u = beban merata terfaktor

x = koefisien momen menurut tabel koefisien momen (PBI 1971) yang tergantung kondisi tumpuan dan L_y/L_x

L_x = panjang bentang pendek

b) Analisis penulangan pelat

Analisis penulangan pelat dengan menganggap pelat adalah balok bertulangan tarik sebelah, dengan anggapan diagram regangan dan tegangan, kopel momen gaya-gaya dalam seperti dalam Gambar 3.7, langkah-langkah perhitungan sebagai berikut. (Kadir Aboe, 1998) :

- Hitung : $Mn = Mu / 0,8$ (3-31)

- Dari persamaan momen nominal

$$Mn = C.(d-a/2) \quad (3-32)$$

$$Mn = 0,85.fc'.b.a.(d-a/2) \quad (3-33)$$

didapat persamaan kuadrat sebagai berikut :

$$0,85.fc'.b.a^2 - 2.0,85.fc'.b.d.a + 2Mn = 0 \quad (3-34)$$

didapat a

- Keseimbangan gaya dalam memberikan

$$C = T \quad (3-35)$$

$$0,85.fc'.b.a = As.fy \quad (3-36)$$

jadi dapat ditentukan luas tulangan perlu

$$As_{perlu} = (0,85.fc'.b.a)/fy \quad (3-37)$$

- Untuk keperluan penulangan, dipilih yang terbesar antara As_{perlu} dan As_{min} (SK-SNI.1991)

$$As_{min} = 0,0025.b.h \quad (3-38)$$

- Tentukan luas penulangan susut (SK-SNI,1991)

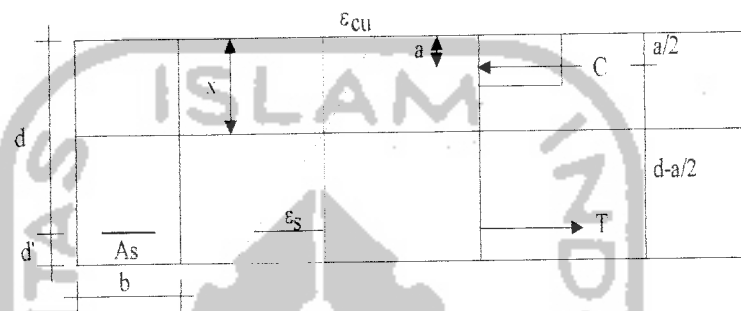
$$As_{min} = 0,0014.b \quad (3-39)$$

- Tentukan jarak antar tulangan pelat

$$S = (1/4 \cdot \pi \cdot \phi \cdot 1000) / A_s \quad (3-40)$$

dengan :

ϕ = diameter tulangan pelat



Gambar 3.7 Analisis Balok Bertulang Sebelah

3.3.5 Perencanaan Struktur Portal Beton Bertulang Dengan Daktilitas Penuh

Struktur dengan tingkat daktilitas tingkat 3 atau penuh harus direncanakan, terhadap beban siklis gempa kuat sedemikian rupa dengan pendetailan khusus sehingga mampu menjamin terjadinya sendi-sendi plastis dengan penerapan energi yang diperlukan. Hal ini beban gempa rencana dapat diperhitungkan dengan menggunakan faktor jenis struktur, K minimum sebesar 1,0. (Kusuma dan Andriono, 1997)

Langkah-langkah perencanaan struktur portal beton bertulang dengan daktilitas penuh adalah sebagai berikut :

- a) perencanaan balok portal terhadap beban lentur

Kuat lentur perlu balok portal yang dinyatakan dengan $M_{u,b}$ harus ditentukan berdasarkan kombinasi pembebanan tanpa atau dengan beban gempa menurut SK-SNI-1991), sebagai berikut :

$$M_{u,b} = 1,2.M_{D,b} + 1,6.M_{L,b} \quad (3-41)$$

$$M_{u,b} = 1,05.(M_{D,b} + M_{L,b,R} + M_{E,b}) \quad (3-42)$$

$$M_{u,b} = 0,9.(M_{D,b} + M_{E,b}) \quad (3-43)$$

dengan :

$M_{D,b}$ = momen lentur balok portal akibat beban mati

$M_{L,b}$ = momen lentur balok portal akibat beban hidup

$M_{L,b,R}$ = momen lentur balok portal akibat beban hidup tereduksi

(koefisien reduksi beban hidup menurut PPKGURDG 1987, pengguna gedung ruang kuliah = 0,9)

$M_{R,b}$ = momen lentur balok portal akibat beban gempa

Khusus untuk portal daktilitas penuh dihitung kapasitas lentur sendi plastis balok yang besarnya ditentukan sebagai berikut :

$$M_{kap,b} = \phi_0.M_{nak,b} \quad (3-44)$$

dengan :

$M_{kap,b}$ = kapasitas lentur aktual balok pada pusat pertemuan balok kolom dengan memperhitungkan luas tulangan yang terpasang.

$M_{nak,b}$ = kuat lentur nominal balok berdasarkan luas tulangan yang terpasang.

ϕ_0 = faktor penambahan kekuatan yang ditetapkan sebesar 1,25 untuk $f_y < 400$ Mpa, dan 1,40 untuk $f_y > 400$ Mpa

f_y = kuat leleh tulangan lentur balok

b) perencanaan balok portal terhadap beban geser

Sesuai dengan desain kapasitas, kuat geser balok portal yang dibebani oleh beban gravitasi sepanjang bentangnya harus dihitung dalam kondisi terjadi sendi-sendi plastis kedua ujung balok tersebut, dengan tanda yang berlawanan (positif dan negatif), menurut persamaan berikut (lihat pula gambar 3.8)

$$V_{u,b} = 1,05.V_g + 0,7 \frac{M_{kap,ki} + M_{kap,ka}}{l_n} \quad (3-45)$$

tetapi tidak perlu lebih besar dari

$$V_{u,b} = 1,05.(V_{D,b} + V_{L,b} + (4,0/K).V_{E,b}) \quad (3-46)$$

dengan :

$M_{kap,ki}$ = momen kapasitas balok berdasarkan tulangan yang sebenarnya terpasang pada ujung balok kiri atau bidang muka kolom kiri.

$M_{kap,ka}$ = momen kapasitas balok berdasarkan tulangan yang sebenarnya terpasang pada ujung balok kanan atau bidang muka kolom kanan.

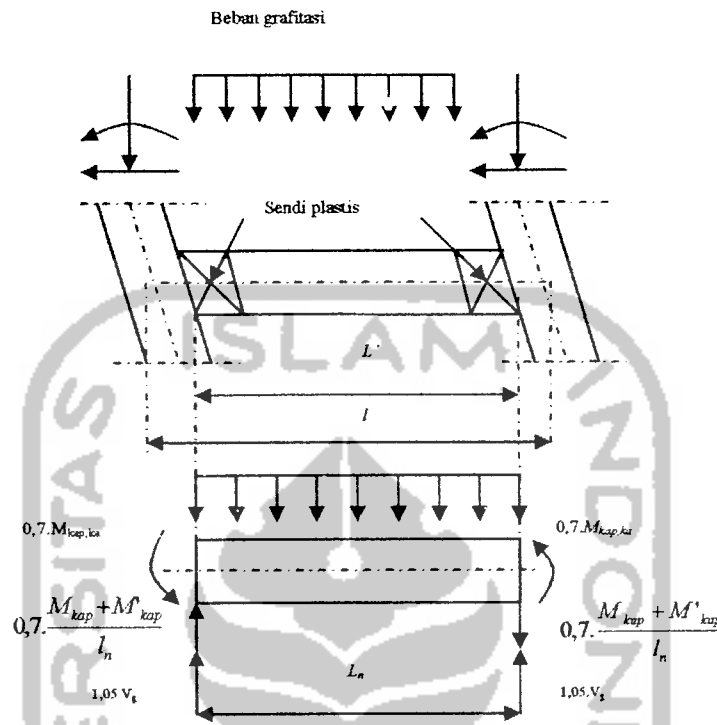
l_n = bentang bersih balok

$V_{D,b}$ = gaya geser balok akibat beban mati

$V_{L,b}$ = gaya geser balok akibat beban hidup

$V_{E,b}$ = beban geser balok akibat gempa

K = faktor jenis struktur ($K > 1,0$)



Gambar 3.8 Balok Portal dengan Sendi Plastis pada Kedua Ujungnya

3. Perencanaan Kolom Portal Terhadap Beban Lentur dan Aksial

Kuat lentur kolom portal dengan daktilitas penuh yang ditentukan pada bidang muka balok $M_{u,k}$ harus dihitung berdasarkan terjadinya kapasitas lentur sendi platis pada kedua ujung balok yang bertemu dengan kolom tersebut, yakni sebagai berikut (lihat pula Gambar 3.9)

$$M_{u,k} = 0,7 \cdot w_d \cdot \alpha_k \cdot (M_{kap,ki} + M_{kap,ka}) \quad (3-47)$$

Dalam segala hal, kuat lentur kolom portal harus memperhatikan pengaruh gempa arah tegak lurus portal sebesar 30% momen rencana kolom, dapat juga ditulis :

$$M_{u,k} = \frac{h}{h_n} \cdot 0,7 \cdot \omega_d \cdot \alpha_k \cdot \left[\frac{l_{ki,x}}{l_{nki,x}} M_{kap,b,ki} + \frac{l_{ka,x}}{l_{nka,x}} M_{kap,b,ka} + 0,3 \cdot \left(\frac{l_{ki,y}}{l_{nki,y}} M_{kap,b,ki,\perp} + \frac{l_{ka,y}}{l_{nka,y}} M_{kap,b,ka,\perp} \right) \right] \quad (3-48)$$

tetapi dalam segala hal tak perlu lebih besar dari :

$$M_{u,k} = 1,05 \cdot (M_{D,k} + M_{L,k} + (4,0/K) \cdot (M_{E,k} + 0,3 M_{E,k,\perp})) \quad (3-49)$$

dengan :

h = tinggi kolom dari titik pertemuan ke titik pertemuan

h_n = tinggi bersih kolom

ω_d = faktor pembesar dinamis yang memperhitungkan pengaruh terjadinya sendi plastis pada struktur secara keseluruhan, diambil = 1,3 kecuali lantai 1 dan yang paling atas diambil = 1

α_k = faktor distribusi momen kolom portal yang ditinjau sesuai dengan kekakuan relatif kolom atas dan kolom bawah

faktor distribusi momen kolom portal dapat dihitung dengan rumus : (Kusuma dan Andriono, 1993).

– untuk faktor distribusi momen kolom atas

$$\alpha_{ka} = M_{E,k,lti} + I_{atas} / (M_{E,k,lti} + I_{atas} + M_{E,k,kt,I,bawah})$$

untuk faktor distribusi momen kolom bawah

$$\alpha_{kb} = M_{E,k,lti} + I_{bawah} / (M_{E,k,lti} + I_{bawah} + M_{E,k,kt,I,atas})$$

dengan :

l_{ki} = bentang balok sebelah kiri, dari titik pertemuan ke titik pertemuan

$l_{n,ki}$ = bentang bersih balok sebelah kiri

$l_{n,ka}$ = bentang balok sebelah kanan, dari titik pertemuan ke titik Pertemuan

$l_{n,ka}$ = bentang bersih balok sebelah kanan

$M_{kap,ki}$ = momen kapasitas lentur balok sebelah kiri bidang muka kolom

$M_{kap,ka}$ = momen kapasitas lentur balok disebelah kanan bidang muka kolom

$M_{kap,ki,\perp}$ = momen kapasitas lentur balok disebelah kiri bidang muka kolom arah tegak lurus portal

$M_{kap,ka,\perp}$ = momen kapsitas lentur balok disebelah kanan bidang muka kolom arah tegak lurus portal

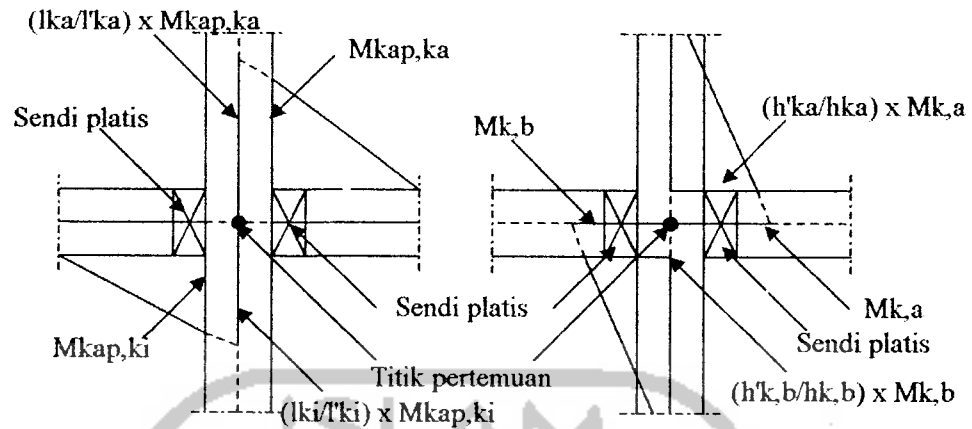
$M_{D,k}$ = momen pada kolom akibat beban mati

$M_{L,k}$ = momen pada kolom akibat beban hidup

$M_{E,k}$ = momen pada kolom akibat beban gempa

$M_{E,k,\perp}$ = momen pada kolom akibat beban gempa arah tegak lurus portal

K = faktor jenis struktur



Gambar 3.9 Pertemuan balok kolom dengan sendi platis pada ujung balok di sebelah kiri dan kanan

Sedangkan beban aksial rencana, $N_{u,k}$ yang bekerja pada kolom portal dengan daktilitas penuh dihitung dari :

$$N_{u,k} = [0,7Rn (\sum M_{kap,b} + 0,3 \sum M_{kap,b,\perp})] / l_b + 1,05.N_{g,k} \quad (3-50)$$

tapi dalam segala hal tidak perlu lebih besar dari :

$$N_{u,k} = 1,05 [N_{g,k} + (4,0/K)(N_{E,k} + 0,3 N_{E,k,\perp})] \quad (3-51)$$

dengan :

R_n = faktor reduksi yang ditentukan sebesar

1,0 untuk $1 < n < 4$

1,1-0,025n untuk $4 < n < 20$

0,6 untuk $n > 20$

n = jumlah lantai di atas kolom yang ditinjau

l_b = bentang balok dari pusat ke pusat kolom

$\sum M_{kap,b}$ = $M_{kap,b,ki} + M_{kap,b,ka}$

$$\Sigma M_{kap,b,\perp} = M_{kap,b,ki,\perp} + M_{kap,b,ka,\perp}$$

$N_{g,k}$ = gaya aksial kolom akibat beban gravitasi

$N_{E,k}$ = gaya aksial kolom akibat beban gempa

$N_{E,k,\perp}$ = gaya aksial kolom akibat beban gempa arah tegak lurus portal

4. Perencanaan Kolom Portal Terhadap Beban Geser

Kuat geser kolom portal dengan daktilitas penuh berdasarkan terjadinya sendi-sendi plastis pada ujung-ujung balok-balok yang bertemu pada kolom tersebut, harus dihitung dengan cermat sebagai berikut (lihat pula Gambar 3.10)

Untuk kolom lantai dasar

$$V_{u,k} = (M_{u,k \text{ atas}} + M_{kap,k \text{ bawah}})/h' \quad (3-52)$$

Untuk kolom lantai paling atas

$$V_{u,k} = (2 M_{kap,h})/h' \quad (3-53)$$

Untuk kolom tiap lantai

$$V_{u,k} = (M_{u,k \text{ atas}} + M_{u,k \text{ bawah}})/h'_k \quad (3-54)$$

dan dalam segala hal tidak perlu lebih besar dari

$$V_{u,k} = 1,05 [M_{D,k} + M_{L,k} + (4,0/K) (V_{E,k} + 0,3 V_{kap,ki,\perp})] \quad (3-55)$$

dengan :

$M_{kap,k}$ = momen kapasitas kolom

$M_{u,k \text{ atas}}$ = momen rencana kolom pada ujung atas dihitung pada muka balok menurut persamaan 3-44 atau 3-45

$M_{u,k \text{ bawah}}$ = momen rencana kolom pada ujung bawah dihitung pada muka balok menurut 3-44 atau 3-45

$M_{kap,k \text{ bawah}}$ = kapasitas lentur ujung dasar kolom lantai dasar = $\emptyset$

$M_{nak,k \text{ bawah}}$

$M_{nak,k \text{ bawah}}$ = kuat lentur nominal aktual ujung dasar kolom lantai dasar

(berdasarkan luas tulangan aktual yang terpasang)

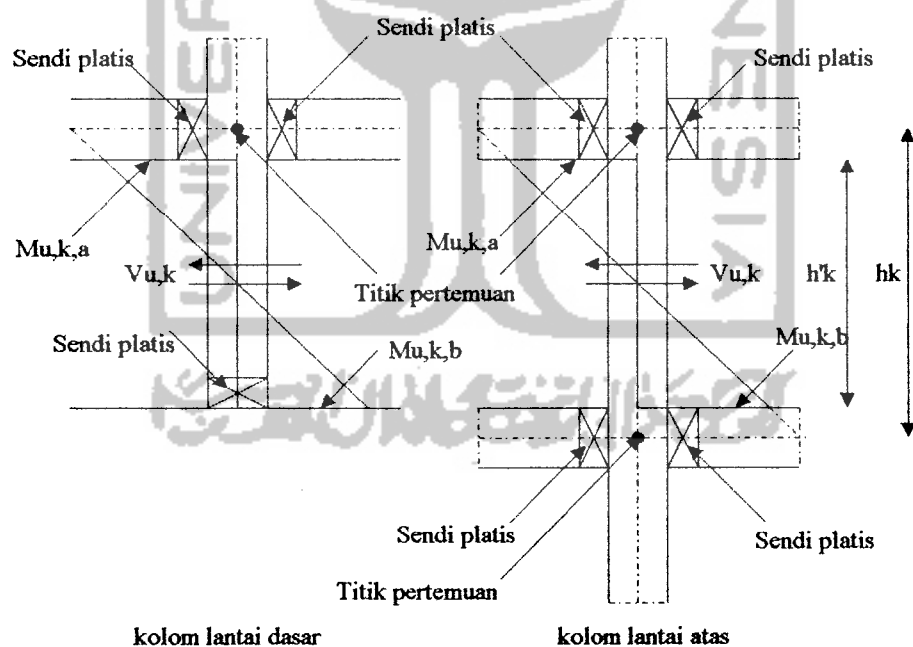
h'_k = tinggi bersih kolom

$V_{D,k}$ = gaya geser kolom akibat beban mati

$V_{L,k}$ = gaya geser kolom akibat beban hidup

$V_{E,k}$ = gaya geser kolom akibat beban gempa

$V_{E,k,\perp}$ = gaya geser kolom akibat beban gempa tegak lurus portal

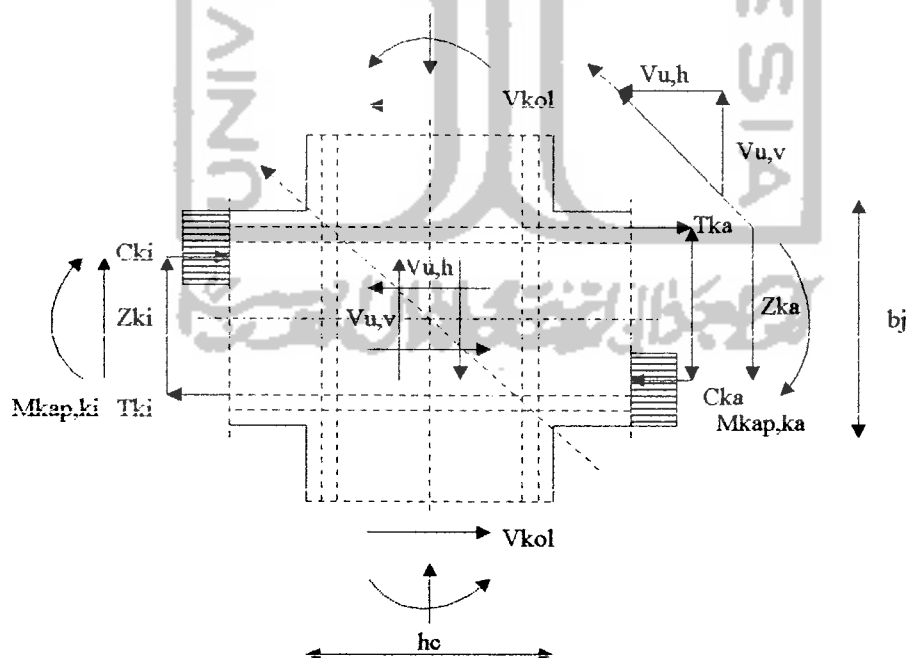


Gambar 3.10 Kolom lantai dasar dan kolom lantai atas dengan $M_{u,k}$ yang ditetapkan berdasarkan kapasitas sendi platis balok

5. Perencanaan Panel Pertemuan Balok Kolom

Panel pertemuan balok kolom portal harus diproporsikan sedemikian rupa, sehingga memenuhi persyaratan kuat geser horizontal perlu $V_{u,h}$ dan kuat geser vertikal perlu $V_{u,v}$ yang berkaitan dengan terjadinya momen kapasitas pada sendi pada kedua ujung balok yang bertemu pada kolom itu, seperti ditunjukkan dalam Gambar 3.10.

Gaya-gaya membentuk keseimbangan pada join rangka adalah seperti yang terlihat pada Gambar 3.11, dimana gaya geser horizontal.



Gambar 3.11 Panel pertemuan balok dan kolom portal dalam kondisi terjadinya sendi-sendi platis pada kedua ujung balok

$$V_{jh} = C_{ki} + T_{ka} - V_{kol} \quad (3-56)$$

$$C_{ki} = T_{ki} = 0,70 (M_{kap,ki}/Z_{ki}) \quad (3-57)$$

$$T_{ka} = C_{ka} 0,70 (M_{kap,ka}/Z_{ka}) \quad (3-58)$$

$$V_{kol} = 0,70 \frac{((l_{ki}/l'_{ki}) M_{kap,ki} + (l_{ka}/l'_{ka}) M_{kap,ka})}{1/2 (h_{k,a} + h_{k,h})} \quad (3-59)$$

Tegangan geser horizontal nominal dalam join adalah :

$$V_{jh} = V_{jh}/(b_j h_c) \quad (3-60)$$

dengan :

b_j = lebar efektif join (mm)

h_c = tinggi total penampang kolom dalam arah geser yang ditinjau

V_{jh} tidak boleh lebih besar dari $1,5 \sqrt{f_c'}$ (Mpa)

Gaya geser horizontal V_{jh} ini ditahan oleh dua mekanisme kuat geser inti join, yaitu :

- a) Strat beton diagonal yang melewati daerah tekan ujung join yang memikul gaya geser V_{ch}
- b) Mekanisme panel rangka yang terdiri dari sengkang horizontal dan strat beton diagonal daerah tarik join yang memikul gaya geser V_{sh}

Besarnya V_{ch} harus diambil sama dengan nol kecuali bila :

- a) tegangan tekan rata-rata minimal pada penampang bruto kolom beton di atas join, termasuk tegangan prategang, apabila ada, melebihi nilai $0,1 f_c'$, maka :

$$V_{ch} = 2/3 \sqrt{(N_{u,k}/A_g) - 0,1 f_c'} \cdot b_j \cdot h_c \quad (3-61)$$

balok diberi gaya prategang yang melewati join maka :

$$V_{ch} = 0,7 P_{cs} \quad (3-62)$$

dengan P_{cs} adalah gaya permanen dalam baja prategang yang terletak di sepertiga bagian tengah tinggi kolom.

- b) Seluruh balok pada join dirancang sehingga penampang kritis dari sendi plastis terletak pada jarak yang lebih tinggi penampang balok diukur dari muka kolom maka :

$$V_{ch} = 0,5 (A_s' / A_s) V_{jh} (1 + (N_{u,k} / 0,4 \cdot A_g f_c')) \quad (3-63)$$

dimana rasio A_s' / A_s tidak boleh diambil lebih besar dari satu.

Bila $\rho_c < 0,1 f_c'$ maka

$$V_{sh} = V_{jh} - 2/3 \sqrt{(N_{u,k} / A_g) - (0,1 f_c')} b_{jh} \quad (3-64)$$

Pada join rangka dengan melakukan relokasi sendi plastis

$$V_{sh} = V_{jh} - 0,5 (A_s' / A_s) V_{jh} (1 + (N_{u,k} / 0,4 \cdot A_g f_c')) \quad (3-65)$$

Luas total efektif dari tulangan geser horizontal yang melewati bidang kritis diagonal yang diletakkan di daerah tekan join efektif b_j tidak boleh kurang dari :

$$A_{jh} = V_{jh} / f_y \quad (3-66)$$

kegunaan sengkang horizontal ini harus didistribusikan secara merata di antara tulangan balok longitudinal atas dan bawah.

Geser join vertikal V_{jv} dapat dihitung dari :

$$V_{jv} = V_{jh} (h_c / h_j) \quad (3-67)$$

sedangkan tulangan join geser vertikal didapat dari :

$$V_{sv} = V_{jv} - V_{cv} \quad (3-68)$$

menjadi :

$$V_{cv} = A_{sc}' \frac{V_{sh}}{V_{sc}} \left[0,6 \cdot \frac{N_{u,k}}{A_g \cdot f_c'} \right] \quad (3-69)$$

dengan :

A_{sc}' = luas tulangan longitudinal tekan

A_{sc} = luas tulangan longitudinal tarik luas tulangan join vertikal

luas tulangan sengkang vertikal tidak boleh kurang dari :

$$A_{sv} = V_{sw} / f_y \quad (3-70)$$

3.3.6 Penulangan Balok

a. Analisis Balok Terlentur Bertulang Rangkap

Penulangan lentur balok bertulang rangkap menyangkut penentuan kuat nominal lentur suatu penampang M_{nak}^+ dan M_{nak}^- pada kedua ujung komponen balok dan penentuan momen nominal balok pada tengah bentang. Momen nominal aktual balok harus lebih besar atau sama dengan momen ultimit balok sebagai tanda tulangan lentur terpakai aman.

Langkah-langkah analisis penampang balok bertulang rangkap adalah sebagai berikut (Dipohusodo, 1996)

a) Tentukan rasio tulangan (ρ)

$$\rho_{min} < \rho \leq \rho_{maks}$$

$$\rho_b = \frac{0,85 \cdot f_c'}{f_y} \beta_1 \left(\frac{600}{600 + f_y} \right) \quad (3-71)$$

$$\rho_{min} = 1,4 / f_y$$

$$\rho_{maks} = 0,75 \cdot \rho_b$$

dengan :

ρ = rasio tulangan

f_c' = kuat desak beton

f_y = tegangan leleh ijin baja

$\beta_1 = 0,85$ untuk $f_c' \leq 30$ Mpa

$\beta_1 = 0,85 - 0,008 \cdot (f_c' - 30)$ untuk $f_c' > 30$ Mpa

b) Anggap bahwa segenap penulangan meluluh, maka : $f_s = f_s' = f_y$ dan $A_{s2} = A_{s'}$

c) Tentukan tinggi efektif balok

$$d' = p \text{ (selimut beton)} + \varnothing_{\text{tul. Sengkang}} + 1/2 \cdot \varnothing_{\text{tul. lentur}} \quad (3-72)$$

$$d' = h - d' \quad (3-73)$$

d) Tentukan A_s dan $A_{s'}$ dengan cara berikut ini

Tentukan luas tulangan tarik (seimbang dengan beton tekan)

$$A_{s1} = \rho \cdot b \cdot d \quad (3-74)$$

hitung gaya tarik

$$T = A_{s1} \cdot f_y \quad (3-75)$$

untuk pasangan kopel gaya beton tekan dan tulangan tarik

$$Mn_1 = T_1 \cdot (d - a/2) \quad (3-76)$$

dengan :

$$a = \beta_1 \cdot x$$

$$x = [600 / (600 + f_y)] \cdot d$$

Dari momen rencana balok M_u , didapat $Mn = 0,8 M_u$

jika, $Mn_1 < (Mn = 0,8 M_u)$

kelebihan Mn yang harus ditahan oleh tambahan tulangan tarik dan tulangan tekan.

$$Mn_2 = Mn - Mn_1 \quad (3-77)$$

$$Mn_2 = Cs.(d - d') \text{ atau } Mn_2 = T_2.(d - a/2) \quad (3-78)$$

$$T_2 = Cs = Mn_2/(d - d') \quad (3-79)$$

dianggap baja tekan leleh saat beton tekan mencapai regangan hancur 0,003 dan $fs' = fy$

Luas tulangan tekan :

$$As' = Cs / fs' \quad (3-80)$$

Tambahan luas tulangan tarik :

$$As_2 = T_2 / fy \quad (3-81)$$

Luas tulangan tarik :

$$As = As_1 + As_2 \quad (3-82)$$

- e) Dengan menggunakan keseimbangan gaya-gaya dalam, hitunglah tinggi balok tegangan tekan = a

$$T = Cc + Cs \quad (3-83)$$

$$As.fy = 0,85.fc'.b.a + As'.(fy - 0,85.fc') \quad (3-84)$$

didapat a

- f) Tentukan letak garis netral

$$x = a / \beta_1 \quad (3-85)$$

- g) Dengan menggunakan diagram regangan memeriksa regangan tulangan baja tekan maupun tarik, untuk membuktikan apakah anggapan pada langkah awal benar.

$$\varepsilon_s' = [(x - d')/x] \varepsilon_{cu} \quad (3-86)$$

$$\varepsilon_s = [(d - x)/x] \varepsilon_{cu} \quad (3-87)$$

dengan menganggap $\varepsilon_s \geq \varepsilon_y$, yang berarti tulangan baja tarik telah meluluh, akan timbul salah satu dari dua kondisi berikut ini:

- b. Kondisi 1: $\varepsilon_s \geq \varepsilon_y$, menunjukkan bahwa anggapan pada langkah awal betul dan tulangan baja tekan meluluh
- b. Kondisi 2: $\varepsilon_s \leq \varepsilon_y$, menunjukkan bahwa pada langkah awal tidak betul dan tulangan baja tekan belum luluh.

Kondisi 1:

- h) Periksa rasio tulangan,

$$\rho = A_{s1} / (b.d) \quad (3-88)$$

$$\rho_{\min} < \rho \leq \rho_{\max} \text{ memenuhi syarat}$$

- i) Hitung kapasitas momen teoritis M_{nak} .

$$Cc = 0,85.f_c'.b.a \quad (3-89)$$

$$Cs = A_s'.(f_y - 0,85.f_c') \quad (3-90)$$

$$M_{nak} = Cc [d - (a/2)] + Cs (d - d') \quad (3-91)$$

$$\phi.M_{nak} \geq Mu \quad \text{-tulangan aman-}$$

$$\text{dengan } \phi = 0,8$$

Kondisi 2:

- h) Mencari letak garis netral, dengan mengacu gambar 3.10 dan 3.11 menggunakan keseimbangan gaya-gaya horizontal akan didapat nilai x ,

$$T = Cc + Cs \quad (3-92)$$

$$As.fy = (0,85.fc').b.a + fs'.As' \quad (3-93)$$

Sedangkan

$$a = \beta_1.c \text{ dan } fs' = \epsilon_s'.E_s = [(x-d)0,003/x]E_s$$

dengan melakukan beberapa substitusi didapatkan

$$As.fy = 0,85.fc'.b. \beta_1.x + 0,003. [(x-d)0,003/x]E_s.As' \quad (3-94)$$

Apabila persamaan tersebut dikalikan dengan x, akan didapat:

$$As.fy.x = 0,85.fc'.b \beta_1.x^2 + x.0,003 E_s.As' - d'.0,003 E_s.As' \quad (3-95)$$

Setelah dilakukan pengelompokan, didapatkan persamaan

$$(0,85.fc'.b.\beta_1).x^2 + 0,003 E_s.As' - As.fy).x - d'(0,003) E_s.As' = 0 \quad (3-96)$$

dengan memasukan nilai $E_s = 200000 \text{ Mpa}$, persamaan menjadi:

$$(0,85.fc'.b.\beta_1).x^2 + (600.As' - As.fy) - 600.d'.As' = 0 \quad (3-97)$$

i) Menghitung tegangan pada tulangan baja tekan,

$$fs' = [(x-d')/x].600 \quad (3-98)$$

j) Priksa rasio tulangan,

$$As_2.fy = As'.fs' \quad (3-99)$$

$$As_1 = As - As_2 \quad (3-100)$$

$$\rho = As_1 / (b.d) \quad (3-101)$$

$$\rho_{\min} < \rho \leq \rho_{\max}, \text{memenuhi syarat}$$

k) Dapatkan a dengan menggunakan persamaan: $a = \beta_1.x$

l) Hitung kapasitas momen teoritis M_{nak} ,

$$Cc = 0,85.fc'.b.a \quad (3-102)$$

$$Cs = As'.(fy - 0,85.fc') \quad (3-103)$$

$$M_{nak} = Cc [d - (a/2)] + Cs (d - d') \quad (3-104)$$

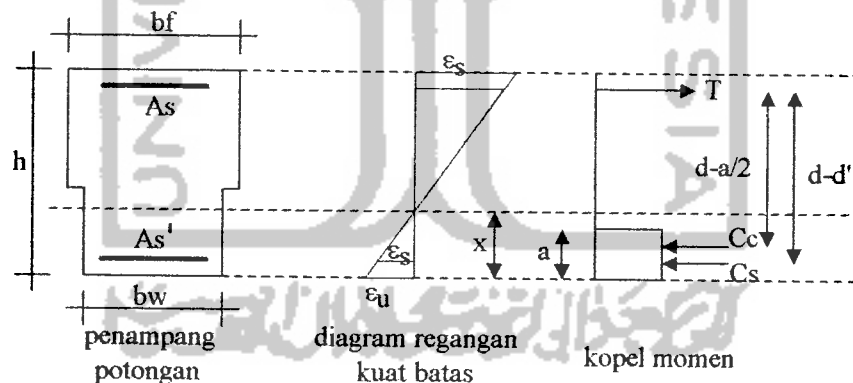
$$\phi M_{nak} \geq Mu \quad \text{-tulangan aman-}$$

dengan $\phi = 0,8$

Dari momen rencana balok didapat momen tumpuan negatif, momen tumpuan positif, dan momen lapangan. Dengan demikian masing-masing dianalisis berbeda sesuai letak penulangan masing-masing.

a) Analisis penulangan lentur tumpuan momen negatif

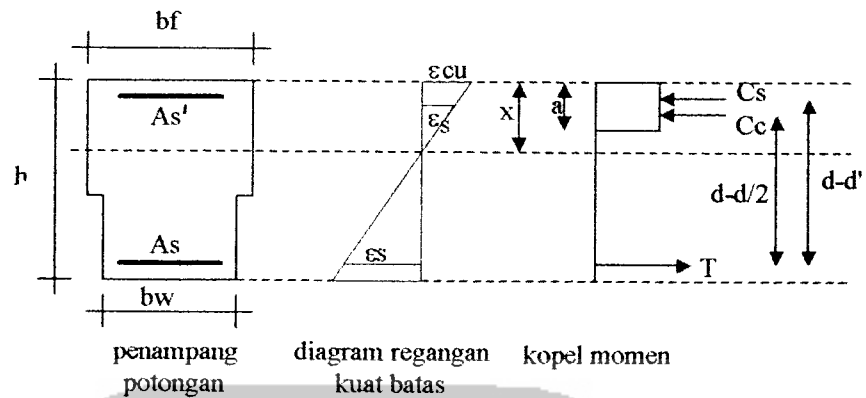
Pada momen tumpuan negatif maka A_s sebagai tulangan tarik berada di atas, dan A_s' sebagai tulangan tekan berada dibawah pada penampang balok, analisis tulangan rangkap sesuai Gambar 3.11 berikut ini.



Gambar 3.12 Analisis balok bertulang rangka tumpuan momen negatif

b) Analisis penulangan lentur tumpuan momen positif dan momen lapangan

Pada momen tumpuan positif dan momen lapangan, maka A_s sebagai tulangan tarik berada di bawah, dan A_s' sebagai tulangan tekan berada diatas pada penampang balok, analisis tulangan rangkap sesuai Gambar 3.12 berikut ini:



Gambar 3.13 Analisis balok bertulang rangkap tumpuan momen positif dan momen lapangan

b. Penulangan Geser Balok

Penulangan geser balok disesuaikan menurut perencanaan daktilitas penuh dan daktilitas terbatas.

a) Penulangan geser balok daktilitas penuh

Penulangan geser balok dihitung dengan rumus sebagai berikut.

(Kusuma dan Andriono, 1993) :

$$V_{u,b} \cdot \phi \leq V_c + V_s \quad (3-105)$$

$$V_c = 1/6 \cdot \sqrt{f_c'} \cdot b_w \cdot d \quad (3-106)$$

$$V_s = (A_v \cdot f_y \cdot d) / S \quad (3-107)$$

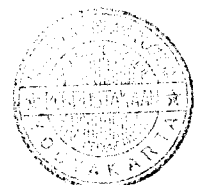
dengan :

$V_{u,b}$ = gaya geser rencana balok

ϕ = 0,6

V_c = gaya geser yang ditahan oleh beton

V_s = gaya geser yang ditahan tulangan geser



- f_c' = kuat tekan beton
 f_y = tegangan ijin leleh baja
 b_w = lebar badan penampang balok
 d = tinggi efektif balok
 S = jarak tulangan geser

- Penulangan geser pada daerah sendi plastis minimum $2.h$ dari muka kolom ke tengah bentang. $V_c = 0$
- Penulangan geser pada daerah diluar sendi plastis dari $2.h$ ke arah tengah bentang.

$$V_c = 1/6 \cdot \sqrt{f_c'} \cdot b_w \cdot d \quad (3-108)$$

- Jarak sengkang maksimum pada lokasi sendi plastis (SK-SNI, 1991)
 - $d/4$
 - $8 \cdot \phi_p$, diameter tul. Pokok
 - $24 \cdot \phi_s$, diameter sengkang
 - 200 mm
 - $1600 \cdot f_y \cdot A_s / [(A_s, a + A_s, b) \cdot f_y]$
 - Jarak sengkang maksimum di luar sendi plastis. $D/2$ (SK-SNI, 1991)

3.3.7 Penulangan Kolom

a. Analisis Penulangan Lentur dan Aksial Kolom

Penulangan lentur dan aksial kolom dianalisis dengan menggunakan diagram interaksi kolom . Tulangan terdistribusi secara simetris dengan memperhatikan keserasian regangan. Misal: penampang dengan empat lapis tulangan (lihat Gambar 3.14) dengan gaya aksial tekan bekerja pada salah satu

sumbu utamanya. Jarak masing-masing tulangan terhadap serat beton yang tertekan di dapat ditentukan sebagai berikut (Wahyu dan Rahim, 1997) :

Untuk lapis pertama $As_1 : d_1 = d'$

kedua $As_2 : d_2 = d' + 1(h - 2d')/3$

ketiga $As_3 : d_3 = d' + 2(h - 2d')/3$

keempat $As_4 : d_4 = d' + 3(h - 2d')/3$

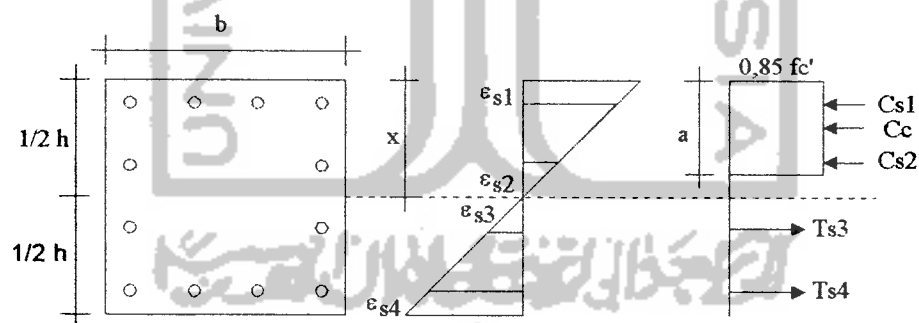
dengan melihat bentuk persamaan tersebut, dapat dibuat rumus umum untuk jarak tulangan di sebagai :

$$d_i = d' + [i - 1](h - 2d')/(N - 1) \quad (3-109)$$

dengan :

i = nomor lapis tulangan

N = banyaknya garis tulangan



Gambar 3.14 Penampang dengan tulangan terdistribusi merata pada keempat sisinya

Besarnya regangan yang terjadi pada lapis tulangan ke-i, dapat ditetapkan melalui perbandingan segitiga, dengan regangan maksimum pada beton adalah 0,003.

Dengan demikian untuk tulangan ke-i

$$\varepsilon_{si} = 0,003 \cdot [(x - di)/x] \quad (3-110)$$

Sebagaimana sebelumnya x adalah jarak sumbu netral terhadap serat terluar. Dengan memperhatikan persamaan tersebut, dapat diketahui bahwa harga ε_{si} akan negatif untuk regangan tarik ataupun positif untuk regangan tekan.

Selanjutnya tegangan pada lapis tulangan ke- i dapat dirumuskan menjadi :

$$f_{si} = \varepsilon_{si} \cdot E_s \quad (3-111)$$

$$f_{si} = 0,003 \cdot [(x - di)/x] \cdot 200000 \quad (3-112)$$

Bila

$$\varepsilon_{si} \geq f_y / E_s, \text{ maka } f_{si} = f_y$$

$$f_y / E_s > \varepsilon_{si} > -f_y / E_s, \text{ maka } f_{si} = \varepsilon_{si} \cdot E_s$$

$$\varepsilon_{si} \leq -f_y / E_s, \text{ maka } f_{si} = -f_y$$

Gaya pada tulangan ke- i , menjadi

$$P_i = f_{si} \cdot A_{si} \quad (3-113)$$

Dengan mengacu pada Gambar 3.13, dapat disusun persamaan keseimbangan :

$$P_n - C_c - \sum f_{si} \cdot A_{si} = 0 \quad (3-114)$$

$$P_n = 0,85 \cdot f_c' \cdot a \cdot b - \sum f_{si} \cdot A_{si} \quad (3-115)$$

Momen terhadap pusat platisnya adalah :

$$P_n e = C_c \cdot 1/2 \cdot (h - a) + \sum_{i=1}^n f_{si} \cdot A_{si} (1/2 \cdot h - di) \quad (3-116)$$

Perlu diperhatikan bahwa bila :

$$di < a, \text{ maka harga } f_{si} = f_{si} - 0,85 \cdot f_c'$$

$$di > a, \text{ maka harga } f_{si} = f_{si}$$

b. Analisa Keruntuhan Kolom

Analisa keruntuhan kolom dapat ditinjau eksentrisitas kolom terhadap eksentrisitas balancenya.

- a. Jika $e > e_b \rightarrow$ keruntuhan akibat adanya gaya tarik, maka :

$$P_n = 0,85 \cdot f_c' \cdot b \cdot d \cdot \left[\frac{h - 2 \cdot e}{2 \cdot d} + \sqrt{\left[\frac{h - 2 \cdot e}{2 \cdot d} + 2 \cdot m \cdot \rho_b \cdot \left(1 - \frac{d'}{d} \right) \right]} \right] \quad (3-117)$$

dengan :

$$\rho_b = \frac{0,85 \cdot f_c'}{f_y} \cdot \beta_1 \cdot \left(\frac{600}{600 + f_y} \right)$$

$$m = \frac{f_y}{(0,85 \cdot f_c')}$$

jika $\phi \cdot p_n < P_u$, jumlah tulangan harus diperbanyak.

- b. jika $e < e_b \rightarrow$ keruntuhan akibat adanya gaya desak, maka :

$$P_n = \left[\frac{A_s' \cdot f_y}{\frac{e}{(d - d')} + 0,5} \right] + \left[\frac{b \cdot h \cdot f_c'}{\frac{3 \cdot h \cdot e}{d^2 + 1,18}} \right] \quad (3-118)$$

jika $\phi \cdot p_n < P_u$, jumlah tulangan harus diperbanyak

dengan :

$$a = \frac{P_n}{0,85 \cdot f_c' \cdot b}$$

$$c = \frac{a}{\beta_1}$$

$$f'_{sb} = \frac{600 \cdot (c - d')}{c} > f_y$$

Penulangan dinyatakan aman jika memenuhi syarat :

$$P_u \leq \phi P_n \quad (3-119)$$

dengan :

P_u = beban aksial rencana terfaktor

ϕ = 0,65 (faktor reduksi kekuatan menurut SK-SNI-1991)

c. Pengaruh Kelangsingan Kolom

Kelangsingan kolom berpengaruh kepada pembesaran kolom, syarat menurut SK-SNI-1991, kolom tidak langsing jika :

$\frac{k.L}{r} < 34 - 12 \cdot \frac{M_1 b}{M_2 b}$, untuk komponen struktur tekan yang ditahan terhadap goyangan kesamping.

$\frac{k.L}{r} < 22$, untuk komponen struktur tekan yang tidak ditahan terhadap goyangan kesamping.

Dengan :

k = faktor panjang efektif

L = panjang beban kolom tanpa penopang

$r = \sqrt{I_g/A_g}$ = jari-jari girasi

Faktor panjang efektif k merupakan fungsi dari faktor kekangan ujung ψ_a dan ψ_b untuk masing-masing titik ujung atas dan bawah yang didefinisikan sebagai. (Wang dan Salmon, 1993).

$$\psi = (\sum E.I_k/l_k)/(\sum E.I_b/l_b) \quad (3-120)$$

Untuk EI_k kekakuan batang kolom boleh ditetapkan sebagai :

$$E.I_k = (E_c I_g / 2,5) / (1 + \beta_d) \quad (3-121)$$

Untuk Eib kekakuan batang balok boleh ditetapkan sebagai :

$$E.I_b = (E_c I_g / 5) / (1 + \beta_d) \quad (3-122)$$

dengan :

$E_c = 4700 \cdot \sqrt{f_{c'}}$ = modulus elastisitas beton

I_g = Inersia penampang beton

β_d = rasio perbandingan momen beban mati terfaktor terhadap momen total terfaktor

Untuk menetapkan faktor panjang efektif kolom, maka dibedakan pada portal tidak bergoyang dan portal bergoyang.

Untuk portal tidak bergoyang, *British Code of Standard Practice*, 1972 menyarankan k digunakan harga terkecil dari persamaan berikut ini.

$$k = 0,7 + 0,05 (\psi_a + \psi_b) \leq 1,0 \quad (3-123)$$

$$k = 0,85 + 0,05 \psi_{min} \leq 1,0 \quad (3-124)$$

Untuk portal bergoyang, menurut rumus *Furlong* harga k ditentukan sebagai berikut ini.

$$k = \frac{20 - \Psi_{rata-rata}}{20} \sqrt{1 + \Psi_{rata-rata}} \quad \text{jika } \Psi_{rata-rata} < 2 \quad (3-125)$$

$$k = 0,9 \cdot \sqrt{1 + \Psi_{rata-rata}} \quad \text{jika } \Psi_{rata-rata} \geq 2 \quad (3-126)$$

d. Metode Pembesaran Momen pada Kolom Langsing

Pada kolom langsing dengan ketentuan $k.L < 100$, hitungan kekuatan kolom dilakukan dengan metode pembesaran momen. Perancangan dari kolom

tersebut didasarkan atas pembesaran momen yang bekerja sedemikian sehingga kolom tersebut bisa direncanakan sebagai kolom pendek (Sudarmoko, 1995)

Pembesaran momen dihitung dengan rumus (SK-SNI, 1991)

$$M_c = \delta_b M_{2b} + \delta_s M_{2s} \quad (3-127)$$

dengan :

M_c = momen terfaktor yang digunakan untuk perencanaan komponen struktur tekan.

δ_b = faktor pembesaran untuk momen akibat beban yang tidak menimbulkan goyangan berarti.

δ_s = faktor pembesaran untuk momen akibat beban yang menimbulkan goyangan.

M_{2b} = momen terfaktor akibat beban yang tidak menimbulkan goyangan.

M_{2s} = momen terfaktor akibat beban yang menimbulkan goyangan.

Faktor δ_b dan δ_s adalah pembesaran momen yang secara empiris dapat ditentukan sebagai berikut :

$$\delta_b = \frac{C_m}{1 - \frac{P_u}{\phi P_c}} \geq 1,0 \quad (3-128)$$

$$\delta_s = \frac{1}{1 - \frac{\sum P_u}{\phi \sum P_c}} \geq 1,0 \quad (3-129)$$

di mana P_c adalah beban tekuk Euler,

$$P_c = (\pi^2 EI) / (k.L)^2 \quad (3-130)$$

dan P_u adalah beban rencana aksial terfaktor, ΣP_u dan ΣP_c adalah jumlah untuk semua kolom dalam satu tingkat, C_m adalah faktor koreksi seperti ditentukan berikut ini.

Untuk komponen struktur portal tidak bergoyang dan tanpa beban transversal pada dukungan,

$$C_m = 0,60 + 0,40 (M_1b / M_2b) \geq 0,40 \quad (3-131)$$

e. Penulangan Geser Kolom

Penulangan geser kolom menurut SK-SNI-1991 dibagi menjadi dalam dua daerah yaitu dalam daerah l_o dan luar l_o . Daerah yang berpotensi terjadi sendi plastis adalah sepanjang l_o dari muka kolom yang ditinjau dimana l_o tidak boleh kurang dari :

- $l_o \geq h$, bila $N_{u,k} \leq 0,3 A_g \cdot A_g$
- $l_o \geq 1,5h$, bila $N_{u,k} > 0,3 A_g \cdot f_c'$
- 1/6 bentang bersih kolom
- 450 mm

Penulangan geser kolom

- Penulangan geser dalam daerah l_o

$$\frac{V_{u,k}}{\phi} \leq 0 + V_{s,k} \quad (3-132)$$

dengan :

$V_{u,k}$ = gaya geser rencana kolom

ϕ = 0,6

$V_{s,k} = (A_v \cdot f_y \cdot d) / S$

A_v = luas penampang tulangan sengkang

f_y = tegangan ijin leleh baja

d = tinggi efektif kolom

S = jarak tulangan geser

Tulangan geser kolom harus dipasang pada daerah l_o dengan jarak maksimum (SK-SNI-1991) :

- 1/4 dimensi komponen struktur terkecil
- 8.Ø kali diameter tulangan longitudinal
- 100 mm
- Penulangan geser luar daerah l_o

$$\frac{V_{u,k}}{\phi} \leq V_c + V_{s,k} \quad (3-133)$$

dengan gaya geser yang ditahan beton :

$$V_c = \left[1 + \frac{N_{u,k}}{14.A_g} \right] \cdot \frac{1}{6} \cdot \sqrt{f_c'} \cdot b \cdot d \quad (3-134)$$

dengan :

N_u = gaya geser aksial yang terjadi pada kolom yang ditinjau

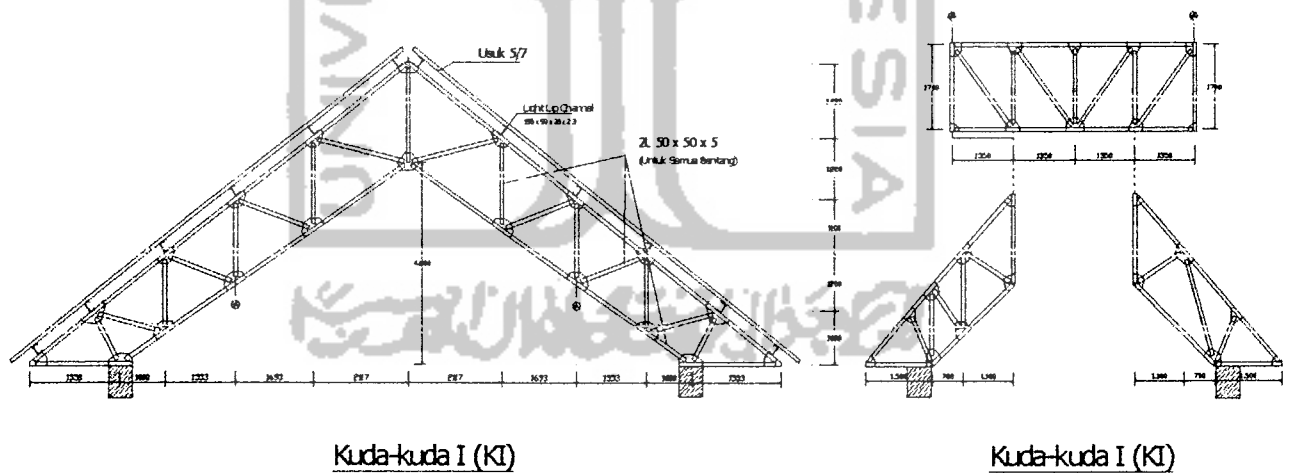
A_g = luas penampang kolom

b_w = lebar komponen kolom terkecil

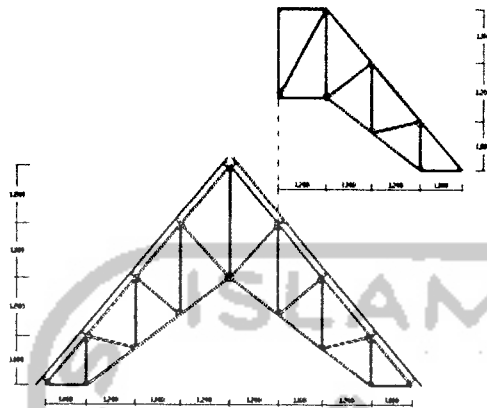
BAB IV

PERENCANAAN ATAP

Perencanaan atap meliputi, perencanaan gording, perencanaan sagrod, dan perencanaan rangka baja atap, dengan metoda AISC-LRFD93 perencanaan atap disajikan dalam gambar dibawah ini.



Gambar 4.1 Rangkaian Profil Kuda-kuda 1



Gambar 4.2 Rangkaian Profil Kuda-kuda 2

4.1 Perencanaan Gording

Asumsi untuk perencanaan gording didasarkan pada gording yang menerima beban terbesar dengan bentang terpanjang dan desain struktur disamakan untuk semua gording

4.1.1 Pembebanan Gording

Pembebanan gording terdiri dari :

a. Beban Mati (DL).

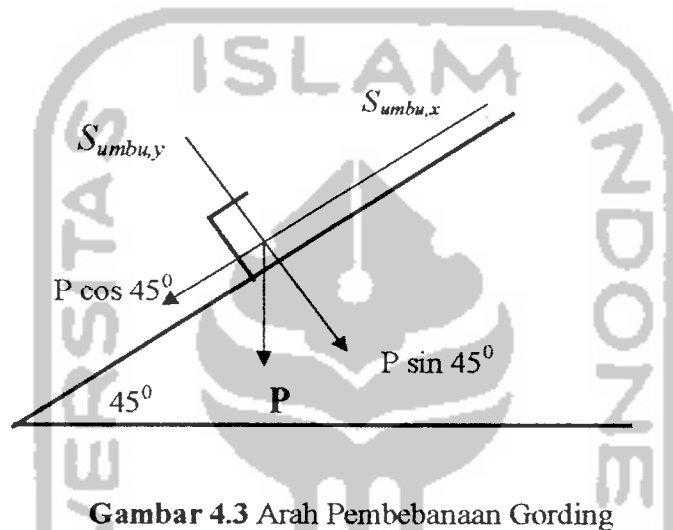
- Penutup atap genteng beton, usuk dan reng $60 \text{ Kg/m}^2 \times 1.65 \text{ m} = 99 \text{ Kg/m}$
 - Berat sendiri gording $= 10 \text{ Kg/m}$
-
- $= 109 \text{ Kg/m}$

b. Beban Hidup (LL)

- Beban Pekerja $= 100 \text{ Kg}$

c. Beban Angin (WL).

- Angin Tekan $q_t = (0,02 \alpha - 0,4) \cdot 60 \text{ Kg/m}^2 \times 1,65 \text{ m} = 49,5 \text{ Kg/m}$
- Angin Hisap $q_h = (-0,4) \times 60 \text{ Kg/m}^2 \times 1,65 \text{ m} = -39,6 \text{ Kg/m}$



Gambar 4.3 Arah Pembebanan Gording

Tabel 4.1 Pembebanan dan Momen Arah Sumbu X dan Sumbu Y Gording

Jenis Pembebanan	q_x	P_x	q_y	P_y	M_x	M_y
	(Kg.m)	(Kg)	(Kg)	(Kg)	(Kg.m)	(Kg.m)
	1	2	3	4	5	6
a. Beban Mati (DL)	77,0746		77,0746		195,0951	48,7738
b. Beban Hidup (LL)		70,7107		70,7107	78,75	78,75
c. Beban Angin (WL)						
• Tiup	49,5		49,5		125,2969	31,324
• Hisap	39,6		39,6		100,2375	25,0594

Keterangan Tabel

1. Pembebanan sejajar gording $q_x = P_x = \text{beban} \sin 45^\circ$
2. Pembebanan tegak lurus gording $q_y = P_y = \text{beban} \cdot \cos 45^\circ$
3. Momen untuk beban merata $M_x = M_{//} = 1/8 q_x L^2$
4. Momen untuk beban merata $M_y = M_{\perp} = 1/32 q_y L^2$
5. Momen untuk beban terpusat $M_x = M_y = 1/4 \cdot P \cdot L$

Dengan $L = 4,5 \text{ m}$

Tabel 4.2 Kombinasi Momen AISC-LRFD93

No	Kombinasi	$M_{u,x}$ (Kg.m)	$M_{u,y}$ (Kg.m)
1.	$1,4 M_D$	273,1331	68,2833
2.	$1,2 M_D + 1,6 M_L$	360,1141	184,5286
3.	$1,2 M_D + 0,5 M_L + 1,3 M_w$	436,3731	138,6248
4.	$1,2 M_D + 0,5 M_L - 1,3 M_w$	143,1804	65,3263
5.	$0,9 M_D + 1,3 M_w$	338,4715	84,6176
6.	$0,9 M_D - 1,3 M_w$	45,2768	11,3192

4.1.2 Pendimensionan Gording

$M_{u,x}$ = kNm (kombinasi maksimum)

Diambil mutu baja $f_y = 240$ MPa, asumsi penampang kompak

Kekuatan desainnya adalah : $\phi_b \cdot Z_x \cdot F_y \geq M_{u,x}$

$$Z_x \text{ (yang diminta)} = \frac{M_{u,x}}{\phi_b \cdot F_y} = \frac{436,3751 \cdot 10^2}{0,9 \cdot 2400} = 20,203 \text{ cm}^3$$

Pilih profil dari tabel LRFD

Coba Light Lip Canal 150 X 50 X 20 X 4,5

$$Z_x = 49 \text{ cm}^3 \quad I_x = 368 \text{ cm}^4$$

$$Z_y = 10,5 \text{ cm}^3 \quad I_y = 35,7 \text{ cm}^4$$

1. Cek batas penampang kompak

Untuk sayap

$$\lambda = \frac{b_f}{t_f} = \frac{50}{4,5} = 10,8 < \lambda_p = \frac{170}{\sqrt{f_y}} = \frac{170}{\sqrt{240}} = 10,97 \text{ -aman-}$$

Untuk badan

$$\lambda = \frac{h_c}{t_w} = \frac{150}{4,5} = 32,61 < \lambda_p = \frac{1680}{\sqrt{f_y}} = \frac{1680}{\sqrt{240}} = 108,44 \text{ -aman-}$$

2. Cek Tegangan

$$fb_x = M_x / Z_x$$

$$fb_x = 436,3751 \cdot 10^2 / 49 = 880,561 \text{ Kg/cm}^2$$

$$fb_y = M_y / Z_y$$

$$fb_y = 154,5286 \cdot 10^2 / 10,5 = 1605,415 \text{ Kg/cm}^2$$

$$\frac{fb_x}{0,66 \cdot fy} + \frac{fb_y}{0,75 \cdot fy} \leq 1,0$$

$$\frac{880561}{0,66 \cdot 2400} + \frac{1605415}{0,75 \cdot 2400} = 0,97 < 1 \quad \text{- aman -}$$

3. Cek berat Gording

$$W < W \text{ taksiran}$$

$$9,20 \text{ Kg/m} < 10 \text{ Kg/m} \quad \text{- aman -}$$

4. Cek lendutan

- Panjang gording $L = 4,5 \text{ m}$
- $E = 200.000 \text{ MPa}$
- $I_y = 357000 \text{ mm}^4$
- Cek lendutan terhadap arah - x

$$\begin{aligned} \Delta_x &= \frac{5 \cdot q_x \cdot L^4}{384 \cdot EI_x} + \frac{1}{48} \cdot \frac{P_x \cdot L^3}{EI_x} \\ &= \frac{5,0 \cdot 7707 \cdot 4500^4}{384 \cdot 200000 \cdot 368 \cdot 10^4} + \frac{1}{48} \cdot \frac{0,7071 \cdot 4500^3}{200000 \cdot 368 \cdot 10^4} \text{ mm} \\ &= 5,593 \text{ mm} < L/360 = 12,5 \text{ mm} \end{aligned}$$

- Cek lendutan terhadap arah - y

$$\begin{aligned} \Delta_y &= \frac{5 \cdot q_y \cdot [L/(a+1)]^4}{384 \cdot EI_y} + \frac{1}{48} \cdot \frac{P_y \cdot [L/(a+1)]^4}{EI_y} \\ \Delta_y &= \frac{5,0 \cdot 7707 [4500/1+1]^4}{384 \cdot 200000 \cdot 35,7 \cdot 10^4} + \frac{1}{48} \cdot \frac{0,7071 [4500/(1+1)]^4}{200000 \cdot 35,7 \cdot 10^4} \end{aligned}$$

$$\Delta_y = 8,8899 \text{ mm} < L/360 = 12,5 \text{ mm}$$

$$\Delta = \sqrt{\Delta_x + \Delta_y} < L/360$$

$$\Delta = \sqrt{5,593 + 8,8899}$$

$$\Delta = 3,8056 \text{ mm} < 12,5 \text{ mm} \quad - \text{ aman } -$$

4.2 Perencanaan Sagrod

4.2.1 Pembebanan Sagrod

a. Beban Mati (D)

- Beban penutup atap : $0,6 \text{ kN/m}^2 \times 1,65 \text{ m} \times 1,5 \text{ m} = 1,485 \text{ kN}$
 - Beban gording : $0,092 \text{ kN/m} \times 1,5 \text{ m} = 0,138 \text{ kN}$
 - Beban sagrod taksiran : $0,03 \text{ kN/m} \times 1,5 \text{ m} = 0,045 \text{ kN}$
-
- $P_D = 1.668 \text{ kN}$

b. Beban Hidup (L)

- Beban pekerja $P_L = 1 \text{ kN}$

c. Beban Angin (W)

- Angin Tiup $q_t = (0,02 \alpha - 0,4) \cdot 0,6 \text{ kN/m}^2 \times 1,65 \text{ m} \times 1,5 \text{ m} = 0.743 \text{ kN}$
- Angin Hisap $q_h = (-0.4) \times 0,6 \text{ kN/m}^2 \times 1,65 \text{ m} \times 1,5 \text{ m} = -0,594 \text{ kN}$

Kombinasi pembebanan terbesar

$$N_U = 1,2.P_D + 1,3.P_W + 0,5.P_L$$

$$N_U = 1,2.1,668 + 1,3.0,743 + 0,5.1$$

$$= 3,468 \text{ kN}$$

$$N_{U,x} = 3,468 \cdot \sin 45^\circ = 2,452 \text{ kN}$$

4.2.2 Pendimensian Sagrod

$$N_U \leq \phi.N_U$$

$$N_U \leq 0,9.A_g.f_y$$

$$A_g = \frac{N_{U,x}}{0,9.f_y} = \frac{2,452.10^3}{0,9.240} = 11,352 \text{ mm}^2$$

Dipakai diameter sagrod $D = 12 \text{ mm}$

$$A_g = 1/4.\pi.D^2$$

$$A_g = 1/4.\pi.12^2 = 113,09 \text{ mm}^2 > 11,352 \text{ mm}^2 \quad \text{-aman-}$$

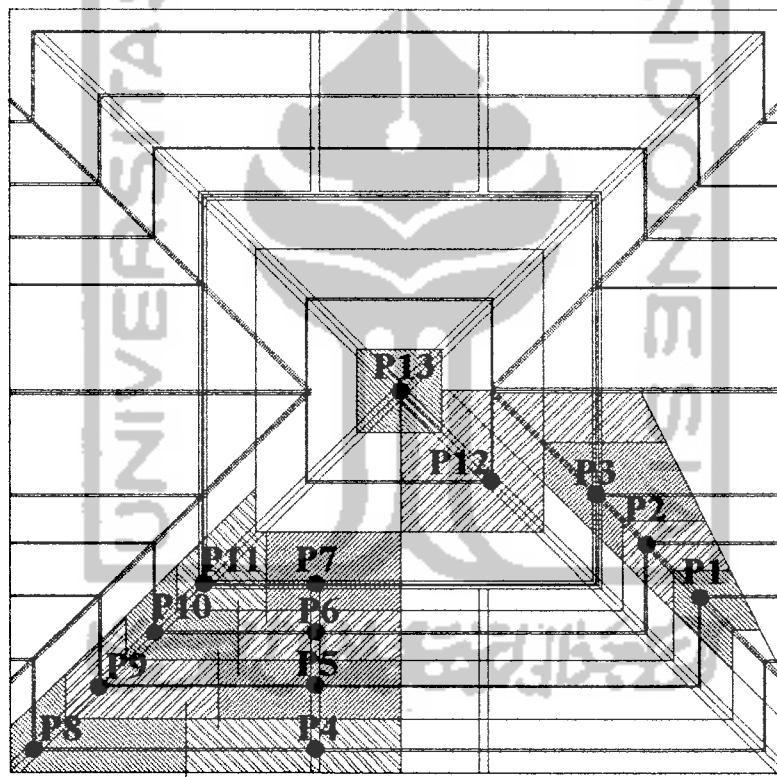
4.3 Perencanaan Kuda-Kuda Rangka Baja

Perencanaan kuda-kuda baja meliputi, pembebanan kuda-kuda, analisis struktur, gaya batang rencana, pendimensian, dan perencanaan sambungan titik buhul.

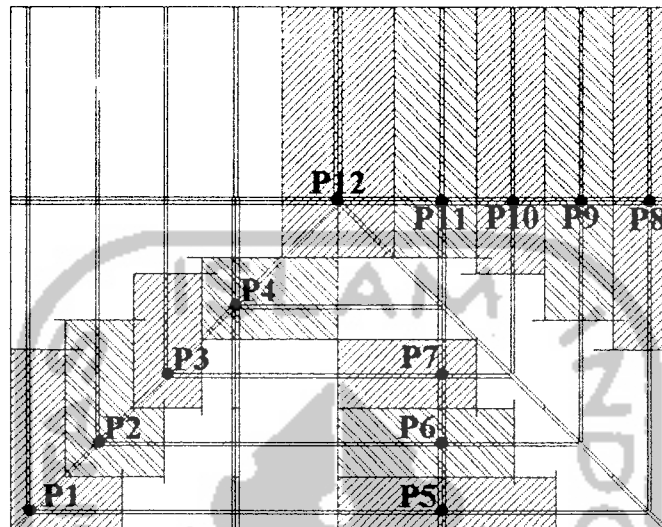
Jenis kuda-kuda yang direncanakan disajikan dalam gambar 4.1 dan gambar 4.2

4.3.1 Perencanaan Pembebanan Kuda-Kuda

Sistem Pembebanan dilakukan dengan cara membagi luasan beban yang membebani gording yang mana terlihat pada gambar dibawah ini.



Gambar 4.4 Rencana Pembebanan Kuda-kuda 1



Gambar 4.5 Rencana Pembebanan Kuda-kuda 2

Beban-Beban Untuk Atap

a. Beban Mati

- Penutup atap genteng beton,
usuk, sagrot dan reng $= 0,600 \text{ kN/m}^2$
 - Berat gording $= 0,092 \text{ kN/m}^2$
- $q_D = 0,692 \text{ kN/m}^2$

b. Beban Hidup

$$P_L = 1,000 \text{ kN/m}^2$$

c. Beban Angin

- Angina Tiup $q_t = (0,02 \alpha - 0,4) \cdot 0,6 \text{ kN/m}^2 = 0,30 \text{ kN/m}^2$
- Angin Hisap $q_h = (-0,4) \times 0,6 \text{ kN/m}^2 = -0,24 \text{ kN/m}^2$

1) Perencanaan Beban Kuda-Kuda I

- Beban Hidup $P = 1,0 \text{ kN}$
- Beban Mati dan Beban Angin disajikan dalam table dibawah ini

Tabel 4.4 Beban Mati Kuda-Kuda I

No	Notasi	Pemutup Atap			Gording			Berat total (kN)
		luas	beban	Berat total	Panjang	beban	Berat total	
		(m ²)	(kN/m ²)	(kN)	(m)	(kN/m ²)	(kN)	
1	P1	2,428	0,6	1,457	1,56	0,092	0,144	1,600
2	P2	3,515	0,6	2,109	2,16	0,092	0,199	2,308
3	P3	4,66	0,6	2,796	2,71	0,092	0,249	3,045
4	P4	4,41	0,6	2,646	3,65	0,092	0,336	2,982
5	P5	4,9	0,6	2,940	3,15	0,092	0,290	3,230
6	P6	4,2	0,6	2,520	2,575	0,092	0,237	2,757
7	P7	3,34	0,6	2,004	2,025	0,092	0,186	2,190
8	P8	4,06	0,6	2,436	3,36	0,092	0,309	2,745
9	P9	4,45	0,6	2,670	2,86	0,092	0,263	2,933
10	P10	3,725	0,6	2,235	2,285	0,092	0,210	2,445
11	P11	2,87	0,6	1,722	1,375	0,092	0,127	1,849
12	P12	9,89	0,6	5,934	5,5	0,092	0,506	6,440
13	P13	1,414	0,6	0,848	0	0	0	0,848

$$P3' = (P1 + P2)/2 + P3$$

Tabel 4.5 Beban Angin Kuda-Kuda I

No	Notasi	Luas (m2)	Angin Tiup			Angin Hisap		
			Beban	P	$P \cdot \alpha$	Beban	P	$P \cdot \alpha$
			kN/m2	kN	kN	kN/m2	kN	kN
1	P1	0,778	0,3	0,233	0,199	0,24	0,187	0,159
2	P2	1,79	0,3	0,537	0,457	0,24	0,430	0,366
3	P3	2,716	0,3	0,815	0,693	0,24	0,652	0,555
4	P4	4,41	0,3	1,323	1,126	0,24	1,058	0,901
5	P5	4,9	0,3	1,470	1,251	0,24	1,176	1,001
6	P6	4,2	0,3	1,260	1,072	0,24	1,008	0,858
7	P7	3,34	0,3	1,002	0,853	0,24	0,802	0,682
8	P8	2,78	0,3	0,834	0,710	0,24	0,667	0,568
9	P9	2,8	0,3	0,840	0,715	0,24	0,672	0,572
10	P10	2	0,3	0,600	0,511	0,24	0,480	0,408
11	P11	1,12	0,3	0,336	0,286	0,24	0,269	0,229
12	P12	5,5	0,3	1,650	1,404	0,24	1,320	1,123
13	P13	0,354	0,3	0,106	0,090	0,24	0,085	0,072

2) Perencanaan Beban Kuda-Kuda II

- Beban Hidup $P = 1,0 \text{ kN}$

Beban Mati dan Beban Angin disajikan dalam table dibawah ini

Tabel 4.6 Beban Mati Kuda-kuda II

No	Notasi	Penutup Atap			Gording			Berat total (kN)
		luas	beban	Berat total	Panjang	beban	Berat total	
		(m ²)	(kN/m ²)	(kN)	(m)	(kN/m ²)	(kN)	
1	P1	4,72	60	283,2	3,9	2,1	8,19	291,39
2	P2	4,43	60	265,8	2,9	2,1	6,09	271,89
3	P3	2,765	60	165,9	1,7	2,1	3,57	169,47
4	P4	2,925	60	175,5	1,8	2,1	3,78	179,28
5	P5	45	60	2700	2,85	2,1	5,985	2705,985
6	P6	3,58	60	214,8	2,35	2,1	4,935	219,735
7	P7	2,845	60	170,7	1,75	2,1	3,675	174,375
8	P8	5,44	60	326,4	4,5	2,1	9,45	335,85
9	P9	6,22	60	373,2	4	2,1	8,4	381,6
11	P10	5,53	60	331,8	3,4	2,1	7,14	338,94
12	P11	4,635	60	278,1	2,85	2,1	5,985	284,085
13	P12	4,84	60	290,4	4,5	2,1	9,45	299,85

Tabel 4.7 Beban Angin Kuda-Kuda II

No	Notasi	Luas (m ²)	Angin Tiup			Angin Hisap		
			Beban	P	P* α	Beban	P	P* α
			kN/m ²	kN	kN	kN/m ²	kN	kN
1	P1	2,72	0,3	0,816	0,694	0,24	0,653	0,555
2	P2	2,72	0,3	0,816	0,694	0,24	0,653	0,555
3	P3	1,87	0,3	0,561	0,477	0,24	0,449	0,382
4	P4	0,975	0,3	0,293	0,249	0,24	0,234	0,199
5	P5	3,45	0,3	1,035	0,881	0,24	0,828	0,705
6	P6	3,58	0,3	1,074	0,914	0,24	0,859	0,731
7	P7	2,845	0,3	0,854	0,726	0,24	0,683	0,581
8	P8	5,44	0,3	1,632	1,389	0,24	1,306	1,111
9	P9	6,22	0,3	1,866	1,588	0,24	1,493	1,270
10	P10	5,53	0,3	1,659	1,412	0,24	1,327	1,129
11	P11	4,635	0,3	1,391	1,183	0,24	1,112	0,947
12	P12	2,42	0,3	0,726	0,618	0,24	0,581	0,494
13	P13	0,354	0,3	0,106	0,090	0,24	0,085	0,072

4.3.2 Pendimensian Kuda-Kuda Rangka Baja

Pendimensian kuda-kuda rangka baja ini disamakan untuk semua rangka baja kuda-kuda, untuk memudahkan dalam pengadaan maupun pekerjaan. Pendimensian dilakukan dengan cara coba-coba dengan menggunakan Program SAP 2000, sehingga diperoleh profil yang aman dan optimum dan di pilih profil 2L 50 x 50 x 5 -10

Contoh hitungan

- Batang Tekan

- Data-data

Porfil 2L 50 x 50 x 5 -10

Frame : K2B4 dengan Units : N-mm

$P_u = -42973,65 \text{ N}$

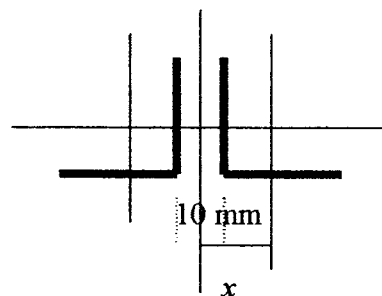
$L = 1174 \text{ mm}$

$A = 480 \text{ mm}^2$ $I_x = I_y = 110000 \text{ mm}^4$ $r_x = r_y = 15000 \text{ mm}$

$E = 200000 \text{ Mpa}$ $f_y = 240 \text{ Mpa}$

- Cek angka kelangsingan batang tekan : $\frac{kL}{r} < 200$

mencari r gabungan dan dipilih yang terkecil :



$$x = e + tp/2 = 14 + 10/2 = 19 \text{ mm}$$

$$\begin{aligned}
 I_y \text{ untuk dua profil} &= 2 (I_y + A.x^2) \\
 &= 2 (11.10^4 + 480.19^2) \\
 &= 566560 \text{ mm}^4
 \end{aligned}$$

$$r_y = \sqrt{(I_y / Ag)} = \sqrt{(566560 / 2.480)} = 24,29 \text{ mm}$$

$$I_x \text{ dua profil} = 2.I_x = 2.110000 = 22.10^4 \text{ mm}^4$$

$$r_x = \sqrt{(I_x / Ag)} = \sqrt{(220000 / 2.480)} = 15,14 \text{ mm}$$

$$\text{dipilih } r \text{ terkecil} = r_x = 15.14 \text{ mm}$$

$$\frac{kL}{r} = \frac{1.1174}{15,14} = 77,54 \text{ maka } \frac{kL}{r} < 200 \text{ -aman-}$$

- Parameter kelangsingan batang tekan

$$\lambda_c = \frac{kL}{\pi r} \sqrt{\frac{f_y}{E}}$$

$$\lambda_c = \frac{1.1174}{\pi \cdot 15,14} \sqrt{\frac{240}{20000}} = 0,855$$

$$\text{untuk } 0,25 < (\lambda_c = 0,855) < 1,2$$

$$\begin{aligned}
 \omega &= 1,43 / (1,6 - 0,67 \cdot \lambda_c) \\
 &= 1,43 / (1,6 - 0,67 \cdot 0,855) = 1,392
 \end{aligned}$$

- Kuat tekan nominal

$$\begin{aligned}
 \phi.P_n &= \phi.A_g.(f_y / \omega) \\
 &= 0,87.960.(240 / 1,392) \\
 &= 144000 \text{ N} = 144 \text{ kN}
 \end{aligned}$$

$$- \phi P_n > P_u$$

$$144000 \text{ kN} > 42973,65 \text{ kN} \quad - \text{aman} -$$

• Batang Tarik

- Data-data :

Porfil 2L 50 x 50 x 5 -10

Frame : K2D4 dengan Units : N-mm

$$P_u = 19888,42 \text{ N}$$

$$L = 1742,022 \text{ mm}$$

$$A = 480 \text{ mm}^2 \quad I_x = I_y = 110000 \text{ mm}^4 \quad r_x = r_y = 15000 \text{ mm}$$

$$E = 200000 \quad f_y = 240$$

- Cek angka perbandingan kelangsingan batang tarik

$$\frac{kL}{r} = \frac{1.1742,022}{15,14} = 115,06 \quad \text{maka} \quad \frac{kL}{r} < 200 \quad -\text{aman}-$$

- Kuat tarik nominal batang tarik

$$\begin{aligned} \phi P_n &= \phi A_g f_y \\ &= 0,9 \cdot (2 \cdot 480) \cdot 240 \\ &= 207360 \text{ N} = 207,36 \text{ kN} \end{aligned}$$

$$- \phi P_n > P_u$$

$$144000 > 42973,65 \quad - \text{aman} -$$

Perencanaan kuda – kuda dapat dilihat pada tabel 4.7 , tabel 4.8 , tabel 4.9 dan tabel 4.10

Tabel 4.7 Batang Tarik Rangka Kuda - Kuda I

FRAME	Profil	Pu (N)	L (mm)	K.L/r	Ø.Pn (N)	Pu / Ø.Pn	
1	2	3	4	5	6	7	8
GA1	2L50X50X5-10	7854,16	1413,879	93,38699	207360	0,037877	aman
GA2	2L50X50X5-10	7854,1	1413,879	93,38699	207360	0,037877	aman
GA3	2L50X50X5-10	10188,24	707,442	46,72668	207360	0,049133	aman
GA4	2L50X50X5-10	10187,99	707,442	46,72668	207360	0,049132	aman
GA5	2L50X50X5-10	3943,47	989,751	65,37325	207360	0,019018	aman
GA6	2L50X50X5-10	3944,68	989,751	65,37325	207360	0,019023	aman
GD3	2L50X50X5-10	8007,61	1123,023	74,17589	207360	0,038617	aman
GD4	2L50X50X5-10	8010,42	1123,366	74,19855	207360	0,03863	aman
GD5	2L50X50X5-10	4495,73	1253,101	82,76757	207360	0,021681	aman
GD6	2L50X50X5-10	4494,33	1253,101	82,76757	207360	0,021674	aman
HA1	2L50X50X5-10	7849,35	1413,879	93,38699	207360	0,037854	aman
HA2	2L50X50X5-10	7849,39	1413,879	93,38699	207360	0,037854	aman
HA3	2L50X50X5-10	10344,56	1697,193	112,0999	207360	0,049887	aman
HA4	2L50X50X5-10	10344,5	1697,193	112,0999	207360	0,049887	aman
HD5	2L50X50X5-10	4417,87	1253,101	82,76757	207360	0,021305	aman
HD6	2L50X50X5-10	4418,71	1253,101	82,76757	207360	0,021309	aman
KV7	2L50X50X5-10	1738,62	2000	132,1004	207360	0,008385	aman
I1D2	2L50X50X5-10	484,07	2170,828	143,3836	207360	0,002334	aman
I1D3	2L50X50X5-10	482,19	2170,828	143,3836	207360	0,002325	aman
I1D6	2L50X50X5-10	484,43	2170,828	143,3836	207360	0,002336	aman
I1D7	2L50X50X5-10	484,83	2170,828	143,3836	207360	0,002338	aman
I2B2	2L50X50X5-10	5303,88	1349,989	89,16704	207360	0,025578	aman

Tabel 4.7 Lanjutan

FRAME	Profil	Pu (N)	L (mm)	K.L/r	Ø.Pn (N)	Pu / Ø.Pn	
1	2	3	4	5	6	7	8
I2B3	2L50X50X5-10	5391,45	1349,989	89,16704	207360	0,026	aman
I2B6	2L50X50X5-10	5311,11	1349,989	89,16704	207360	0,025613	aman
I2B7	2L50X50X5-10	5386,24	1349,989	89,16704	207360	0,025975	aman
I2D1	2L50X50X5-10	10896,75	2171,104	143,4018	207360	0,05255	aman
I2D2	2L50X50X5-10	2030,92	2171,099	143,4015	207360	0,009794	aman
I2D3	2L50X50X5-10	2124,54	2171,099	143,4015	207360	0,010246	aman
I2D4	2L50X50X5-10	10990,21	2171,104	143,4018	207360	0,053001	aman
I2D5	2L50X50X5-10	10896,29	2171,104	143,4018	207360	0,052548	aman
I2D6	2L50X50X5-10	2030,46	2171,099	143,4015	207360	0,009792	aman
I2D7	2L50X50X5-10	2127,78	2171,099	143,4015	207360	0,010261	aman
I2D8	2L50X50X5-10	10993,43	2171,104	143,4018	207360	0,053016	aman
K1A1	2L50X50X5-10	8593,83	1732,105	114,4059	207360	0,041444	aman
K1A2	2L50X50X5-10	8590,47	1732,105	114,4059	207360	0,041428	aman
K1D3	2L50X50X5-10	19890,63	1742,166	115,0704	207360	0,095923	aman
K1D4	2L50X50X5-10	19395,29	1738,488	114,8275	207360	0,093534	aman
K1D5	2L50X50X5-10	11594,52	1667,476	110,1371	207360	0,055915	aman
K1D6	2L50X50X5-10	11222,28	1667,476	110,1371	207360	0,05412	aman
K1D7	2L50X50X5-10	2460,86	1811,419	119,6446	207360	0,011868	aman
K1D8	2L50X50X5-10	2539,63	1811,419	119,6446	207360	0,012247	aman
K2A1	2L50X50X5-10	8590,37	1732,105	114,4059	207360	0,041427	aman
K2A2	2L50X50X5-10	8593,88	1732,105	114,4059	207360	0,041444	aman
K2D3	2L50X50X5-10	19448,4	1742,021	115,0608	207360	0,093791	aman

Tabel 4.7 Lanjutan

FRAME	Profil	Pu (N)	L (mm)	K.L/r	$\emptyset.Pn$ (N)	$Pu / \emptyset.Pn$	
1	2	3	4	5	6	7	8
K2D4	2L50X50X5-10	19888,42	1742,022	115,0609	207360	0,095913	aman
K2D5	2L50X50X5-10	11225,32	1667,476	110,1371	207360	0,054134	aman
K2D6	2L50X50X5-10	11594,12	1667,476	110,1371	207360	0,055913	aman
K2D7	2L50X50X5-10	2534,46	1811,419	119,6446	207360	0,012223	aman
K2D8	2L50X50X5-10	2464,39	1811,419	119,6446	207360	0,011885	aman

Keterangan Tabel 4.7 Batang Tarik Rangka Kuda - Kuda I

1. Batang yang ditinjau
2. Profil yang digunakan
3. Pu = Gaya yang bekerja
4. L = Panjang bentang kuda - kuda
5. $K.L/r$ = nilai kelangsingan
6. $\emptyset.Pn = \emptyset.Ag .fy$
(Kuat tarik nominal batang)
7. Rasio Demam/capacity = $Pu/(\emptyset.Pn)$
8. Kontrol $\emptyset.Pn > Pu$, maka aman

Tabel 4.8 Batang Tekan Rangka Kuda - Kuda I

FRAME	Profil	Pu (N)	L (mm)	K.L/r	λ_c	ω	$\phi \cdot P_n$ (N)	$P_u / \phi \cdot P_n$	
1	2	3	4	5	6	7	8	9	10
GA7	2L50X50XS-10	-1946,37	1555,835	102,76321	1,13370128	1,7015299	108326,042	0,0179677	aman
GA8	2L50X50XS-10	-1947,36	1555,835	102,76321	1,13370128	1,7015299	108326,042	0,01797684	aman
GB1	2L50X50XS-10	-6779,3	1500	99,075297	1,0930156	1,64807388	111839,647	0,06061625	aman
GB2	2L50X50XS-10	-6779,24	1500	99,075297	1,0930156	1,64807388	111839,647	0,06061571	aman
GB3	2L50X50XS-10	-11914,71	936,425	61,851057	0,68235142	1,25128569	147304,49	0,08088491	aman
GB4	2L50X50XS-10	-11908,26	936,084	61,828534	0,68210294	1,25110343	147325,949	0,08082935	aman
GB5	2L50X50XS-10	-5695,48	1471,787	97,211823	1,07245743	1,62232037	113615,044	0,05012963	aman
GB6	2L50X50XS-10	-5697,89	1472,128	97,234346	1,07270591	1,62262683	113593,586	0,05016031	aman
GD1	2L50X50XS-10	-5566,92	1118,015	73,845112	0,81467189	1,35651766	135877,331	0,04097019	aman
GD2	2L50X50XS-10	-5566,87	1118,015	73,845112	0,81467189	1,35651766	135877,331	0,04096982	aman
GV1	2L50X50XS-10	-12635,26	1500	99,075297	1,0930156	1,64807388	111839,647	0,11297657	aman
GV2	2L50X50XS-10	-12639,02	1500	99,075297	1,0930156	1,64807388	111839,647	0,11301019	aman
GV3	2L50X50XS-10	-10632,68	1577,924	104,22219	1,14979703	1,7236475	106936,018	0,0994303	aman
GV4	2L50X50XS-10	-10629,8	1578,393	104,25317	1,15013878	1,72412334	106906,505	0,09943081	aman
HA5	2L50X50XS-10	-1943,85	1555,835	102,76321	1,13370128	1,7015299	108326,042	0,01794444	aman
HA6	2L50X50XS-10	-1945,87	1555,835	102,76321	1,13370128	1,7015299	108326,042	0,01796309	aman
HB1	2L50X50XS-10	-6774,32	1500	99,075297	1,0930156	1,64807388	111839,647	0,06057172	aman
HB2	2L50X50XS-10	-6774,36	1500	99,075297	1,0930156	1,64807388	111839,647	0,06057208	aman
HB3	2L50X50XS-10	-5646,57	2408,212	159,06288	1,75480885	3,37043109	54687,3664	0,10325182	aman
HB4	2L50X50XS-10	-5650,5	2408,212	159,06288	1,75480885	3,37043109	54687,3664	0,10323368	aman
HD1	2L50X50XS-10	-5393,98	1118,015	73,845112	0,81467189	1,35651766	135877,331	0,03969742	aman
HD2	2L50X50XS-10	-5393,96	1118,015	73,845112	0,81467189	1,35651766	135877,331	0,03969728	aman
HD3	2L50X50XS-10	-16157,99	2308,482	152,47569	1,68213789	3,02346281	60963,2105	0,26504493	aman
HD4	2L50X50XS-10	-16157,72	2308,482	152,47569	1,68213789	3,02346281	60963,2105	0,2650405	aman
IIA1	2L50X50XS-10	-4767,17	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,03930746	aman
IIA2	2L50X50XS-10	-4944,32	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,04076814	aman
IIA3	2L50X50XS-10	-4944,33	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,04076822	aman
IIA4	2L50X50XS-10	-4770,31	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,03933335	aman
IIA5	2L50X50XS-10	-4059,38	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,03347141	aman
IIA6	2L50X50XS-10	-4242,04	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,03497752	aman
IIA7	2L50X50XS-10	-4242,09	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,03497794	aman
IIA8	2L50X50XS-10	-4061,67	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,03349029	aman
IIIB1	2L50X50XS-10	-3278,68	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,02703406	aman
IIIB2	2L50X50XS-10	-6337,44	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,05225479	aman
IIIB3	2L50X50XS-10	-6338,51	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,05226362	aman
IIIB4	2L50X50XS-10	-3278,3	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,02703093	aman

Tabel 4.8 Lanjutan

FRAME	Profil	Pu (N)	L (mm)	K.L/r	λ_c	ω	ϕP_n (N)	Pu / ϕP_n	
1	2	3	4	5	6	7	8	9	10
II B5	2L50X50X5-10	-3617,03	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,0298239	aman
II B6	2L50X50X5-10	-6544,63	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,05396316	aman
II B7	2L50X50X5-10	-6547,63	1349,989	39,167041	0,98370602	1,51979404	121279,591	0,0539879	aman
II B8	2L50X50X5-10	-3622,2	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,02986653	aman
II D1	2L50X50X5-10	-5088,26	2170,969	143,39293	1,58193532	2,64764148	69616,6764	0,07308967	aman
II D4	2L50X50X5-10	-5092,01	2170,969	143,39293	1,58193532	2,64764148	69616,6764	0,07314354	aman
II D5	2L50X50X5-10	-5294,48	2170,969	143,39293	1,58193532	2,64764148	69616,6764	0,07605189	aman
II D8	2L50X50X5-10	-5292,37	2170,969	143,39293	1,58193532	2,64764148	69616,6764	0,07602158	aman
II V1	2L50X50X5-10	-4418,24	1700,173	112,29676	1,23887707	1,85725776	99243,0906	0,04451937	aman
II V2	2L50X50X5-10	-295,02	1700	112,28534	1,23875101	1,85705405	99253,9772	0,00297237	aman
II V3	2L50X50X5-10	-4415,65	1700,173	112,29676	1,23887707	1,85725776	99243,0906	0,04449327	aman
II V4	2L50X50X5-10	-4447,85	1700,173	112,29676	1,23887707	1,85725776	99243,0906	0,04481773	aman
II V5	2L50X50X5-10	-296,14	1700	112,28534	1,23875101	1,85705405	99253,9772	0,00298366	aman
II V6	2L50X50X5-10	-4447,37	1700,173	112,29676	1,23887707	1,85725776	99243,0906	0,04481289	aman
II A1	2L50X50X5-10	-10008,07	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,08252103	aman
II A2	2L50X50X5-10	-10143,96	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,0836415	aman
II A3	2L50X50X5-10	-10144,75	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,08364802	aman
II A4	2L50X50X5-10	-9940,8	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,08196636	aman
II A5	2L50X50X5-10	-10009,76	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,08253496	aman
II A6	2L50X50X5-10	-10144,3	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,08364431	aman
II A7	2L50X50X5-10	-10145,12	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,08365107	aman
II A8	2L50X50X5-10	-9939,83	1349,998	89,167635	0,98371258	1,51980114	121279,025	0,08195836	aman
II B1	2L50X50X5-10	-3456,81	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,02850282	aman
II B4	2L50X50X5-10	-3776,1	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,03113549	aman
II B5	2L50X50X5-10	-3461,95	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,0285452	aman
II B8	2L50X50X5-10	-3775,34	1349,989	89,167041	0,98370602	1,51979404	121279,591	0,03112923	aman
II V1	2L50X50X5-10	-8326,22	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,08390643	aman
II V2	2L50X50X5-10	-276,56	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,002787	aman
II V3	2L50X50X5-10	-8400,3	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,08465296	aman
II V4	2L50X50X5-10	-8325,86	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,0839028	aman
II V5	2L50X50X5-10	-276,56	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,002787	aman
II V6	2L50X50X5-10	-8402,86	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,08467876	aman
K1 A3	2L50X50X5-10	-2921,62	2078,415	137,27972	1,51449334	2,44323551	75440,9466	0,03872724	aman
K1 A4	2L50X50X5-10	-2573,39	2078,415	137,27972	1,51449334	2,44323551	75440,9466	0,03411132	aman
K1 A5	2L50X50X5-10	-16505,02	1905,252	125,84227	1,38831343	2,13487004	86337,8081	0,19116793	aman
K1 A6	2L50X50X5-10	-15831,64	1905,252	125,84227	1,38831343	2,13487004	86337,8081	0,18336857	aman
K1 A7	2L50X50X5-10	-12139,16	2078,456	137,28243	1,51452322	2,44331907	75438,3666	0,16091494	aman

Tabel 4.8 Lanjutan

FRAME	Profil	Pu (N)	L (mm)	K.L/r	λ_c	ω	$\phi \cdot P_u$ (N)	$P_u / \phi \cdot P_n$	10
1	2	3	4	5	6	7	8	9	
K1A8	2L50X50X5-10	-11958,52	2078,456	137,28243	1,51452322	2,44331907	75438,3666	0,1585204	aman
K1A9	2L50X50X5-10	-1870,67	2598,076	171,60343	1,89315839	4,31263429	42739,5387	0,04376907	aman
K1B1	2L50X50X5-10	-7078,97	2121,32	140,11361	1,54575723	2,53392152	72741,0059	0,09731746	aman
K1B2	2L50X50X5-10	-7073,45	2121,32	140,11361	1,54575723	2,53392152	72741,0059	0,09724158	aman
K1B3	2L50X50X5-10	-42988,08	1173,989	77,542206	0,85545886	1,39261855	132354,98	0,32479382	aman
K1B4	2L50X50X5-10	-42888,84	1169,173	77,224108	0,85194955	1,38943705	132658,043	0,32330373	aman
K1B5	2L50X50X5-10	-22415,04	1832,511	121,03771	1,33530874	2,027382	90915,279	0,24654866	aman
K1B6	2L50X50X5-10	-23027,24	1837,328	121,35588	1,33881877	2,03416422	90612,1531	0,25412971	aman
K1B7	2L50X50X5-10	-9101,13	2004,451	132,39439	1,46059747	2,30125636	80095,3789	0,11362865	aman
K1B8	2L50X50X5-10	-9312,64	2004,451	132,39439	1,46059747	2,30125636	80095,3789	0,11626938	aman
K1D1	2L50X50X5-10	-19270,47	1224,706	80,892074	0,89241517	1,42702916	129163,443	0,14919446	aman
K1D2	2L50X50X5-10	-18925,79	1224,706	80,892074	0,89241517	1,42702916	129163,443	0,1465259	aman
K1D9	2L50X50X5-10	-10483,93	2179,449	143,95304	1,5881145	2,6680932	69083,044	0,15175837	aman
K1V1	2L50X50X5-10	-16383,87	1575,589	104,06797	1,14809557	1,72128233	107082,956	0,15300166	aman
K1V2	2L50X50X5-10	-16061,94	1577,843	104,21634	1,149738	1,72356534	106941,115	0,15019424	aman
K1V3	2L50X50X5-10	-11177,29	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,11263773	aman
K1V4	2L50X50X5-10	-11031,01	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,11116361	aman
K1V5	2L50X50X5-10	-1971,17	1833,55	121,10634	1,33606583	2,02884106	90849,8964	0,021697	aman
K1V6	2L50X50X5-10	-2059,74	1833,55	121,10634	1,33606583	2,02884106	90849,8964	0,0226719	aman
K2A3	2L50X50X5-10	-2633,14	2078,415	137,27972	1,51449334	2,44323551	75440,9466	0,03490333	aman
K2A4	2L50X50X5-10	-2918,86	2078,415	137,27972	1,51449334	2,44323551	75440,9466	0,03869066	aman
K2A5	2L50X50X5-10	-15802,34	1905,252	125,84227	1,38831343	2,13487004	86337,8081	0,1830292	aman
K2A6	2L50X50X5-10	-16503,95	1905,252	125,84227	1,38831343	2,13487004	86337,8081	0,19115554	aman
K2A7	2L50X50X5-10	-11942,72	2078,456	137,28243	1,51452322	2,44331907	75438,3666	0,15831096	aman
K2A8	2L50X50X5-10	-12133,5	2078,456	137,28243	1,51452322	2,44331907	75438,3666	0,16083991	aman
K2A9	2L50X50X5-10	-1859,08	2598,076	171,60343	1,89315839	4,31263429	42739,5387	0,0434979	aman
K2B1	2L50X50X5-10	-7073,29	2121,32	140,11361	1,54575723	2,53392152	72741,0059	0,09723938	aman
K2B2	2L50X50X5-10	-7079,02	2121,32	140,11361	1,54575723	2,53392152	72741,0059	0,09731815	aman
K2B3	2L50X50X5-10	-42872,24	1173,71	77,523778	0,85525556	1,39243384	132372,537	0,32387564	aman
K2B4	2L50X50X5-10	-42973,65	1173,789	77,528996	0,85531312	1,39248613	132367,566	0,32465393	aman
K2B5	2L50X50X5-10	-23001,93	1832,79	121,05614	1,33551204	2,02777359	90897,722	0,25305288	aman
K2B6	2L50X50X5-10	-22407,9	1832,711	121,05092	1,33545447	2,02766269	90902,6933	0,24650425	aman
K2B7	2L50X50X5-10	-9310,28	2004,451	132,39439	1,46059747	2,30125636	80095,3789	0,11623991	aman
K2B8	2L50X50X5-10	-9097,73	2004,451	132,39439	1,46059747	2,30125636	80095,3789	0,1135862	aman
K2B9	2L50X50X5-10	-6869,77	2505,696	165,50172	1,8258432	3,79627487	48552,8594	0,14149053	aman
K2D1	2L50X50X5-10	-18943,89	1224,706	80,892074	0,89241517	1,42702916	129163,443	0,14666603	aman
K2D2	2L50X50X5-10	-19269,87	1224,706	80,892074	0,89241517	1,42702916	129163,443	0,14918981	aman

Tabel 4.8 Lanjutan

FRAME	Profil	Pu (N)	L (mm)	K.L/r	λ_c	ω	$\phi \cdot P_n$ (N)	Pu / $\phi \cdot P_n$	
1	2	3	4	5	6	7	8	9	10
K2D9	2L50X50X5-10	-10260,01	2179,449	143,95304	1,5881145	2,6680932	69083,044	0,14851705	aman
K2V1	2L50X50X5-10	-16011,38	1575,8	104,0819	1,14824932	1,72149579	107069,678	0,14954168	aman
K2V2	2L50X50X5-10	-16384,69	1575,692	104,07477	1,14817062	1,72138653	107076,474	0,15301858	aman
K2V3	2L50X50X5-10	-11023,52	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,11108813	aman
K2V4	2L50X50X5-10	-11171,87	1700,346	112,30819	1,23900313	1,85746152	99232,204	0,11258311	aman
K2V5	2L50X50X5-10	-2060,14	1833,55	121,10634	1,33606583	2,02884106	90849,8964	0,02267631	aman
K2V6	2L50X50X5-10	-1974,51	1833,55	121,10634	1,33606583	2,02884106	90849,8964	0,02173376	aman
K1A10	2L50X50X5-10	-1869,57	2598,076	171,60343	1,89315839	4,31263429	42739,5387	0,04374334	aman
K1B13	2L50X50X5-10	-6551,79	2505,696	165,50172	1,8258432	3,79627487	48552,8594	0,13494138	aman
K1B14	2L50X50X5-10	-6867,75	2505,696	165,50172	1,8258432	3,79627487	48552,8594	0,14144893	aman
K1D10	2L50X50X5-10	-10265,9	2179,449	143,95304	1,5881145	2,6680932	69083,044	0,14860231	aman
K2A10	2L50X50X5-10	-1862,19	2598,076	171,60343	1,89315839	4,31263429	42739,5387	0,04357066	aman
K2B10	2L50X50X5-10	-6544,44	2505,696	165,50172	1,8258432	3,79627487	48552,8594	0,13479	aman
K2D10	2L50X50X5-10	-10486,55	2179,449	143,95304	1,5881145	2,6680932	69083,044	0,15179629	aman

Keterangan Tabel 4.8 Batang Tekan Rangka Kuda - Kuda I

1. Batang yang ditinjau

2. Profil yang digunakan

3. Pu = Gaya yang bekerja

4. L = Panjang batang kuda - kuda

5. K.L/r = nilai kelangsingan

6. $\lambda_c = (K.L)/(\pi.r) \cdot \sqrt{(f_y/E)}$ λ_c = parameter kelangsingan batang tekan7. $\omega = 1,42 / (1,6 - 0,67 \cdot \lambda_c)$ 8. $\phi \cdot P_n = \phi \cdot A_g \cdot (f_y/\omega)$

(Kuat tekan nominal batang)

9. Rasio Demand/capacity = $P_u/(\phi \cdot P_n)$ 10. Kontrol $\phi \cdot P_n > P_u$, maka aman

Tabel 4.9 Batang Tarik Rangka Kuda - Kuda II

FRAME	Profil	Pu (N)	L (mm)	K.L/r	Ø.Pn (N)	Pu / Ø.Pn	
1	2	3	4	5	6	7	8
FA1	2L45X45X5-10	5544,84	1414,214	93,40911	207360	0,028669	aman
FA2	2L45X45X5-10	5944,84	1414,214	93,40911	207360	0,028669	aman
FB5	2L45X45X5-10	2454,45	1350,991	89,23322	207360	0,011837	aman
FB6	2L45X45X5-10	2454,45	1350,991	89,23322	207360	0,011837	aman
FB7	2L45X45X5-10	3042,65	1200,003	79,26044	207360	0,014673	aman
FB8	2L45X45X5-10	3042,65	1200,003	79,26044	207360	0,014673	aman
FD1	2L45X45X5-10	6640,54	1208,714	79,8358	207360	0,032024	aman
FD2	2L45X45X5-10	6640,54	1208,714	79,8358	207360	0,032024	aman
FD3	2L45X45X5-10	1250,24	1234,342	81,52853	207360	0,006029	aman
FD4	2L45X45X5-10	1250,24	1234,342	81,52853	207360	0,006029	aman
FV5	2L45X45X5-10	1062,15	1660	109,6433	207360	0,005122	aman
FV6	2L45X45X5-10	1062,15	1660	109,6433	207360	0,005122	aman
JA1	2L45X45X5-10	8432,15	1414,214	93,40911	207360	0,040664	aman
JA2	2L45X45X5-10	8723,15	1414,214	93,40911	207360	0,042068	aman
JA3	2L45X45X5-10	-8309,97	1697,056	112,0909	207360	-0,04008	aman
JD1	2L45X45X5-10	11021,66	1208,481	79,82041	207360	0,053152	aman
JD2	2L45X45X5-10	11021,66	1208,481	79,82041	207360	0,053152	aman
JD3	2L45X45X5-10	4419,38	1233,062	81,44399	207360	0,021313	aman
JD4	2L45X45X5-10	4354,42	1233,062	81,44399	207360	0,020999	aman
JV5	2L45X45X5-10	4375,16	1657,36	109,469	207360	0,021099	aman
JV6	2L45X45X5-10	4306,03	1657,36	109,469	207360	0,020766	aman
JV7	2L45X45X5-10	487,25	2000	132,1004	207360	0,00235	aman

Keterangan **Tabel 4.9** Batang Tarik Rangka Kuda - Kuda II

1. Batang yang ditinjau
2. Profil yang digunakan
3. Pu = Gaya yang bekerja
4. L = Panjang bentang kuda - kuda
5. K.L/r = nilai kelangsingan
6. $\text{Ø.Pn} = \text{Ø.Ag} \cdot f_y$
(Kuat tarik nominal batang)
7. Rasio Demam/capacity = $\text{Pu}/(\text{Ø.Pn})$
8. Kontrol $\text{Ø.Pn} > \text{Pu}$, maka aman

Tabel 4.10 Batang Tekan Rangka Kuda - Kuda II

FRAME	Profil	Pu (N)	L (mm)	K.L/r	λ_c	ϕ	ϕP_n (N)	Pu / ϕP_n	
1	2	3	4	5	6	7	8	9	10
FA3	2L45X45X5-10	-3249,06	1697,056	112,0909	1,236606	1,853594	99439,24	0,032674	an.an
FA4	2L45X45X5-10	-3249,06	1697,056	112,0909	1,236606	1,853594	99439,24	0,032674	aman
FA5	2L45X45X5-10	-4626,89	1555,635	102,75	1,133556	1,701332	108338,6	0,042708	aman
FA6	2L45X45X5-10	-4626,89	1555,635	102,75	1,133556	1,701332	108338,6	0,042708	aman
FA7	2L45X45X5-10	-152,09	1200	79,26024	0,874412	1,410057	130718,2	0,001163	aman
FA8	2L45X45X5-10	-151,57	1200	79,26024	0,874412	1,410057	130718,2	0,00116	aman
FB1	2L45X45X5-10	-4187,78	1000	66,0502	0,728677	1,286218	143303,8	0,029223	aman
FB2	2L45X45X5-10	-4187,78	1000	66,0502	0,728677	1,286218	143303,8	0,029223	aman
FB3	2L45X45X5-10	-5581,43	1473,828	97,34663	1,073945	1,624156	113486,6	0,049181	aman
FB4	2L45X45X5-10	-5581,43	1473,828	97,34663	1,073945	1,624156	113486,6	0,049181	aman
FD5	2L45X45X5-10	-5342,48	2046,178	135,1505	1,491003	2,379257	77469,57	0,068962	aman
FD6	2L45X45X5-10	-5342,48	2046,178	135,1505	1,491003	2,379257	77469,57	0,068962	aman
FV1	2L45X45X5-10	-11696,7	1000	66,0502	0,728677	1,286218	143303,8	0,081622	aman
FV2	2L45X45X5-10	-11696,7	1000	66,0502	0,728677	1,286218	143303,8	0,081622	aman
FV3	2L45X45X5-10	-4714,98	1344,41	88,79855	0,979641	1,515407	121630,7	0,038765	aman
FV4	2L45X45X5-10	-4714,98	1344,41	88,79855	0,979641	1,515407	121630,7	0,038765	aman
JA4	2L45X45X5-10	-8173,22	1697,056	112,0909	1,236606	1,853594	99439,24	0,082193	aman
JA5	2L45X45X5-10	-10752,6	1555,635	102,75	1,133556	1,701332	108338,6	0,09925	aman
JA6	2L45X45X5-10	-10752,6	1555,635	102,75	1,133556	1,701332	108338,6	0,09925	aman
JA7	2L45X45X5-10	-4785,73	1697,056	112,0909	1,236606	1,853594	99439,24	0,048127	aman
JA8	2L45X45X5-10	-4781,65	1697,056	112,0909	1,236606	1,853594	99439,24	0,048086	aman
JB1	2L45X45X5-10	-7403,14	1000	66,0502	0,728677	1,286218	143303,8	0,05166	aman
JB2	2L45X45X5-10	-7818,78	1000	66,0502	0,728677	1,286218	143303,8	0,054561	aman
JB3	2L45X45X5-10	-21751,5	1474,694	97,40383	1,074576	1,624937	113432,1	0,191758	aman
JB4	2L45X45X5-10	-21802,7	1474,694	97,40383	1,074576	1,624937	113432,1	0,192209	aman
JB5	2L45X45X5-10	-11435,2	1351,58	89,27213	0,984865	1,52105	121179,5	0,094366	aman

Tabel 4.10 Lanjutan

FRAME	Profil	Pu (N)	L (mm)	K.L/r	λ_c	ω	ϕP_n (N)	$P_u / \phi P_n$	
1	2	3	4	5	6	7	8	9	10
JB6	2L45X45X5-10	-11392,6	1351,58	89,27213	0,984865	1,52105	121179,5	0,094014	aman
JB7	2L45X45X5-10	-7662,11	1474,888	97,41664	1,074717	1,625112	113419,9	0,067555	aman
JB8	2L45X45X5-10	-7716,77	1474,888	97,41664	1,074717	1,625112	113419,9	0,068037	aman
JD5	2L45X45X5-10	-7916,79	1442,221	95,25898	1,050913	1,596182	115475,6	0,068558	aman
JD6	2L45X45X5-10	-7866,74	1442,221	95,25898	1,050913	1,596182	115475,6	0,068125	aman
JV1	2L45X45X5-10	-19965	1000	66,0502	0,728677	1,286218	143303,8	0,139319	aman
JV2	2L45X45X5-10	-20087,3	1000	66,0502	0,728677	1,286218	143303,8	0,140173	aman
JV3	2L45X45X5-10	-8984,37	1342,851	88,69557	0,978505	1,514186	121728,8	0,073806	aman
JV4	2L45X45X5-10	-8984,37	1342,851	88,69557	0,978505	1,514186	121728,8	0,073806	aman

Keterangan Tabel 4.10 Batang Tekan Rangka Kuda - Kuda II

1. Batang yang ditinjau
2. Profil yang digunakan
3. P_u = Gaya yang bekerja
4. L = Panjang bentang kuda - kuda
5. $K.L/r$ = nilai kelangsingan
6. $\lambda_c = (K.L)/(\pi.r) \cdot \sqrt{(f_y/E)}$
 λ_c = parameter kelangsingan batang tekan
7. $\omega = 1,42 / (1,6 - 0,67 \cdot \lambda_c)$
8. $\phi P_n = \phi A_g \cdot (f_y/\omega)$
 (Kuat tekan nominal batang)
9. Rasio Demam/capacity = $P_u/(\phi P_n)$
10. Kontrol $\phi P_n > P_u$, maka aman

4.4 Perencanaan Sambungan Baut

Sebagai contoh perhitungan ditinjau pada perencanaan sambungan baut kuda-kuda K2B4, sebagai berikut :

- Profil 2L 50 x 50 x 5 - 10

tegangan putus minimum baja profil = 370 Mpa

gaya batang kombinasi maksimum $P_u = -42973,65 \text{ N} = -42,974 \text{ kN}$

- Data-data baut yang digunakan untuk menyambung :

mutu baut, A.307

tegangan tarik putus baut, $f_{u,b} = 410 \text{ Mpa}$, diameter baut, $d = 16 \text{ mm}$

- Kekuatan satu baut

1. Kuat geser rencana baut

$$\phi_f \cdot R_{ng} = \phi_f \cdot r_i \cdot f_u^b \cdot A_b$$

dengan

$$\phi_f \cdot R_{ng} = \text{kuat geser rencana baut}$$

$$\phi_f = 0,75 \text{ (faktor reduksi kekuatan untuk fraktur)}$$

$$r_i = 0,4 \text{ (untuk baut dengan ulir pada bidang geser)}$$

$$f_u^b = 410 \text{ Mpa (tegangan tarik putus baut)}$$

$$A_b = 1/4 \cdot \pi \cdot 16^2 = 201,06 \text{ mm}^2 \text{ (luas bruto penampang baut)}$$

$$\phi_f \cdot R_{ng} = 0,75 \cdot 0,4 \cdot 410 \cdot 201,06$$

$$= 24718,1 \text{ N} = 24,7181 \text{ kN}$$

2. Kuat tarik rencana baut

$$\phi_f.R_{n,ta} = \phi_f.0,75.f_u^b.A_b$$

$$\phi_f.R_{n,ta} = 0,75.0,75.410.201,06 = 46346,4 \text{ N} = 46,3464 \text{ kN}$$

3. Kuat tumpu rencana baut

$$\phi_f.R_{n,tu} = 2,4.\phi_f.d_b.t_f.f_u$$

dengan

$$\phi_f.R_{n,tu} = \text{Kuat tumpu rencana baut}$$

$$\phi_f = 0,75 \text{ (faktor reduksi kekuatan untuk fraktur)}$$

$$d_b = 16 \text{ mm (diameter baut)}$$

$$t \text{ pelat buhul} = 8 \text{ mm, } t_f < t \text{ pelat buhul maka dipakai } t_f$$

$$t_f = 5 \text{ mm (tabal pelat profil)}$$

$$f_u = 370 \text{ Mpa (tagangan tarik putus pelat profil)}$$

$$\phi_f.R_{n,tu} = 2,4.0,75.16.5.370$$

$$= 53280 \text{ N} = 53,280 \text{ kN}$$

- Menghitung jumlah baut sambungan

Dari perhitungan diatas kuat rencana baut yang terkecil adalah kuat baut

$$\text{dalam geser, yaitu : } \phi_f.R_n = 24,7181 \text{ kN}$$

$$\text{Jumlah baut, } n = N_u / \phi_f.R_n = 42,974 / 24,7181 = 1,7386 \approx 2 \text{ buah}$$

Sarat minimum jumlah baut 3 buah

- Maka jumlah baut yang dipasang pada tiap join 3 buah

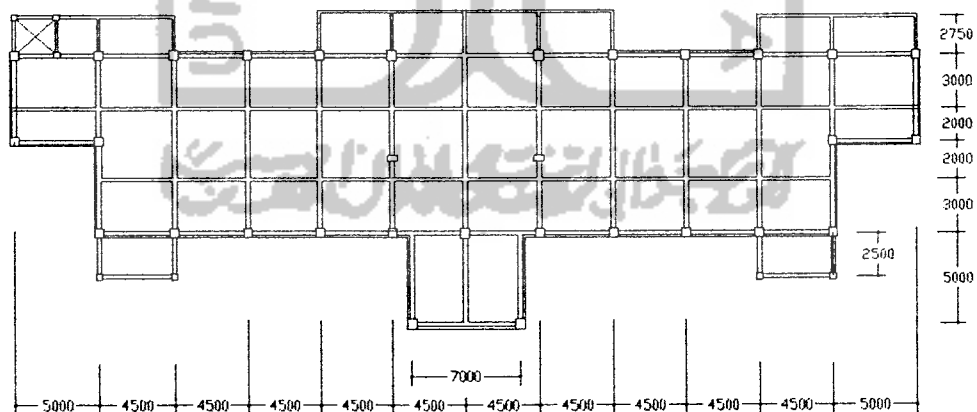
BAB V

PERENCANAAN PLAT DAN TANGGA

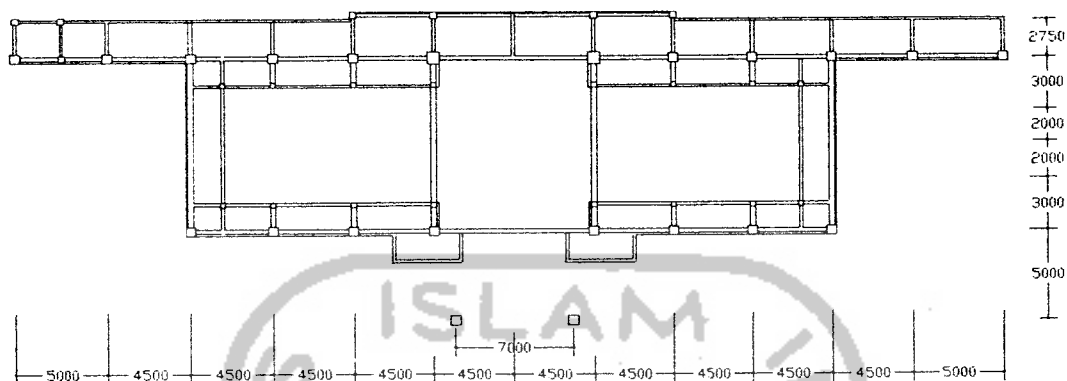
Struktur non portal akan membebani struktur portal, maka harus direncanakan lebih dulu. Perencanaan struktur non portal beton bertulang yang meliputi perencanaan plat dan perencanaan tangga.

5.1 Perencanaan Plat Lantai

Perencanaan plat atap dan plat lantai, denah plat atap disajikan pada gambar 5.1 dan gambar 5.2



Gambar 5.1 Denah Plat lantai 1



Gambar 5.2 Denah Plat Lantai Atap

5.1.1 Pembebanan Pelat Lantai

Perhitungan beban pelat sesuai ketentuan PPPURDG 1987, sebagai berikut ini

1. Beban pelat lantai

a. Perhitungan pembebanan pelat lantai untuk beban mati

- Pelat beton $= 0,12 \cdot 1,0 \cdot 1,0 \cdot 24 = 2,88 \text{ kN/m}^2$
 - Tegel $= 0,02 \cdot 1,0 \cdot 1,0 \cdot 24 = 0,48 \text{ kN/m}^2$
 - Spesi $= 0,04 \cdot 1,0 \cdot 1,0 \cdot 21 = 0,84 \text{ kN/m}^2$
 - Plafond $= 1,0 \cdot 1,0 \cdot 0,18 = 0,18 \text{ kN/m}^2$
-
- $= 4,40 \text{ kN/m}^2$

b. Beban Hidup

- Untuk ruang kuliah ditetapkan $= 2,5 \text{ kN/m}^2$

2. Beban pelat atap

a. Beban mati

- Pelat $= 0,12 \cdot 1,0 \cdot 1,0 \cdot 24 = 2,88 \text{ kN/m}^2$
 - Plafond $= 1,0 \cdot 1,0 \cdot 0,18 = 0,18 \text{ kN/m}^2$
 - Aspal $= 0,04 \cdot 1,0 \cdot 1,0 \cdot 14 = 0,56 \text{ kN/m}^2$
-
- $= 3,14 \text{ kN/m}^2$

b. Beban Hidup

- Pekerja Atap $= 1 \text{ kN/m}^2$
 - Hujan $= 0,2 \text{ kN/m}^2$
-
- $= 1,2 \text{ kN/m}^2$

$$\begin{aligned} \text{Beban Ultimit } (W_u) &= 1,2 W_D + 1,6 W_L \\ &= 1,2 \cdot 4,4 + 1,6 \cdot 2,5 = 9,28 \text{ kN/m}^2 \end{aligned}$$

$$\text{koefisien momen (distribusi momen)} = x = L_Y / L_X$$

5.1.2 Penulangan Plat Lantai

Tebal Pelat:

Pelat dengan satu ujung menerus

$$h_{\min} = \frac{Lx}{24} \left(0,4 + \frac{Fy}{700} \right)$$

$$h_{\min} = \frac{1,5 \cdot 10^3}{24} \left(0,4 + \frac{240}{700} \right) = 46,4286 \text{ mm}$$

Pelat dengan dua ujung menerus

$$h_{\min} = \frac{Lx}{28} \left(0,4 + \frac{Fy}{700} \right)$$

$$h_{\min} = \frac{1,5 \cdot 10^3}{28} \cdot \left(0,4 + \frac{240}{700} \right) = 39,7959 \text{ mm}$$

Digunakan $h = 120 \text{ mm}$

1. Perhitungan penulangan pelat 1 (satu) arah pada pelat atap

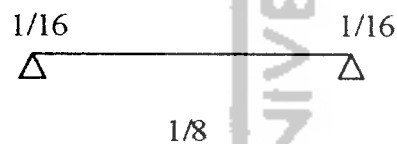
Penulangan pelat satu arah direncanakan bila pada kedua sisi yang berhadapan tidak ada dukungan, dan $L_y/L_x > 2$, maka dianggap pelat satu arah.

$$L_x = 1,5 \text{ m} ; L_y = 4,5 \text{ m}$$

$$L_y/L_x = 4,5/1,5 = 3 \text{ m}$$

$$\text{Lebar balok} = 300 \text{ mm}$$

$$L_n = 1500 - 300 = 1200 \text{ mm}$$



$$Mu = X \cdot Wu \cdot L_n^2$$

$$Mu \cdot 1/16 = 1/16 \cdot 9,28 \cdot 1,2^2 = 0,8352 \text{ KNm}$$

$$Mu \cdot 1/8 = 1/8 \cdot 9,28 \cdot 1,2^2 = 1,6704 \text{ KNm}$$

$$Mu \cdot 1/16 = 1/16 \cdot 9,28 \cdot 1,2^2 = 0,8352 \text{ KNm}$$

Contoh perhitungan diambil $Mu \cdot 1/16$

$$Mn \cdot 1/16 = \frac{M \cdot 1/16}{\phi} = \frac{0,8352}{0,8} = 1,044 \text{ KNm}$$

Digunakan tulangan pokok P10

$$d' = 20 + 0,5 \cdot 10 = 25 \text{ mm}$$

$$d = 120 - d'$$

$$= 120 - 25 = 95 \text{ mm}$$

$$Mn = 0,85 \cdot f_c' \cdot b \cdot a \cdot (d - a/2)$$

$$Mu/0,8 = C_c \cdot [d - (a/2)] = 0,85 \cdot f_c' \cdot b \cdot a \cdot [d - (a/2)]$$

$$0,85 \cdot f_c' \cdot b \cdot a^2 - 2 \cdot 0,85 \cdot f_c' \cdot b \cdot d \cdot a + 2 Mn = 0$$

$$0,85 \cdot 30 \cdot 1000 \cdot a^2 - 2 \cdot 0,85 \cdot 30 \cdot 1000 \cdot 95 \cdot a + 2 \cdot 1,044 \cdot 10^6 = 0$$

$$\text{didapat } a = 0,432$$

$$A_{s,perlu} = (0,85 \cdot f_c' \cdot b \cdot a) / f_y$$

$$= (0,85 \cdot 30 \cdot 1000 \cdot 0,432) / 240$$

$$= 45,9 \text{ mm}^2$$

$$A_{s,min} = 0,0025 \cdot b \cdot h$$

$$= 0,0025 \cdot 1000 \cdot 120 = 300 \text{ mm}^2$$

$$A_{s,perlu} < A_{s,min}, \text{ maka diambil } A_{s,min}$$

$$\text{Direncanakan tulangan P10} = 1/4 \cdot \pi \varnothing^2 = 1/4 \cdot \pi 10^2 = 78,54 \text{ mm}$$

$$S = (1/4 \cdot \pi \varnothing \cdot b) / A_s$$

$$= (78,54 \cdot 1000) / 300 = 261,8 \text{ mm}$$

Dipakai **P10- 200**

$$\text{Luas tulangan dipakai } A_{s \text{ pakai}} = (78,54 \cdot 1000) / 200 = 392,7 \text{ mm}^2$$

Tabel 5.1 Pelat Satu Arah

	Arah	L (m)	L_y/L_x	letak	W_u kN	M_u kN.m	h mm	d' mm	d mm	a mm	As perlu mm ²	As min mm ²	s mm	Tul	As Susut mm ²	s Perlu mm ²	Tul pakai
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19
P6-200	arah-X	1,5	3	1/16	9,28	0,8352	100	25	75	0,43194172	45,89381	250	202,6	P10-200	140	201,92857	P6-200
	arah-Y	4,5	3	1/8	9,28	1,6704	100	25	75	0,86586541	91,9982	250	202,6	P10-200	140	201,92857	P6-200
	arah-X	1	7	1/16	9,28	0,8352	100	25	75	0,43194172	45,89381	250	202,6	P8-200	140	201,92857	P6-200
P6-200	arah-Y	7	7	1/12	9,28	1,1136	100	25	75	0,57636138	61,2384	250	202,6	P8-200	140	201,92857	P6-200

Keterangan Tabel 5.1 Pelat Dua Arah

1. Pelat yang ditinjau
2. Arah yang ditinjau
3. L = panjang pelat
4. Perbandingan L_y/L_x
5. Letak Penulangan
6. $W_u = 1,2 \cdot W_D + 1,6 \cdot W_L$ (beban ultimit)
7. $M_u = x \cdot W_u \cdot L_n^2$ (momen ultimit)
8. h = pelat beton
9. $d' = f_{tul} \cdot sengkang + 1/2 \cdot f_{tul} \cdot pokok$

10. $d = h - d'$ (tinggi efektif balok)11. a = nilai dr pers. $0,85 \cdot f_c' \cdot b \cdot a^2 - 2 \cdot 0,85 \cdot f_c' \cdot b \cdot d \cdot a + 2 \cdot M_n = 0$ (tinggi balok tegangan tekan)12. As perlu = $(0,85 \cdot f_c' \cdot b \cdot a) / f_y$ 13. As min = $0,0025 \cdot b \cdot h$ 14. $s = (1/4 \cdot p \cdot f_y) / As$ (jarak tulangan)

15. Tulangan dipakai

16. As. Susut = $0,0014 \cdot b \cdot (luas \ tul. \ Susut)$ 17. As perlu = $(0,85 \cdot f_c' \cdot b \cdot a) / f_y$

18. Tulangan dipakai



Tabel 5.1 Pelat Satu Arah

No	Arah	L (m)	Ly/Lx	letak	Wu kN	Mu kN.m	h mm	d' mm	d mm	a mm	As perlu mm ²	As min mm ²	s mm	Tul	As Susut mm ²	s Perlu mm ²	Tul pakai
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19
2	arah-X	1,5	3	1/16	9,28	0,8352	100	25	75	0,43194172	45,89381	250	202,6	P10-200	140	201,92857	P6-200
	arah-Y	4,5	3	1/8	9,28	1,6704	100	25	75	0,86586541	91,9982	250	202,6	P10-200	140	201,92857	P6-200
	arah-X	1	7	1/16	9,28	0,8352	100	25	75	0,43194172	45,89381	250	202,6	P8-200	140	201,92857	P6-200
	arah-Y	7	7	1/12	9,28	1,1136	100	25	75	0,57636138	61,2384	250	202,6	P8-200	140	201,92857	P6-200

Keterangan Tabel 5.1 Pelat Dua Arah

1. Pelat yang ditinjau
2. Arah yang ditinjau
3. L = panjang pelat
4. Perbandingan Ly/Lx
5. Letak Penulangan
6. Wu = 1,2 . WD + 1,6 . WL (beban ultimit)
7. Mu = x . Wu . Ln2 (momen ultimit)
8. h = pelat beton
9. d' = f.tul.senggang + 1/2 . f.tul.pokok

10. d = h - d' (tinggi efektif balok)

11. a = nilai dr pers. $0,85.f_c'.b.a^2 - 2.0,85.f_c'.b.d.a + 2.M_n = 0$ (tinggi balok tegangan tekan)12. As perlu = $(0,85.f_c'.b.a)/f_y$ 13. As min = $0,0025.b.h$ 14. s = $(1/4.p.f_2.b)/As$ (jarak tulangan)

15. Tulangan dipakai

16. As. Susut = $0,0014.b$ (luas tul. Susut)17. As perlu = $(0,85.f_c'.b.a)/f_y$

18. Tulangan dipakai

- Penulangan sejajar arah x

1. Tulangan lapangan

Digunakan tulangan pokok P10

$$d' = 20 + 0,5 \cdot 10 = 25 \text{ mm}$$

$$d = 120 - d'$$

$$= 120 - 25 = 95 \text{ mm}$$

$$Mu = Mn \text{ lx} = 3,97184 \text{ kNm}$$

$$Mn \text{ lx} = \frac{M \text{ lx}}{\phi} = \frac{3,91784}{0,8} = 4,9648 \text{ kN/m}$$

$$Mn = 0,85 \cdot f_c' \cdot b \cdot a \cdot (d - a/2)$$

$$Mu/0,8 = C_c \cdot [d - (a/2)] = 0,85 \cdot f_c' \cdot b \cdot a \cdot [d - (a/2)]$$

$$0,85 \cdot f_c' \cdot b \cdot a^2 - 2 \cdot 0,85 \cdot f_c' \cdot b \cdot d \cdot a + 2 \cdot Mn = 0$$

$$0,85 \cdot 30 \cdot 1000 \cdot a^2 - 2 \cdot 0,85 \cdot 30 \cdot 1000 \cdot 95 \cdot a + 2 \cdot 4,9648 \cdot 10^6 = 0$$

$$\text{didapat } a = 2,072$$

$$A_{s, \text{perlu}} = (0,85 \cdot f_c' \cdot b \cdot a) / f_y$$

$$= (0,85 \cdot 30 \cdot 1000 \cdot 2,072) / 240$$

$$= 220,1553 \text{ mm}^2$$

$$A_{s, \text{min}} = 0,0025 \cdot b \cdot h$$

$$= 0,0025 \cdot 1000 \cdot 120 = 300 \text{ mm}^2$$

$$A_{s, \text{perlu}} < A_{s, \text{min}}, \text{ maka diambil } A_{s, \text{min}}$$

Direncanakan tulangan P10 = $1/4 \cdot \pi \phi^2 = 1/4 \cdot \pi 10^2 = 78,54 \text{ mm}$

$$S = (1/4 \cdot \pi \phi \cdot b) / A_s$$

$$= (78,54 \cdot 1000) / 300 = 261,8 \text{ mm}$$

Dipakai **P10- 150** ,untuk tulangan **lapangan**

Luas tulangan dipakai $A_{s \text{ pakai}} = (78,54 \cdot 1000) / 200 = 392,7 \text{ mm}^2$

$$A_{s \text{ pakai}} = 392,7 \text{ mm}^2 > A_{s, \text{min}} = 300 \text{ mm}^2 \quad \text{-aman-}$$

2. Tulangan Tumpuan

Digunakan tulangan pokok P10

$$d' = 20 + 0,5 \cdot 10 = 25 \text{ mm}$$

$$d = 120 - d'$$

$$= 120 - 25 = 95 \text{ mm}$$

$$Mu = Mn \text{ tx} = 8,94592 \text{ kNm}$$

$$Mn \text{ tx} = \frac{M \text{ tx}}{\phi} = \frac{8,94592}{0,8} = 11,1824 \text{ kNm}$$

$$Mn = 0,85 \cdot f_c' \cdot b \cdot a \cdot (d - a/2)$$

$$Mu/0,8 = C_c \cdot [d - (a/2)] = 0,85 \cdot f_c' \cdot b \cdot a \cdot [d - (a/2)]$$

$$0,85 \cdot f_c' \cdot b \cdot a^2 - 2 \cdot 0,85 \cdot f_c' \cdot b \cdot d \cdot a + 2 \cdot Mn = 0$$

$$0,85 \cdot 30 \cdot 1000 \cdot a - 2 \cdot 0,85 \cdot 30 \cdot 1000 \cdot 95 \cdot a + 2 \cdot 11,1824 \cdot 10^6 = 0$$

didapat $a = 4,734 \text{ mm}$

$$\begin{aligned}
 A_{s,perlu} &= (0,85.f_c'.b.a)/f_y \\
 &= (0,85.30.1000.4,734)/240 \\
 &= 502,9885 \text{ mm}^2
 \end{aligned}$$

$$\begin{aligned}
 A_{s,min} &= 0,0025.b.h \\
 &= 0,0025.1000.120 = 300 \text{ mm}^2
 \end{aligned}$$

$A_{s,perlu} > A_{s,min}$, maka diambil $A_{s,perlu}$

Direncanakan tulangan P10 = $1/4. \pi. \phi^2 = 1/4. \pi. 10^2 = 78,54 \text{ mm}$

$$\begin{aligned}
 S &= (1/4. \pi. \phi^2.b)/A_s \\
 &= (78.54.1000)/502,9885 = 156,1467 \text{ mm}
 \end{aligned}$$

Dipakai **P10- 150** ,untuk tulangan **tumpuan**

Luas tulangan dipakai $A_{s \text{ pakai}} = (78,54.1000)/150 = 523,6 \text{ mm}^2$

$$A_{s \text{ pakai}} = 523,6 \text{ mm}^2 > A_{perlu} = 488 \text{ mm}^2 \quad \text{-aman-}$$

Dengan cara yang sama dapat di hitung pelat lantai yang lain. (Disajikan pada Tabel 5.2)

Tabel 5.2 Pelat Dua Arah

1	Arah	L (m)	Ly/Lx	letak	Wu kN	Mu kN.m	h mm	d' mm	d mm	a mm	As perlu mm ²	As min mm ²	s mm	Tul
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PELAT LANTAI	arah-X	4	1,125	lx	9,28	3,97184	120	25	95	2,072049837	220,155295	300	261,8	P10-150
				tx	9,28	8,94592	120	25	95	4,734009618	502,988522	300	156,1467	P10-150
	arah-Y	4,5	1,125	ly	9,28	3,89934	120	25	95	2,033813864	216,092723	300	261,8	P10-100
				ty	9,28	10,24164	120	25	95	5,440424035	578,045054	300	135,8718	P10-100
	arah-X	3	1,5	lx	9,28	3,00672	120	25	95	1,56433481	166,210574	300	261,8	P10-150
				tx	9,28	-6,34752	120	25	95	3,220699867	342,199361	300	229,5153	P10-150
	arah-Y	4,5	1,5	ly	9,28	3,19464	120	25	95	1,662976263	176,691228	300	261,8	P10-100
				ty	9,28	-10,71144	120	25	95	5,375002747	571,094042	300	137,5255	P10-100
	arah-X	2,75	1,6364	lx	9,28	2,6219248	120	25	95	1,362675449	144,784266	300	261,8	P10-150
				tx	9,28	-5,5947496	120	25	95	2,844288861	302,205691	300	259,8892	P10-150
	arah-Y	4,5	1,6364	ly	9,28	2,8714176	120	25	95	1,493377397	158,671348	300	261,8	P10-100
				ty	9,28	-10,71144	120	25	95	5,697934943	605,405588	300	129,7312	P10-100
	arah-X	2,5	1,8	lx	9,28	2,16688	120	25	95	1,124759471	119,505694	300	261,8	P10-150
				tx	9,28	-4,62376	120	25	95	2,356611506	250,389973	300	261,8	P10-150
	arah-Y	4,5	1,8	ly	9,28	2,06712	120	25	95	1,072681416	113,9724	300	261,8	P10-100
				ty	9,28	-10,71144	120	25	95	5,375002747	571,094042	300	137,5255	P10-100
	arah-X	3	1,667	lx	9,28	3,42432	120	25	95	1,783679793	189,515978	300	261,8	P10-200
				tx	9,28	-6,93216	120	25	95	3,512047636	373,155061	300	210,4755	P10-200
	arah-Y	5	1,667	ly	9,28	2,552	120	25	95	1,326076619	140,895641	300	261,8	P10-100
				ty	9,28	-13,224	120	25	95	6,59463858	700,680349	300	112,0911	P10-100
	arah-X	2	2,5	lx	9,28	1,55904	120	25	95	0,807893424	85,8386763	300	261,8	P10-200
				tx	9,28	-3,08096	120	25	95	1,576678872	167,52213	300	261,8	P10-200
	arah-Y	5	2,5	ly	9,28	2,32	120	25	95	1,204749483	128,004633	300	261,8	P10-100
				ty	9,28	-13,224	120	25	95	6,59463858	700,680349	300	112,0911	P10-100
	arah-X	3,5	1,429	lx	9,28	3,9310544	120	25	95	2,050537872	217,869649	300	261,8	P10-150
				tx	9,28	-8,3975416	120	25	95	4,238542876	450,345181	300	174,3996	P10-150
	arah-Y	5	1,429	ly	9,28	4,10872	120	25	95	2,144282278	227,829992	300	261,8	P10-100
				ty	9,28	-13,224	120	25	95	6,59463858	700,680349	300	112,0911	P10-100
	arah-X	2,75	1,81	lx	9,28	1,47378	120	25	95	0,763532724	81,1253519	300	261,8	P10-200
				tx	9,28	-3,64936	120	25	95	1,864753095	198,130016	300	261,8	P10-200
	arah-Y	5	1,81	ly	9,28	4,872	120	25	95	2,548104718	270,736126	300	261,8	P10-100
				ty	9,28	-12,064	120	25	95	6,033386056	641,047269	300	122,5183	P10-100

Tabel 5.2 Lanjutan

1	Arah	L (m)	Ly/Lx	letak	Wu kN	Mu kN.m	h mm	d' mm	d mm	a mm	As perlu mm ²	As min mm ²	s mm	Tul
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PELAT LANTAI	arah-X	2,5	1,1	lx	9,28	2,436	120	25	95	1,265393421	134,448051	300	261,8	P10-200
				tx	9,28	-4,814	120	25	95	2,452351353	260,562331	300	261,8	P10-200
	arah-Y	2,75	1,1	ly	9,28	0,56144	120	25	95	0,290143793	30,827778	300	261,8	P10-200
				ty	9,28	-4,00026	120	25	95	2,042167911	216,980341	300	261,8	P10-200
	arah-X	2,25	1,333	lx	9,28	1,5028902	120	25	95	0,778676386	82,734366	300	261,8	P10-200
				tx	9,28	-3,3036336	120	25	95	1,689635675	179,523791	300	261,8	P10-200
	arah-Y	3	1,333	ly	9,28	1,5593184	120	25	95	0,80803831	85,8540704	300	261,8	P10-200
				ty	9,28	-4,76064	120	25	95	2,425506987	257,710117	300	261,8	P10-200
	arah-X	2,25	2	lx	9,28	1,92618	120	25	95	0,999155198	106,16024	300	261,8	P10-200
				tx	9,28	-3,89934	120	25	95	1,991176069	211,562457	300	261,8	P10-200
	arah-Y	4,5	2	ly	9,28	2,25504	120	25	95	1,170805998	124,398137	300	261,8	P10-100
				ty	9,28	-10,71144	120	25	95	5,375002747	571,094042	300	137,5255	P10-100
	arah-X	2,25	1,7778	lx	9,28	1,85832	120	25	95	0,963774189	102,401008	300	261,8	P10-200
				tx	9,28	-3,84192	120	25	95	1,9621515	208,478597	300	261,8	P10-200
	arah-Y	4	1,7778	ly	9,28	1,96323556	120	25	95	1,018480934	108,213599	300	261,8	P10-150
				ty	9,28	-8,46336	120	25	95	4,271049035	453,79896	300	173,0722	P10-150
	arah-X	3,84	1	lx	9,28	2,87362253	120	25	95	1,494533309	158,794164	300	261,8	P10-150
				tx	9,28	-7,1156367	120	25	95	3,603303417	382,850988	300	205,1451	P10-150
	arah-Y	3,84	1	ly	9,28	2,87362253	120	25	95	1,494533309	158,794164	300	261,8	P10-150
				ty	9,28	-7,1156367	120	25	95	3,603303417	382,850988	300	205,1451	P10-150
	arah-X	2,5	1	lx	9,28	1,218	120	25	95	0,630575739	66,9986723	300	261,8	P10-200
				tx	9,28	-3,016	120	25	95	1,543701372	164,018271	300	261,8	P10-200
	arah-Y	2,5	1	ly	9,28	1,218	120	25	95	0,630575739	66,9986723	300	261,8	P10-200
				ty	9,28	-3,016	120	25	95	1,543701372	164,018271	300	261,8	P10-200
	arah-X	4,25	1,0588	lx	9,28	3,91442	120	25	95	2,041765651	216,9376	300	261,8	P10-100
				tx	9,28	-9,40644	120	25	95	4,735650597	503,162876	300	156,0926	P10-100
	arah-Y	4,5	1,0588	ly	9,28	3,94632	120	25	95	2,05858898	218,725079	300	261,8	P10-100
				ty	9,28	-9,9929224	120	25	95	5,023488591	533,745663	300	147,1487	P10-100

Tabel 5.2 Lanjutan

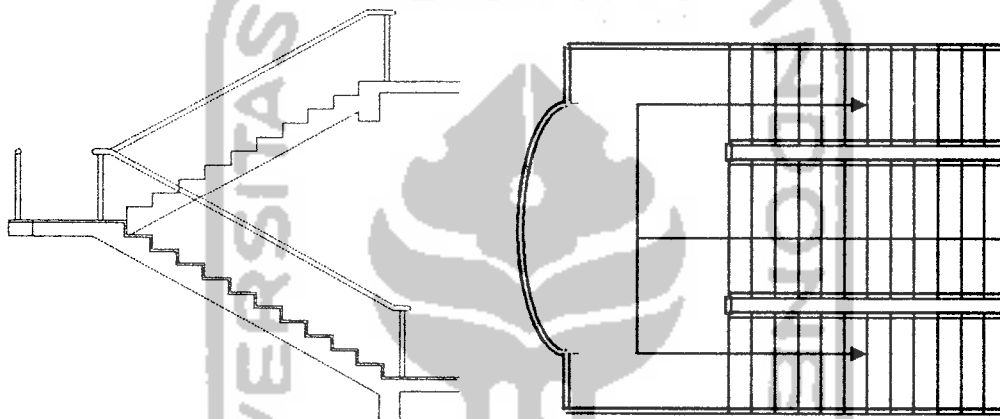
1	Arah	L (m)	Ly/Lx	letak	Wu kN	Mu kN.m	h mm	d' mm	d mm	a mm	As perlu mm ²	As min mm ²	s mm	Tul	As Susut mm ²	s mm ²	Tul pakai
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19
PELAT ATAP	arah-X	2,75	1,81	tx	9,28	1,47378	100	25	75	0,76332724	81,1253519	250	202,6	P8-200	140	201,92857	P6-200
				tx	9,28	-3,64936	100	25	75	1,864753095	198,130016	250	202,6	P8-200	140	201,92857	P6-200
	arah-Y	5	1,81	ly	9,28	4,872	100	25	75	2,548104718	270,736126	250	187,0825	P10-100	140	201,92857	P6-200
				ty	9,28	-12,064	100	25	75	6,033386056	641,047269	250	122,5183	P10-100	140	201,92857	P6-200
	arah-X	2,75	1,636	tx	9,28	1,6394048	100	25	75	0,849726292	90,2834186	250	202,6	P8-200	140	201,92857	P6-200
				tx	9,28	-3,9392034	100	25	75	2,011321049	213,702862	250	202,6	P8-200	140	201,92857	P6-200
	arah-Y	4,5	1,636	ly	9,28	3,94632	100	25	75	2,05858898	218,725079	250	202,6	P10-100	140	201,92857	P6-200
				ty	9,28	-9,9935856	100	25	75	5,023813635	533,780199	250	147,1392	P10-100	140	201,92857	P6-200
	arah-X	1,75	2	tx	9,28	1,16522	100	25	75	0,603163479	64,0861197	250	202,6	P8-200	140	201,92857	P6-200
				tx	9,28	-2,35886	100	25	75	1,20946307	128,505451	250	202,6	P8-200	140	201,92857	P6-200
	arah-Y	3,5	2	ly	9,28	1,36416	100	25	75	0,706528203	75,0686216	250	202,6	P8-150	140	201,92857	P6-200
				ty	9,28	-6,47976	100	25	75	3,286675538	349,209276	250	155,04	P8-150	140	201,92857	P6-200
	arah-X	1	1,5	tx	9,28	0,33408	100	25	75	0,172540586	18,3324373	250	202,6	P8-200	140	201,92857	P6-200
				tx	9,28	-0,70528	100	25	75	0,363227179	38,5928878	250	202,6	P8-200	140	201,92857	P6-200
	arah-Y	1,5	1,5	ly	9,28	0,35496	100	25	75	0,183334798	19,4793223	250	202,6	P8-200	140	201,92857	P6-200
				ty	9,28	-1,19016	100	25	75	0,612145426	65,0404515	250	202,6	P8-200	140	201,92857	P6-200

Keterangan Tabel 5.2 Pelat Dua Arah

1. Pelat yang ditinjau
2. Arah yang ditinjau
3. L = panjang pelat
4. Perbandingan Ly/Lx
5. Letak Penulangan
6. Wu = 1,2 . WD + 1,6 . WL (beban ultimit)
7. Mu = x . Wu . Ln² (momen ultimit)
8. h = pelat beton
9. d' = f tul.senggang + 1/2 f tul.pokok
10. d = h - d' (tinggi efektif balok)
11. a = nilai dr pers. $0,85 \cdot f_c' \cdot b \cdot a^2 - 2 \cdot 0,85 \cdot f_c' \cdot b \cdot d \cdot a + 2 \cdot M_n = 0$ (tinggi balok tegangan tekan)
12. As perlu = $(0,85 \cdot f_c' \cdot b \cdot a) / f_y$
13. As min = $0,0025 \cdot b \cdot h$
14. s = $(1/4 \cdot p \cdot f_y \cdot b) / A_s$ (jarak tulangan)
15. Tulangan dipakai
16. As Susut = $0,0014 \cdot b \cdot (\text{luas tul. Susut})$
17. As perlu = $(0,85 \cdot f_c' \cdot b \cdot a) / f_y$
18. Tulangan dipakai

5.2 Perencanaan Pelat Tangga

Perencanaan tangga meliputi perencanaan optrede dan antrede, pembebanan tangga dan bordes, perhitungan struktur tangga, penentuan tulangan yang dipakai pada pelat tangga dan bordes. Perencanaan tangga disajikan pada gambar 5.3



Gambar 5.3 Tangga tampak atas

5.2.1 Perencanaan Optrede dan Antrede

Langkah-langkah perencanaan optrede dan antrede, sebagai berikut :

$$\operatorname{tg} \alpha^{\circ} = O/A = 1.83/3.64 = 0.50$$

$$\alpha^{\circ} = 27^{\circ}$$

$$O = A \cdot 0,50$$

$$2 \cdot O + A = 65$$

$$2 \cdot 0,50 \cdot A + A = 65$$

dari persamaan diatas didapat $A = 32,50$ cm, diambil $A = 33$ cm

$$O = 33.0,50 = 16,5 \text{ cm} \sim 17 \text{ cm}$$

$$\text{Optrede} = 183/17 = 10,76 \sim 11 \text{ buah}$$

$$\text{Aptrede} = 11 - 1 = 10 \text{ buah}$$

$$\text{Tinggi injakan, } O = 183/11 = 16,64 \text{ cm}$$

$$\text{Lebar injakan, } A = 364/10 = 36.4 \text{ cm}$$

$$ht = 140 \text{ mm}$$

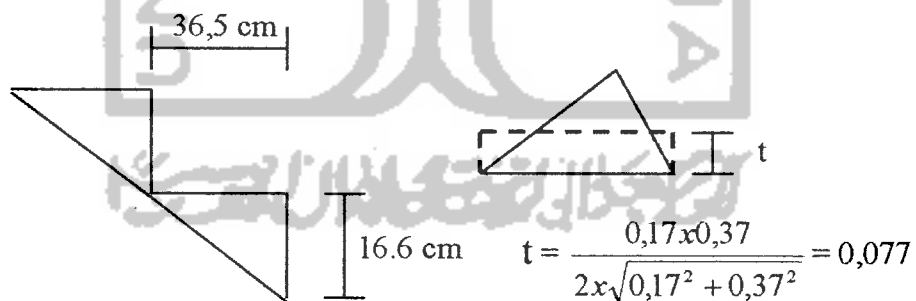
$$\begin{aligned} hb &= (ht/\cos 30^\circ) + \frac{1}{2} O \\ &= (140/\cos 30^\circ) + \frac{1}{2} 16,4 = 240,326 \text{ mm} \sim 240 \text{ mm} \end{aligned}$$

5.2.2 Pembebanan Plat Tangga dan Bordes

Pembebanan tangga dan bordes menurut PPPURDG 1987. Pelat tangga menggunakan beton.

a. Beban Mati

- Berat sendiri (pada SAP 2000 otomatis terhitung)



- Berat Optrede dan Antrede $0,077 \times 1 \times 24 = 1,85 \text{ kN/m}^2$
- Speci $0,040 \times 1 \times 21 = 0,84 \text{ kN/m}^2$
- Sandaran $0,080 \times 1 \times 24 = 1,92 \text{ kN/m}^2$
- Tegel $0,003 \times 1 \times 24 = 0,72 \text{ kN/m}^2$

$$W_D = 5,33 \text{ kN/m}^2$$

b. Beban Hidup

$$W_L = 3,0 \text{ kN/m}^2$$

5.2.3 Analisis Struktur Tangga dan Bordes

Analisis 3 dimensi struktur tangga dan bordes menggunakan program SAP2000 dengan input sebagai berikut :

1. Nomor join dan elemen sesuai dengan gambar
2. Dukungan dianggap jepit dan bordes menggantung
3. Beban berupa terbagi merata terdiri dari beban hidup dan beban mati
4. Pelat tangga berupa lemen balok
5. Dengan kombinasi beban $1,2 W_D + 1,6 W_L$
6. Modulus elastisitas beton $E = 4700 \cdot \sqrt{f_c'} = 4700 \sqrt{30} = 25743 \text{ MPa}$

Data input program dan hasil program disajikan dalam lampiran-lampiran.

5.2.4 Penulangan Pelat Tangga dan Bordes

Penulangan pelat tangga dan bordes, dipilih pelat tangga yang memiliki moment yang terbesar untuk mewakili tulangan atas dan bawah yang digunakan, sebagai berikut :

Profil balok 25 X 45 tebal selimut = 0.03 cm

Frame : 4 ; Join : 24

$b = 45 \text{ cm}$, $h = 25 \text{ cm}$

$d' = 3 \text{ cm}$, $d = h - d' = 25 - 3 = 22 \text{ cm}$

Dari analisis SAP 2000 di dapat :

- $Mu_{Atas} = -23,876 \text{ kN m}$

$$Mn = Mu / 0,8$$

$$Mn = 0,85 \cdot f_c' \cdot b \cdot a \cdot (d - a/2)$$

$$Mu/0,8 = C_c \cdot [d - (a/2)] + C_s (d - d')$$

$$0,85 \cdot f_c' \cdot b \cdot a^2 - 2 \cdot 0,85 \cdot f_c' \cdot b \cdot d \cdot a + 2 Mn = 0$$

$$0,85 \cdot 30 \cdot 450 \cdot a - 2 \cdot 0,85 \cdot 30 \cdot 450 \cdot 220 \cdot a + 2 \cdot 29,845 \cdot 10^6 = 0$$

$$\text{didapat } a = 12,158 \text{ mm}$$

$$\begin{aligned} A_{s,perlu} &= (0,85 \cdot f_c' \cdot b \cdot a) / f_y \\ &= (0,85 \cdot 30 \cdot 450 \cdot 12,158) / 240 \\ &= 581,301 \text{ mm}^2 \end{aligned}$$

$$\begin{aligned} A_{s,min} &= 0,0025 \cdot b \cdot h \\ &= 0,0025 \cdot 450 \cdot 250 = 381 \text{ mm}^2 \end{aligned}$$

$$A_{s,perlu} > A_{s,min}, \text{ maka diambil } A_{s,perlu}$$

$$\text{Direncanakan tulangan P12} = 1/4 \cdot \pi \cdot \phi^2 = 1/4 \cdot \pi \cdot 12^2 = 113,04 \text{ mm}$$

$$\begin{aligned} S &= (1/4 \cdot \pi \cdot \phi^2 \cdot b) / A_s \\ &= (113,04 \cdot 450) / 581,301 = 87,507 \text{ mm} \end{aligned}$$

Dipakai **P12- 85** ,untuk tulangan **atas**

Dari analisis SAP 2000 di dapat :

- $Mu_{Bawah} = 11,938 \text{ kN m}$

$$Mn = Mu / 0,8$$

$$0,85 \cdot f_c' \cdot b \cdot a^2 - 2 \cdot 0,85 \cdot f_c' \cdot b \cdot d \cdot a + 2 Mn = 0$$

$$0,85 \cdot 30 \cdot 450 \cdot a^2 - 2 \cdot 0,85 \cdot 30 \cdot 450 \cdot 220 \cdot a + 2 \cdot 11,938 \cdot 10^6 = 0$$

didapat $a = 5,992 \text{ mm}$

$$\begin{aligned} A_{s,perlu} &= (0,85 \cdot f_c' \cdot b \cdot a) / f_y \\ &= (0,85 \cdot 30 \cdot 450 \cdot 5,992) / 240 \\ &= 286 \text{ mm}^2 \end{aligned}$$

$$\begin{aligned} A_{s,min} &= 0,0025 \cdot b \cdot h \\ &= 0,0025 \cdot 450 \cdot 250 = 381 \text{ mm}^2 \end{aligned}$$

$A_{s,perlu} < A_{s,min}$, maka diambil $A_{s,min}$

Direncanakan tulangan P12 = $1/4 \cdot \pi \cdot \phi^2 = 1/4 \cdot \pi \cdot 12^2 = 113,04 \text{ mm}$

$$\begin{aligned} S &= (1/4 \cdot \pi \cdot \phi \cdot b) / A_s \\ &= (113,04 \cdot 450) / 381 = 133,51 \text{ mm} \end{aligned}$$

Dipakai **P12- 100** untuk tulangan **bawah**

BAB VI

PERENCANAAN STRUKTUR PORTAL BETON BERTULANG

Perencanaan struktur portal beton bertulang merupakan inti dari desain struktur bangunan, maka penentuan beban dan sifat struktur akan sangat mempengaruhi dimensi dan tulangan beton yang diperlukan. Perencanaan dengan daktilitas penuh ini struktur diberi beban gempa dikalikan factor pengali $K = 1$, tetapi dengan persyaratan daktilitas yang ketat. Pada bab ini akan dibahas desain balok, desain kolom, dan desain pertemuan balok kolom .

Perencanaan struktur portal dihitung menggunakan program aplikasi komputer SAP 2000 dengan pemasukan data-data sebagai berikut :

1. Nomor joint dan frame, disesuaikan dengan bentuk dan ukuran portal.
2. Dukungan portal dianggap jepit.
3. Ukuran penampang balok dan kolom.
4. Modulus elastisitas beton $E = 4700 \sqrt{f_c'}$ dengan $f_c' = 30$ MPa. Jadi
$$E = 4700 \sqrt{30} = 25742.960 \text{ MPa.}$$
5. Pembebanan portal, meliputi beban mati, beban hidup dan beban gempa.
6. Jenis pembebanan, beban merata dan beban terpusat.

Data-data input program disajikan dalam lampiran-lampiran. Hasil output dari perhitungan analisis struktur portal, berupa reaksi dukungan, joint displacements, dan gaya-gaya dalam untuk keperluan perhitungan desain balok dan kolom, sebagai elemen portal, disajikan dalam lampiran-lampiran.

Selanjutnya akan dibahas mengenai perhitungan pembebanan portal sebagai input dalam program aplikasi computer SAP 2000 untuk kepentingan analisis struktur portal.

6.1 Perhitungan Pembebanan Portal

Pembebanan portal meliputi beban mati, beban hidup dan beban gempa kiri/kanan. Besarnya beban yang dipakai sesuai dengan Pedoman Perencanaan Pembebanan untuk Rumah dan Gedung 1987.

1. Beban yang digunakan meliputi

a. Beban Mati

Beban mati yang ditetapkan seperti tercantum dibawah ini

Beton bertulang : 24 kN/m^3

1. Tegel : 24 kN/m^3
2. Spesi : 21 kN/m^2
3. Plafond : 0.18 kN/m^2
4. Tembok : 24 kN/m^3
5. Aspal : 2.5 kN/m^2

b. Beban Hidup

- Untuk ruang kuliah ditetapkan = $2,5 \text{ kN/m}^2$,

c. Beban Gempa

Pembebanan gempa khusus pada portal, ditentukan berdasarkan persyaratan dan analisis gaya-gaya dalam struktur dalam batas elatisitas dengan pembebanan gempa menurut PPKGURDG 1987

$$V_b = C.I.K.W_t$$

dengan :

V_b = gaya gempa dasar

C = koefisien gempa dasar

I = faktor keutamaan struktur = 1,5 (bangunan sekolah)

K = faktor jenis struktur = 1,0 (portal daktil beton bertulang)

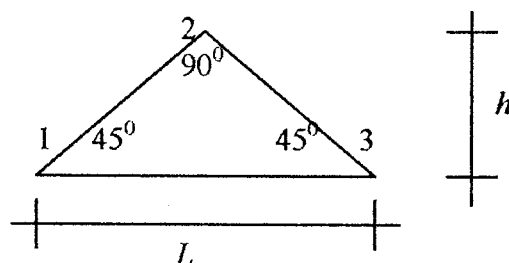
W_t = berat kombinasi beban mati keseluruhannya dan beban hidup vertikal yang direduksi

2 Jenis Pembebanan Portal

a. Pembebanan Merata

Pembebanan merata adalah distribusi beban pelat kebalok tumpuan, dalam hal ini digunakan cara pembebanan amplop atau *Trapezodial*, dengan menggunakan rumus sebagai berikut :

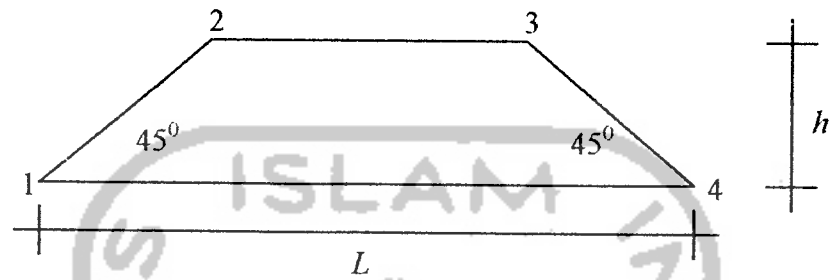
- untuk beban betang pendek (segitiga)



Gambar 6.1 Distribusi beban merata pada bentang pendek

$$(1 = 0 ; 2 = h \cdot q_D ; 3 = 0)$$

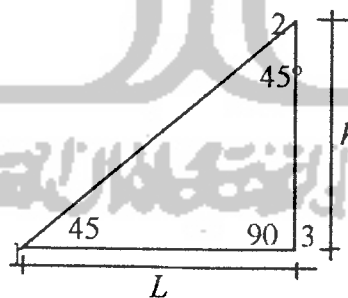
- untuk beban bentang panjang (trapesium)



Gambar 6.2 Distribusi beban merata pada bentang panjang

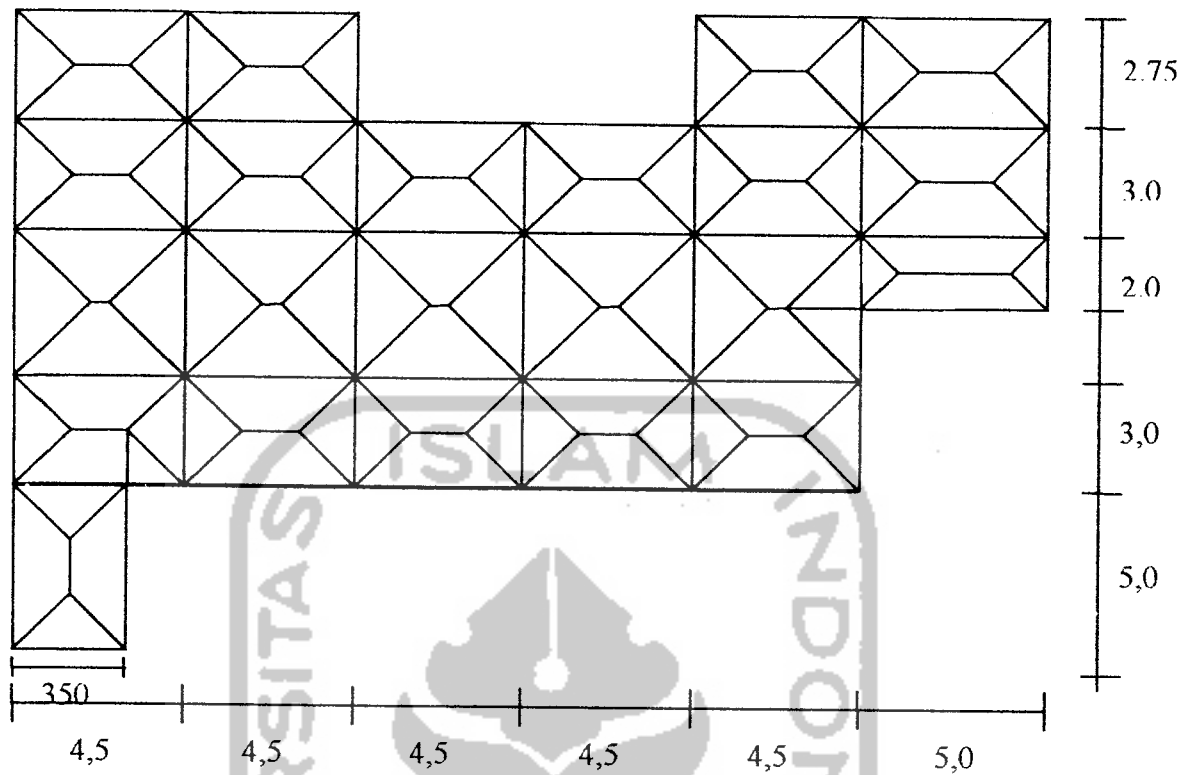
$$(1 = 0 ; 2 = h \cdot q_D ; 3 = h \cdot q_D ; 4 = 0)$$

- untuk beban bentang terpotong



Gambar 6.3 Distribusi beban terpotong

$$(1 = 0 ; 2 = h \cdot q_D ; 3 = 0)$$



Gambar 6.4 Pembagian beban amplop pada balok

Berikut beban yang digunakan pada pembebanan amplop ini :

1. Beban gravitasi mati (q_D)

- Pelat lantai untuk per m^2
 - Pelat beton = $0,12 \cdot 1,0 \cdot 1,0 \cdot 24 = 2,88 \text{ kN/m}^2$
 - Tegel = $0,02 \cdot 1,0 \cdot 1,0 \cdot 24 = 0,48 \text{ kN/m}^2$
 - Spesi = $0,04 \cdot 1,0 \cdot 1,0 \cdot 21 = 0,84 \text{ kN/m}^2$
 - Plafond = $1,0 \cdot 1,0 \cdot 0,18 = 0,18 \text{ kN/m}^2$
- $$q_D = 4,40 \text{ kN/m}^2$$
- Tembok $q_D = 2.5 \text{ kN/m}^2$
 - Berat sendiri balok (dihitung sendiri oleh SAP 2000)

2. Beban hidup

- untuk ruang kuliah $q_L = 2,5 \text{ kN/m}^2$

b. Pembebanan Titik

Pembebanan titik untuk beban mati dan beban hidup, berasal dari reaksi tumpuan rangka baja yang membebani balok-balok atap disajikan pada tabel 6.1 dan tabel 6.2 dan reaksi tumpuan pada tangga disajikan pada tabel 6.3.

Tabel 6.1 Reaksi Tumpuan Kuda-Kuda 1

JOINT	LOAD	F1 (kN)	F2 (kN)	F3 (kN)
3	DL	9,006	9,0069	24,3652
	LL	1,5947	1,5951	6,0564
4	DL	-9,0421	9,0367	24,1829
	LL	-1,6053	1,6042	6,017
6	DL	0,741	-2,97E-03	13,3889
	LL	0,1636	-5,09E-04	3,9777
7	DL	-0,7003	-7,80E-03	15,2821
	LL	-0,1518	-1,39E-03	5,0333
10	DL	0,7409	3,04E-03	13,3887
	LL	0,1636	5,21E-04	3,9776
11	DL	-0,6992	7,55E-03	15,2799
	LL	-0,1516	1,36E-03	5,0328
13	DL	9,0015	-9,0023	24,3589
	LL	1,5935	-1,5939	6,0548
14	DL	-9,0479	-9,0411	24,1912
	LL	-1,6067	-1,6054	6,019

Tabel 6.2 Reaksi Tumpuan Kuda-Kuda 2

JOINT	LOAD	F1	F2	F3
3	DL	-7,1385	0,0976	19,1156
	LL	-1,8566	0,024	5,0711
12	DL	9,85E-03	-0,0976	8,1929
	LL	2,37E-03	-0,024	3,2645
20	DL	7,1385	0,0976	19,1156
	LL	1,8566	0,024	5,0711
32	DL	-9,85E-03	-0,0976	8,1929
	LL	-2,37E-03	-0,024	3,2645

Tabel 6.3 Reaksi Tumpuan Tangga

JOINT	LOAD	F1 (kN)	F2 (kN)	F3 (kN)	M1 (kN m)	M2 (kN m)	M3 (kN m)
1	LD	-2,3097	-74,0823	48,1039	-3,456	-1,6698	-2,8663
	LL	-0,5533	-18,7671	12,3375	-0,9792	-0,4212	-0,678
2	LD	-0,4787	-38,0892	28,6979	-3,9822	-0,4339	-0,5733
	LL	-0,1111	-9,9094	7,5637	-1,1145	-0,11	-0,1295
3	LD	0,4787	-38,0892	28,6979	-3,9822	0,4339	0,5733
	LL	0,1111	-9,9094	7,5637	-1,1145	0,11	0,1295
4	LD	2,3097	-74,0823	48,1039	-3,456	1,6698	2,8663
	LL	0,5533	-18,7671	12,3375	-0,9792	0,4212	0,678
29	LD	0,0316	27,9048	23,5903	-5,9286	0,8913	0,2623
	LL	-0,0006	6,9879	6,078	-1,5939	0,2259	0,0531
30	LD	-0,2355	31,342	25,0642	-5,2171	1,2009	0,0212
	LL	-0,0707	7,9792	6,5142	-1,4105	0,3048	-0,0116
31	LD	-0,9727	52,9248	36,2386	-4,1276	1,7351	-0,818
	LL	-0,2697	13,7093	9,484	-1,1297	0,4437	-0,2413
32	LD	0,9727	52,9248	36,2386	-4,1276	-1,7351	0,818
	LL	0,2697	13,7093	9,484	-1,1297	-0,4437	0,2413
33	LD	0,2355	31,342	25,0642	-5,2171	-1,2009	-0,0212
	LL	0,0707	7,9792	6,5142	-1,4105	-0,3048	0,0116
34	LD	-0,0316	27,9048	23,5903	-5,9286	-0,8913	-0,2623
	LL	6,02E-04	6,9879	6,078	-1,5939	-0,2259	-0,0531

c. Beban Gempa

Perhitungan gaya geser dasar horisontal total akibat gempa dan distribusinya sepanjang tinggi gedung.

a. Mencari berat bangunan tiap lantai.

Berat bangunan tiap lantai didapat dari jumlah reaksi tiap lantai berdasarkan hasil analisis SAP 2000 berikut ini:

- Lantai Dasar	= 7756.705 kN
- Lantai 1	= 7756.705 kN
- Lantai 2	= 8051.958 kN
- Lantai 3	= 8194.182 kN
- Atap	= 2749.546 kN
Berat Total	= 35846.13 kN

b. Berat Total Bangunan (W_t) = 35846.13 kN

c. Waktu getar alami (PPKGURDG, 1987).

$$T = 0,06.H^{3/4} = 0,06.19,3^{3/4} = 0,552 \text{ detik}$$

d. berdasrkan grafik koefisien gempa dasar PPKGURDG, 1987 untuk wilayah 3, jenis tanah lunak dan $T = 0,552$ detik, diperoleh koefisien gempa dasar $C = 0,007$

e. Faktor keutamaan ruang kuliah $I = 1,5$ dan faktor jenis struktur dengan daktilitas penuh $K = 1,0$ (PPKGURDG, 1987).

f. Gaya geser horisontal total akibat gempa

$$V_x = V_y = C.I.K. W_t$$

$$= 0,07 \cdot 1,5 \cdot 1,0 \cdot 35846,13$$

$$= 2509,23 \text{ kN}$$

- g. Distribusi gaya geser horisontal total akibat gempa kesepanjang tinggi gedung dihitung dengan rumus berikut : (PPKGURDG, 1987).

$$F_i = \frac{W_i h_i}{\sum W_i h_i} V_b, \text{ untuk } \frac{h_w}{l_w} < 3,0$$

$$F_i = 0,9 \cdot \frac{W_i h_i}{\sum W_i h_i} V_b + (0,1 \cdot V_b \text{ dipuncak}), \text{ untuk } \frac{h_w}{l_w} > 3,0$$

dengan :

F_i = beban horizontal tiap lantai

W_i = beban pada tiap lantai

h_i = tinggi struktur setiap lantai dari penjepit lateral

Perhitungan distribusi gaya geser gempa disajikan pada tabel berikut ini :

$$\frac{h_w}{l_w} = \frac{19,3}{55} = 0,354 < 3,0$$

Tabel 6.4 Distribusi gaya geser gempa

Lantai	h_i (m)	W_i (kN)	$W_i \cdot h_i$	F_i x,y
atap	19,3	2749,546	53066,238	368,437
3	15,3	8194,182	125370,985	870,447
2	11,3	8051,958	90987,125	631,721
1	7,3	9093,739	66384,295	460,904
Dasar	3,3	7756,705	25597,127	177,720
		35846,130	361405,769	

- h. Gaya geser gempa pada analisis tiga dimensi dibagi jumlah kolom yang bekerja pada lantai itu (Gidion)

6.2 Desain Balok

6.2.1 Momen Rencana Balok

Momen rencana balok dihitung berdasarkan tipe-tipe pembebanan menurut SK SNI T-15-1991-03 adalah sebagai berikut.

$$M_{u1} = 1,2M_D + 1,6M_L$$

$$M_{u2} = 1,05.(M_D + 0,9M_L + M_{ex})$$

$$M_{u3} = 1,05.(M_D + 0,9M_L + M_{ey})$$

$$M_{u4} = 0,9.(M_D + M_{ex})$$

$$M_{u5} = 0,9.(M_D + M_{ey})$$

Contoh perhitungan diambil pada Balok 1B1

Diketahui:

$$M_D = -11736,927 \text{ Nmm} ; M_L = 0 \text{ KN}$$

$$M_{ex} = 0 \text{ KN} ; M_{ey} = 0 \text{ KN}$$

$$M_{u1} = 1,2.11736,927 + 1,6.0 = -14084313 \text{ Nmm}$$

Hasil perhitungan momen rencana balok lainnya disajikan pada lampiran momen rencana balok.

6.2.2 Penulangan Lentur Balok dan Perhitungan Momen Nominal Aktual Balok

Sebagai contoh perhitungan penulangan lentur balok dan perhitungan momen nominal aktual balok pada balok 3A45X70.

Tulangan Tumpuan Balok

$$Mu = -512,4589 \text{ KN.m (negative)}$$

$$Mu = 278.0960 \text{ KNm (positive)}$$

$$\text{Rasio} = \rho/\rho' = \frac{512,4589}{278,0960} = 0,5427$$

$$\rho_{\min} = \frac{1,4}{f_y} = \frac{1,4}{390} = 0,0036$$

$$\rho_b = \frac{0,85 \cdot f_c'}{f_y} \cdot \beta_1 \left(\frac{600}{600 + f_y} \right)$$

$$\rho_b = \frac{0,85 \cdot 30}{390} \cdot 0,85 \left(\frac{600}{600 + 390} \right) = 0,03367$$

$$\rho_{\max} = 0,75 \cdot \rho_b = 0,75 \cdot 0,03367 = 0,025$$

$$d' = \text{Selimut beton} + \phi \cdot \text{tul. Sengkang} + \frac{1}{2} \cdot \phi \cdot \text{tul. lentur}$$

$$= 40 + 12 + \frac{1}{2} \cdot 25 = 64.5 \text{ mm}$$

$$d = h - d' = 700 - 64.5 = 635.5 \text{ mm}$$

$$m = \frac{f_y}{0,85 \cdot f_c'} = \frac{390}{0,85 \cdot 30} = 15,294$$

$$Rn = \frac{Mu}{b \cdot d^2} = \frac{512,4589 \cdot 10^6}{450 \cdot 635,5^2} = 2,8198 \text{ N.mm}$$

$$\rho_{perlu} = \frac{1}{m} \cdot \left(1 - \sqrt{1 - \frac{2 \cdot m \cdot Rn}{f_y}} \right)$$

$$\rho_{perlu} = \frac{1}{15,294} \cdot \left(1 - \sqrt{1 - \frac{2 \cdot 15,294 \cdot 2,8198}{390}} \right) = 0,00769$$

$$\text{Syarat} = \rho_{\min} < \rho_{perlu} < \rho_{\max}$$

Memenuhi syarat, digunakan $\rho_{perlu} = 0,00769$

Luas tulangan tarik

$$As = \rho \cdot b \cdot d$$

$$As = 0,00769 \cdot 450 \cdot 635,5 = 2209,53 \text{ mm}^2$$

$$\text{Jumlah tulangan} = n = As / \varphi + 1 = 2209,53 / 490,87 + 1 = 5,05 \approx 6 \text{ buah}$$

Luas tulangan tekan

$$As' = (\rho / \rho') \cdot As = (0,6) \cdot 2209,53 = 1325,718$$

$$\text{Jumlah tulangan} = n = As' / \varphi + 1 = 1325,718 / 490,87 = 2,7 \approx 3 \text{ buah}$$

$$\text{Digunakan tulangan } As = 6D-25 = 2945,220 \text{ mm}^2$$

$$As' = 3D-25 = 1472,610 \text{ mm}^2$$

Keseimbangan gaya

$$(0,85 \cdot f_c' \cdot b \cdot \beta_1) \cdot x^2 + (600 \cdot As' - As \cdot f_y) \cdot x - 600 \cdot d' \cdot As' = 0$$

$$(0,85 \cdot 30 \cdot 450 \cdot 0,85) \cdot x^2 + (600 \cdot 1472,610 - 2945,220 \cdot 390) \cdot x - 600 \cdot 64,5 \cdot 1472,610 = 0$$

$$9753,75 \cdot x^2 - 265069,8 \cdot x - 56990007 = 0$$

$$x = 91,225 \text{ mm}$$

$$a = \beta_1 \cdot x = 0,85 \cdot 91,225 = 77,541 \text{ mm}$$

$$f_s' = \frac{x - d'}{x} \cdot 600 = \frac{91,225 - 64,5}{91,225} \cdot 600 = 175,775 < f_y = 390$$

$$C_c = 0,85 \cdot f_c' \cdot b \cdot a = 0,85 \cdot 30 \cdot 450 \cdot 77,541 = 889787,69 \text{ KN}$$

$$C_s = A_s' \cdot f_s' = 1472,610 \cdot 175,775 = 258848,11 \text{ KN}$$

$$M_{nak} = C_c \cdot \left(d - \frac{a}{2}\right) + C_s \cdot (d - d')$$

$$\begin{aligned} M_{nak} &= 889787,69 \left(635,5 - \frac{77,541}{2}\right) + 258848,11 \cdot (635,5 - 64,5) \\ &= 678,765 \text{ KNm} \end{aligned}$$

$$\phi M_{nak} = 678,765 > M_n = 512,4589/0,8 = 640,574 \text{ KNm} \quad \text{—aman—}$$

Dengan cara yang sama dapat dihitung penulangan lentur dan perhitungan momen nominal aktual seluruh balok, yang disajikan pada Tabel 6.5.

Tabel 6.5 Perhitungan Pemulangan Lentur dan Perhitungan Momen Nominal Aktual Balok

	BALOK	Letak	Dimensi	Mu (kN.m)	p/p	Mu (kN.m)	Rn kN	P	P pakai	As (mm2)	n tul	As' (mm2)	n tul	Letak Tul.	Digunakan Tulangan	X (mm)	a (mm)	f'y (Npa)	Cs (N)	Cc (N)	M nak-Mu,0.8 (kN.m)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Sloof	1B30X50	tump	b = 300 d = 53	-30,8764	0,5	30,6764	0,511763	0,00133	0,00133	174,97	2	87,483	2	As	2 D-22	760,264	49,923	42,434	36,986	28118,91	324621,87	149,297 > 38,346	aman
				2,8186	1	2,81956	0,047038	0,00013	0,00013	17,05	2	17,05	2	As	2 D-22	760,264	49,923	42,434	-36,986	-28118,91	324621,87	127,140 > 22,087	aman
				17,8700	0,5	17,67	0,294781	0,00077	0,00077	101,3	2	50,65	2	As	2 D-22	760,264	49,923	42,434	-36,986	-28118,91	324621,87	127,140 > 22,087	aman
				-2,3519	1	2,35191	0,039236	0,00011	0,00011	14,43	2	14,43	2	As	2 D-22	760,264	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 6,286	aman
1C25X40	tump	b = 250 d = 48	-5,0286	0,5	5,02859	0,162338	0,00042	0,00042	35,55	2	17,775	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 6,286	aman	
			-0,5080	1	0,50801	0,0164	0,00003	0,00003	4,22	2	4,22	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 6,286	aman	
			2,8450	0,5	2,945	0,095074	0,00025	0,00025	21,16	2	10,58	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 6,286	aman	
			0,5495	1	0,54954	0,017741	0,00003	0,00003	4,22	2	4,22	2	As	2 D-19	567,060	80,306	68,260	118,095	173908,45	783288,05	570,348 > 522,089	aman	
2A45X70	tump	b = 450 d = 64,5	-417,8711	0,6	417,671	2,298216	0,00619	0,00619	1778,55	4	1067,13	3	As	5 D-25	2454,350	61,662	52,412	-27,619	-27114,36	601432,26	350,967 > 345,721	aman	
			237,0775	1	237,078	1,304308	0,00344	0,00344	986,08	3	986,08	3	As	3 D-25	1472,610	74,076	62,965	170,714	259573,19	481682,21	302,420 > 281,692	aman	
			278,5771	0,6	276,377	1,521853	0,00403	0,00403	1157,92	3	694,752	2	As	3 D-25	1472,610	60,105	51,089	70,925	53922,03	390832,41	185,964 > 179,056	aman	
			-148,1783	1	148,178	0,815344	0,00213	0,00213	610,57	2	610,57	2	As	2 D-25	981,740	54,119	46,001	67,843	38470,91	293259,19	108,177 > 104,258	aman	
2B30X50	tump	b = 300 d = 53	-225,3535	0,9	225,354	3,759482	0,01048	0,01048	1378,65	4	1240,79	4	As	5 D-22	1900,660	74,076	62,965	170,714	259573,19	481682,21	302,420 > 281,692	aman	
			184,4020	1	184,402	3,076304	0,00844	0,00844	1106,49	3	1106,49	3	As	4 D-22	1520,328	60,105	51,089	70,925	53922,03	390832,41	185,964 > 179,056	aman	
			143,2450	0,8	143,245	2,3397	0,00645	0,00645	848,5	3	678,8	2	As	3 D-22	1140,396	60,105	51,089	70,925	53922,03	390832,41	185,964 > 179,056	aman	
			-102,8710	1	102,971	1,717824	0,00457	0,00457	599,13	2	599,13	2	As	2 D-22	760,264	54,119	46,001	67,843	38470,91	293259,19	108,177 > 104,258	aman	
2C25X40	tump	b = 250 d = 48	-83,4061	0,5	83,4061	2,692604	0,00732	0,00732	619,46	3	309,73	2	As	3 D-19	850,590	54,119	46,001	67,843	38470,91	293259,19	108,177 > 104,258	aman	
			38,2881	1	36,2661	1,170782	0,00308	0,00308	259,49	2	259,49	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 37,313	aman	
			29,8503	0,5	29,8503	0,963659	0,00252	0,00252	213,26	2	106,63	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 37,313	aman	
			-10,9811	1	10,9911	0,354827	0,00092	0,00092	77,51	2	77,51	2	As	2 D-19	567,060	91,225	77,541	175,775	258848,11	889787,69	678,765 > 640,574	aman	
3A45X70	tump	b = 450 d = 64,5	-512,4588	0,6	512,459	2,819781	0,00769	0,00769	2209,53	5	1325,72	3	As	6 D-25	2945,220	91,225	77,541	175,775	258848,11	889787,69	678,765 > 640,574	aman	
			278,0980	1	278,096	1,53021	0,00405	0,00405	1160,94	3	1160,94	3	As	3 D-25	1472,610	72,125	61,306	63,429	62271,01	703486,19	461,058 > 394,223	aman	
			315,3784	0,6	315,378	1,753555	0,00462	0,00462	1327,45	3	796,47	2	As	4 D-25	1963,480	60,105	51,089	70,925	53922,03	390832,41	185,964 > 155,261	aman	
			-183,8874	1	183,897	1,011887	0,00265	0,00265	759,63	2	759,63	2	As	2 D-25	981,740	60,105	51,089	70,925	53922,03	390832,41	185,964 > 155,261	aman	
3B30X50	tump	b = 300 d = 53	-124,2088	0,6	124,209	2,072127	0,00555	0,00555	730,11	2	438,066	2	As	3 D-22	1140,396	60,105	51,089	70,925	53922,03	390832,41	185,964 > 155,261	aman	
			72,1490	1	72,149	1,203633	0,00317	0,00317	415,59	2	415,59	2	As	2 D-22	760,264	49,923	42,434	-36,986	-28118,91	324621,87	127,140 > 38,300	aman	
			48,7119	0,5	46,7119	0,779276	0,00203	0,00203	267,05	2	133,525	2	As	2 D-22	760,264	49,923	42,434	-36,986	-28118,91	324621,87	127,140 > 38,300	aman	
			-4,3410	1	4,34097	0,072419	0,00019	0,00019	24,91	2	24,91	2	As	2 D-22	760,264	65,119	53,551	157,732	89443,64	352863,16	141,633 > 129,835	aman	
3CX25X40	tump	b = 250 d = 48	-103,8877	0,5	103,868	3,333168	0,00926	0,00926	783,63	3	391,815	2	As	4 D-19	1134,120	65,119	53,551	157,732	89443,64	352863,16	141,633 > 129,835	aman	
			45,8823	1	45,6823	1,474765	0,0039	0,0039	328,58	2	328,58	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 37,799	aman	
			30,2398	0,5	30,2396	0,976226	0,00256	0,00256	216,64	2	108,32	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 37,799	aman	
			-7,8728	1	7,87261	0,254152	0,00066	0,00066	55,61	2	55,61	2	As	2 D-19	567,060	54,119	46,001	67,843	38470,91	293259,19	108,177 > 82,542	aman	
3C/25X40	tump	b = 250 d = 48	-68,0337	0,8	66,0337	2,131777	0,00572	0,00572	484,06	2	387,248	2	As	3 D-19	850,590	54,119	46,001	67,843	38470,91	293259,19	108,177 > 82,542	aman	
			50,7832	1	50,7832	1,62265	0,00431	0,00431	363,12	2	363,12	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 37,799	aman	
			19,1832	0,5	19,1832	0,619292	0,00161	0,00161	136,25	2	68,125	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 37,799	aman	
			-8,4281	1	8,42613	0,304304	0,00079	0,00079	66,56	2	66,56	2	As	2 D-19	567,060	91,225	77,541	175,775	258848,11	889787,69	678,765 > 653,259	aman	
4A45X70	tump	b = 450 d = 64,5	-555,2898	0,6	555,27	3,053346	0,00837	0,00837	2404,92	5	1442,95	3	As	6 D-25	2945,220	91,225	77,541	175,775	258848,11	889787,69	678,765 > 653,259	aman	
			285,0110	1	295,011	1,623284	0,00431	0,00431	1235,47	3	1235,47	3	As	3 D-25	1472,610	72,125	61,306	63,429	62271,01	703486,19	461,058 > 403,740	aman	
			322,8821	0,7	322,892	1,777249	0,00473	0,00473	1359,05	3	951,335	2	As	4 D-25	1963,480	72,125	61,306	63,429	62271,01	703486,19	461,058 > 403,740	aman	
			-211,0533	1	211,0533	1,161311	0,00305	0,00305	874,29	2	874,29	2	As	2 D-25	981,740	60,105	51,089	70,925	53922,03	390832,41	185,964 > 130,673	aman	
4B30X50	tump	b = 300 d = 53	-104,5383	0,8	104,538	1,74397	0,00464	0,00464	610,4	2	488,32	2	As	3 D-22	1140,396	60,105	51,089	70,925	53922,03	390832,41	185,964 > 130,673	aman	
			79,3250	1	79,325	1,323347	0,00349	0,00349	457,54	2	457,54	2	As	2 D-22	760,264	49,923	42,434	-36,986	-28118,91	324621,87	127,140 > 39,079	aman	
			47,2631	1,1	47,2631	0,788471	0,00206	0,00206	271	2	298,1	2	As	2 D-22	760,264	49,923	42,434	-36,986	-28118,91	324621,87	127,140 > 39,079	aman	
			-49,0917	0,9628	49,0917	0,818978	0,00214	0,00214	280,56	2	270,109	2	As	2 D-22	760,264	72,400	61,540	160,771	122228,06	470777,86	244,110 > 239,537	aman	
4B/30X50	tump	b = 300 d = 53	-181,8287	0,3	191,63	3,196881	0,00879	0,00879	1156,33	4	578,163	2	As	4 D-22	1320,528	72,400	61,540	160,771	122228,06	470777,86	244,110 > 239,537	aman	
			60,3475	1	60,3475	1,006753	0,00264	0,00264	346,11	2	346,11	2	As										

Tabel 6.5 Lanjutan

BALOK	Letak	Dimensi	Mu (kN.m)	p/p	Mu (kN.m)	Rn kN	P	p pokok	As (mm2)	n tul	As' (mm2)	n tul	Letak Tul.	Digunakan Tulangan	X (mm)	a (mm)	f _y (Mpa)	C _s (N)	C _c (N)	M _{hak} -Mu/0.8 (kN.m)				
Lantai 4	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	8D20X50	tump	-56,7453	0,5	56,7453	1,388748	0,00367	0,00367	321,86	2	160,93	2	As	2 D-19	567,060	49,161	41,787	14,176	8038,37	213115,03	95,123 > 70,932	aman		
		lap	28,8298	0,5	28,8298	0,705561	0,00184	0,00184	161,37	2	80,685	2	As	2 D-19	567,060	49,161	41,787	14,176	8038,37	213115,03	95,123 > 36,037	aman		
	7C/25X40	tump	-107,2887	0,8	107,2887	3,46296	0,00959	0,00959	811,56	3	649,248	3	As	4 D-19	1134,120	61,250	129,799	110405,98	331900,82	141,753 > 134,086	aman			
lap		44,5433	0,8	44,5433	1,437993	0,0038	0,0038	321,58	2	257,264	2	As	3 D-19	850,590	44,999	38,249	-22687,16	243840,56	74,272 > 55,679	aman				
8B30X50	tump	-107,2887	0,8	107,2887	1,78942	0,00477	0,00477	627,5	2	502	2	As	3 D-22	1140,396	60,105	51,089	70,925	53922,03	390832,41	185,964 > 134,086	aman			
	lap	48,9285	1,8	48,9285	0,816272	0,00213	0,00213	280,21	2	504,378	2	As	2 D-22	760,264	49,923	42,434	-36,986	-28118,91	324621,87	127,140 > 61,162	aman			
8C/25X40	tump	-84,6777	0,5778	84,6777	1,412643	0,00373	0,00373	489,01	2	282,566	2	As	2 D-22	760,264	82,832	70,408	252,310	214612,25	448847,95	207,435 > 187,073	aman			
	lap	-149,6587	0,5	149,6587	4,831439	0,01386	0,01386	1172,91	5	586,455	3	As	6 D-19	1701,180	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 66,747	aman			
8D20X50	tump	-53,3973	0,5	53,3973	1,723829	0,00459	0,00459	388,43	2	194,215	2	As	2 D-19	567,060	44,999	38,249	-40,008	-22687,16	243840,56	74,272 > 66,747	aman			
	lap	-57,1816	1	57,1816	1,672799	0,00444	0,00444	37,07	2	37,07	2	As	2 D-19	567,060	49,161	41,787	14,176	8038,37	213115,03	95,123 > 83,854	aman			
8F20X30	tump	-67,0835	0,8	67,0835	1,641756	0,00436	0,00436	382,38	2	305,904	2	As	2 D-19	567,060	60,405	51,344	123,220	261856,79	73,520 > 66,791	aman				
	lap	50,8854	1	50,8854	1,245335	0,00328	0,00328	286,68	2	286,68	2	As	2 D-19	567,060	49,161	41,787	14,176	8038,37	213115,03	95,123 > 32,956	aman			
	tump	-28,3848	0,6	26,3648	0,645234	0,00168	0,00168	147,34	2	88,404	2	As	2 D-19	567,060	49,161	41,787	14,176	8038,37	213115,03	95,123 > 32,956	aman			
	lap	-13,5659	1	13,5659	0,332002	0,00086	0,00086	75,17	2	75,17	2	As	2 D-19	567,060	49,161	41,787	14,176	8038,37	213115,03	95,123 > 32,956	aman			
	tump	-53,4328	1	53,4328	4,20704	0,01187	0,01187	566,2	2	566,2	2	As	3 D-19	850,590	60,405	51,344	123,220	69873,31	261856,79	73,520 > 66,791	aman			
	lap	50,3395	1	50,3395	3,96341	0,01111	0,01111	526,62	2	526,62	2	As	2 D-19	567,060	49,161	41,787	14,176	8038,37	213115,03	50,892 > 14,185	aman			

Keterangan Tabel 6.5 Perhitungan Penulangan Lentur dan Perhitungan Momen Nominal Aktual Balok

- Letak balok yang ditinjau
- Balok yang ditinjau
- Letak yang ditinjau
- Ukuran penampang yang digunakan
- d' = Tebal selimut beton + $\frac{\phi}{2}$ tulangan + 1/2 ϕ tul. Paksi
- Momen ultimid balok dari SAP 2000
- Perbandingan p/p
- Rn = Mu/(b.d²)
- p = 1/m . $\sqrt{1 - 2 \cdot m \cdot Rn/fy}$
- paksa, syarat p < p_{maks} maka digunakan p_{maks}
- dengan p_{maks} = 0,75 . 0,85 . fy / (600 + fy)
- As = p . b . d
- n tul = As / ϕ + 1
- Jumlah tulangan As
- As' = p' / n . As
- n tul = As' / ϕ + 1
- Letak tulangan
- Tulangan yang dipasang
- Luar tulangan yang dipasang
- x = a/B1 dengan a = [As . fy - As' . fy - As' . fy] / (0,85 . fy) [0,85 . fy] jika as > ey dengan ss = [(d - x) / s] . sec
- a = x . B1 (tinggi balok tekan)
- f_y = (x - d) / x . 600 (tegangan leleh tulangan)
- Cs = As' . fy - 0,85 . fy' (tegangan tarik beton)
- Cc = 0,85 . fy' . b . a (Tegangan tarik tulangan)
- Kontrol M_{hak} > Mu/0,8
M_{hak} = Cs . (d - a/2) + C_s . (d - d')
- Jika M_{hak} > Mu/0,8 maka aman
Jika M_{hak} < Mu/0,8 maka tidak aman

6.2.3 Gaya Geser Rencana Balok

Gaya geser rencana balok dapat dihitung dengan rumus (Kusuma dan Andriono, 1997)

$$V_{u,b} = 1,05.(V_{D,b} + V_{L,b}) + 0,7.1,25.\left[\frac{M_{nak,b} + M_{nak,b'}}{l_n}\right]$$

tetapi gaya geser terpakai balok tidak boleh lebih besar dari gaya geser maksimum,

$$V_{u,bmaks} = 1,05.(V_{D,b} + V_{L,b} + 4/k.V_{E,b})$$

Sebagai contoh perhitungan adalah gaya geser rencana balok 1B30X50

Deketahui

$$V_{D,b} = 16874,85 \text{ N}, \quad V_{L,b} = 0, \quad V_{E,b} = 0$$

$$M_{nak+} = 127139586 \text{ N mm}$$

$$M_{nak-} = 127139586 \text{ N mm}$$

$$l_n = 9550 \text{ mm}$$

$$V_{u,b} = 1,05.(16874,85 + 0) + 0,7.0,25.\left[\frac{127139586 + 127139586}{9550}\right] = 5579,237 \text{ N}$$

$$V_{u,bmaks} = 1,05.(16874,85 + 0 + 4/1.0) = 17718,593 \text{ N}$$

dipilih sebagai gaya geser balok terpakai adalah

$$V_{u,b} = 17718,593 \text{ N}$$

Dengan cara yang sama didapat gaya geser rencana dari semua balok, disajikan pada Tabel 6.6.

Tabel 6,6 Gaya Geser Rencana Balok

BALOK	Ln (mm)	LOC	VD (N)	VL (N)	VE (N)	M nak + (N mm)	M nak - (N mm)	V ren (N)	V maks (N)	V pakai (N)
1	2	3	4	5	6	7	8	9	10	11
1B30X50	9550	225	-16874,85	0	0	149297290,4	127139585,6	7609,394	-17718,593	7609,394
		5000	0	0	0	149297290,4	127139585,6	25327,986	0,000	0,000
		9775	16874,85	0	0	149297290,4	127139585,6	43046,579	17718,593	17718,593
1C25X40	4750	125	-5595,5	0	0	74271590,73	74271590,73	21487,943	-5875,275	-5875,275
		2500	0	0	0	74271590,73	74271590,73	27363,218	0,000	0,000
		4875	5595,5	0	0	74271590,73	74271590,73	33238,493	5875,275	5875,275
2A45X70	2750	0	87215,66	34665,18	33847,65	570347504,3	240679618,6	386028,967	270135,012	270135,012
		1375	105738,83	39391,74	33847,65	570347504,3	240679618,6	410441,183	294547,229	294547,229
		2750	127149,51	45758,93	33847,65	570347504,3	240679618,6	439607,947	323713,992	323713,992
2B30X50	4775	0	-7270,16	-59,16	-18691,79	302420013,8	127184637,1	71027,579	-86201,304	71027,579
		2387,5	1167,26	-59,16	-18691,79	302420013,8	127184637,1	79886,870	-77342,013	-77342,013
		4775	9604,69	-59,16	-18691,79	302420013,8	127184637,1	88746,172	-68482,712	-68482,712
2C25X40	4500	0	-20363,92	-9868,6	1815,97	108177218,8	74271590,73	3732,011	-24117,072	3732,011
		2250	5837,08	2006,4	1815,97	108177218,8	74271590,73	43711,811	15862,728	15862,728
		4500	32038,08	13881,4	1815,97	108177218,8	74271590,73	83691,611	55842,528	55842,528
3A45X70	2750	0	85934,3	34957,99	44096,12	678764651,4	240929105,8	419566,736	312140,609	312140,609
		1375	116488,72	39684,55	44096,12	678764651,4	240929105,8	456611,765	349185,638	349185,638
		2750	149930,64	46051,74	44096,12	678764651,4	240929105,8	498411,331	390985,203	390985,203
3B30X50	4775	0	-16874,4	-7629,77	8264,71	185963708,7	127139585,6	31645,571	8982,403	8982,403
		2387,5	14855,52	5453,36	8264,71	185963708,7	127139585,6	78699,273	56036,106	56036,106
		4775	49827,7	20357,62	8264,71	185963708,7	127139585,6	131069,535	108406,368	108406,368
3CX25X40	2250	0	-3107,6	-2706,77	1558,65	141633019,7	74271590,73	77857,816	441,242	441,242
		1125	24717,9	6004,17	1558,65	141633019,7	74271590,73	116221,078	38804,504	38804,504
		2250	42780,9	9168,23	1558,65	141633019,7	74271590,73	138509,491	61092,917	61092,917
3CY25X40	2350	250	-5521,16	-3735,75	26215,94	108177218,8	74271590,73	58213,312	100387,193	58213,312
		1425	5884,89	1172,06	26215,94	108177218,8	74271590,73	75342,865	117516,746	75342,865
		2600	16278,94	5504,87	26215,94	108177218,8	74271590,73	90806,068	132979,949	90806,068
4A45X70	2750	0	110012,9	37483,01	39980,93	678764651,4	240929105,8	447500,537	322790,612	322790,612
		1375	140567,32	42209,57	39980,93	678764651,4	240929105,8	484545,566	359835,641	359835,641
		2750	174009,25	48576,76	39980,93	678764651,4	240929105,8	526345,142	401635,217	401635,217
4B30X50	4550	225	-49442,97	-12335,54	331,35	185963708,7	127139585,6	-4655,264	-63475,766	-4655,264
		2500	869,57	373,56	331,35	185963708,7	127139585,6	61517,458	2696,957	2696,957
		4775	51108,54	13040,87	331,35	185963708,7	127139585,6	127569,052	68748,551	68748,551
4BK30X50	775	0	18165,86	-802,08	-6289,13	244109820,9	0	293839,831	-8182,377	-8182,377
		387,5	19535,28	-802,08	-6289,13	244109820,9	0	295277,722	-6744,486	-6744,486
		775	20904,71	-802,08	-6289,13	244109820,9	0	296715,624	-5306,585	-5306,585
4CX25X40	4500	0	-14173,5	-9515,6	1923,18	108177218,8	74271590,73	10602,602	-16796,199	10602,602
		2250	12027,5	2359,4	1923,18	108177218,8	74271590,73	50582,402	23183,601	23183,601
		4500	38228,5	14234,41	1923,18	108177218,8	74271590,73	90562,213	63163,412	63163,412
4D20X50	4500	0	-45045,87	-135,59	-113,61	95122748,36	95122748,36	-10448,353	-47917,695	-10448,353
		2250	-369,87	-135,59	-113,61	95122748,36	95122748,36	36461,447	-1007,895	-1007,895
		4500	44306,12	-135,59	-113,61	95122748,36	95122748,36	83371,236	45901,895	45901,895
4F20X30	3841,5	0	-2682,34	13,41	100,09	50892068,36	50892068,36	20381,688	-2381,999	-2381,999
		1920,7	32,82	13,41	100,09	50892068,36	50892068,36	23232,606	468,920	468,920
		3841,5	2747,97	13,41	100,09	50892068,36	50892068,36	26083,513	3319,827	3319,827
5A45X70	2750	0	107537,82	37741,95	31240,31	678764651,4	240929105,8	445173,590	283753,061	283753,061
		1375	138092,24	42468,52	31240,31	678764651,4	240929105,8	482218,630	320798,100	320798,100
		2750	171534,16	48835,7	31240,31	678764651,4	240929105,8	524018,185	362597,655	362597,655
5B30X50	4250	250	-113188,1	-15313,22	-420,95	302420013,8	185936683,9	-34382,328	-136694,345	-34382,328
		2375	-61071,29	-10493,79	-420,95	302420013,8	185936683,9	25400,692	-76911,324	25400,692
		4500	-9985,76	-6260,32	-420,95	302420013,8	185936683,9	83485,642	-18826,374	-18826,374
5BK30X50	775	0	15877,4	-3114,12	-30178,2	244109820,9	0	289009,306	-113346,996	-113346,996
		387,5	17246,82	-3114,12	-30178,2	244109820,9	0	290447,197	-111909,105	-111909,105
		775	18616,25	-3114,12	-30178,2	244109820,9	0	291885,099	-110471,204	-110471,204
5C25X40	4500	0	-20413,91	-9612,66	1881,85	108177218,8	74271590,73	3948,259	-23624,129	3948,259
		2250	5787,09	2262,34	1881,85	108177218,8	74271590,73	43928,059	16355,672	16355,672
		4500	31988,09	14137,34	1881,85	108177218,8	74271590,73	83907,859	56335,472	56335,472
5D20X50	7000	0	-39777,62	-0,9034	30,3	95122748,36	95122748,36	-17986,762	-41640,190	-17986,762
		3500	-31,62	-0,9034	30,3	95122748,36	95122748,36	23746,538	93,110	93,110
		7000	39714,38	-0,9034	30,3	95122748,36	95122748,36	65479,838	41826,410	41826,410
5F20X30	2125	0	16370,98	6424,81	-550,37	73519617,45	50892068,36	75163,921	21624,026	21624,026
		1062,5	22840,12	9247,11	-550,37	73519617,45	50892068,36	84919,933	31380,038	31380,038
		2125	29309,25	12069,4	-550,37	73519617,45	50892068,36	94675,924	41136,029	41136,029
6A45X70	2750	0	116805,89	37109,59	18738,04	570347504,3	240929105,8	419744,721	240311,022	240311,022
		1375	135329,07	41836,16	18738,04	570347504,3	240929105,8	444156,958	264723,260	264723,260
		2750	156739,74	48203,34	18738,04	570347504,3	240929105,8	473323,701	293890,002	293890,002
6B30X50	4550	225	-43727,51	-11832,35	716,32	127139585,6	127139585,6	-9438,012	-55329,309	-9438,012
		2500	2660,65	876,76	716,32	127139585,6	127139585,6	52614,121	6722,825	6722,825
		4775	48975,25	13544,06	716,32	127139585,6	127139585,6	114545,116	68653,820	68653,820
6BK30X50	850	0	8945,54	1065,44	-2968,39	244109820,9	0	261801,051	-1955,709	-1955,709
		425	10447,49	1065,44	-2968,39	244109820,9	0	263378,098	-378,661	-378,661
		850	11949,44	1065,44	-2968,39	244109820,9	0	264955,146	1198,386	1198,386

Tabel 6,6 Lanjutan

BALOK	Ln (mm)	LOC	VD (N)	VL (N)	VE (N)	M nak + (N mm)	M nak - (N mm)	V ren (N)	V maks (N)	V pakai (N)
1	2	3	4	5	6	7	8	9	10	11
6C25X40	2250	0	20530,78	33,62	-25,48	108177218,8	74271590,73	92544,935	21485,604	21485,604
		1125	38512,53	8744,56	-25,48	108177218,8	74271590,73	120572,259	49512,929	49512,929
		2250	46731,78	11908,63	-25,48	108177218,8	74271590,73	132524,745	61465,415	61465,415
6CY25X40	750	0	45265,95	399,12	5519,37	108177218,8	74271590,73	260805,268	71129,678	71129,678
		375	46149,45	399,12	5519,37	108177218,8	74271590,73	261732,943	72057,353	72057,353
		750	47032,95	399,12	5519,37	108177218,8	74271590,73	262660,618	72985,028	72985,028
6D20X50	2375	0	6112,43	2283,49	3047,27	95122748,36	95122748,36	78906,162	21614,250	21614,250
		1187,5	12012,53	4046,44	3047,27	95122748,36	95122748,36	86952,365	29660,453	29660,453
		2375	21917,31	8085,11	3047,27	95122748,36	95122748,36	101592,987	44301,075	44301,075
7CY25X40	2250	0	35927,3	8119,51	6302,69	141752651,3	74271590,73	130258,578	72720,449	72720,449
		1125	48200,48	9701,54	6302,69	141752651,3	74271590,73	144806,548	87268,419	87268,419
		2250	63285,05	11947,64	6302,69	141752651,3	74271590,73	163003,752	105465,623	105465,623
8B30X50	700	150	-123886,1	-5263,53	-11609,73	185963708,7	127139585,6	255772,017	-184367,967	-184367,967
		500	-123666,2	-5247,03	-11609,73	185963708,7	127139585,6	256020,216	-184119,768	-184119,768
		850	-123438,5	-5227,53	-11609,73	185963708,7	127139585,6	256279,807	-183860,177	-183860,177
8CY25X40	700	150	-18226,55	-3368,06	-4872,96	207435466,6	74271590,73	329459,481	-43140,773	-43140,773
		500	-17401,95	-3368,06	-4872,96	207435466,6	74271590,73	330325,311	-42274,943	-42274,943
		850	-16577,35	-3368,06	-4872,96	207435466,6	74271590,73	331191,141	-41409,113	-41409,113
8D20X50	4375	0	3740,36	731,99	3768,11	95122748,36	95122748,36	42745,067	20522,030	20522,030
		2187,5	15371,1	3206,99	3768,11	95122748,36	95122748,36	57556,094	35333,057	35333,057
		4375	27517,07	5878,86	3768,11	95122748,36	95122748,36	73114,826	50891,789	50891,789
8F20X30	850	0	-39575	-5113,79	-6247,35	73519617,45	50892068,36	81147,624	-73162,100	-73162,100
		425	-38123,48	-4788,66	-6247,35	73519617,45	50892068,36	83013,106	-71296,617	-71296,617
		850	-36124,42	-4254,29	-6247,35	73519617,45	50892068,36	85673,208	-68636,516	-68636,516

Keterangan Tabel 6,6 Gaya Geser Rencana Balok

- Balok yang ditinjau
- Bentang bersih balok
- Lokasi yang ditinjau
- VD = Gaya geser balok akibat beban mati
- VL = Gaya geser balok akibat beban hidup
- VE = Gaya geser balok akibat beban gempa
- M Nak+ = Momen nominal aktual balok positif (Lampiran Momen Rencana Balok)
- M nak- = Momen nominal aktual balok negatif (Lampiran Momen Rencana Balok)
- $V_{ren} = 1,05 (VD + VL) + 0,7 \cdot 1,25 [(M_{nak+} + M_{nak-})/l_n]$
(Gaya geser rencana balok)
- $V_{maks} = 1,05 (VD + VL + 4k \cdot VE)$
(Gaya geser maksimum balok)
- Vierpakai pilih yang terkecil

6.2.4 Penulangan Geser Balok

Sebagai contoh perhitungan geser balok ditinjau pada balok 1B30X50, sebagai berikut ini. (Kusuma dan Andriomo, 1997)

a. Sepanjang daerah sendi plastis

Daerah sendi plastis diambil dari ujung muka kolom ke arah tengah bentang sesuai panjang penghentian tulangan desak (dipohusodo, 1996)

$$\text{Jarak daerah sendi plastis} = 0,3 \cdot l_n = 0,3 \cdot 9,550 = 2,865 \text{ m} \approx 3 \text{ m}$$

$$2 \text{ m} > (2 \cdot h = 2 \cdot 0,5 = 1 \text{ m}) \text{ memenuhi syarat SKSNI 1991}$$

Tulangan geser dalam daerah (0-d) dari muka kolom ke tengah bentang:

$$V_{u,b,terpakai} = 17718,5925 \text{ N}$$

$$V_s = V_{u,b} / \phi - V_c = 17718,5925 / 0,6 - 0 = 29530,99 \text{ N}$$

$$A_v = \frac{1}{4} \cdot \pi \cdot d^2 = \frac{1}{4} \cdot \pi \cdot 12^2 = 113,097 \text{ mm}^2$$

$$S = A_v \cdot f_y \cdot d / V_s = 2 \cdot 113,097 \cdot 240 \cdot 447 / 29530,99 = 821.302 \text{ mm}$$

digunakan sengkang **2P12 – 250**

Kontrol kuat geser:

$$V_{u,b} \leq 0,6 \cdot (V_c + V_s)$$

$$17718,5925 \leq 0,6 \cdot (0 + (2 \cdot 113,097 \cdot 240 \cdot 447) / 250) = 58238,622 \text{ -aman-}$$

Tulangan geser dalam daerah (d – l) dari muka kolom ke tengah bentang

$$V_{u,b,terpakai} = 16059,910 \text{ N}$$

$$V_s = V_{u,b} / \phi - V_c = 16059,910 / 0,6 - 0 = 26766,5 \text{ N}$$

$$A_v = \frac{1}{4} \pi d^2 = \frac{1}{4} \pi 12^2 = 113,097 \text{ mm}^2$$

$$S = A_v \cdot f_y \cdot d / V_s = 2.113,097.240.447 / 26766,5 = 906.127 \text{ mm}$$

digunakan sengkang **2P12 – 250**

Kontrol kuat geser:

$$V_{u,b} \leq 0,6 \cdot (V_c + V_s)$$

$$16059,910 \leq 0,6 \cdot (0 + (2.113,097.240.447) / 250) = 58238,622 \text{ -aman}$$

b. Di luar daerah sendi plastis

$$V_{u,b,terpakai} = 14007,893 \text{ KN}$$

$$V_c = 1/6 \cdot \sqrt{f_c'} \cdot b \cdot d = 1/6 \cdot \sqrt{30} \cdot 300 \cdot 447 = 122416 \text{ N}$$

$$V_s = V_{u,b} / \phi - V_c = 14007,893 / 0,6 - 122416 = -99069,5 \text{ N}$$

$$A_v = \frac{1}{4} \pi d^2 = \frac{1}{4} \pi 12^2 = 113,097 \text{ mm}^2$$

$$S = A_v \cdot f_y \cdot d / V_s = 1.113,097.240.447 / 99069,5 = 122,408 \text{ mm}$$

digunakan sengkang **P12 – 250**

Kontrol kuat geser:

$$V_{u,b} \leq 0,6 \cdot (V_c + V_s)$$

$$14007,893 \leq 0,6 \cdot (122416 + (1.113,097.240.447) / 250) = 284913,641 \text{ -aman-}$$

Dengan cara yang sama didapat penulangan geser balok dari semua balok disajikan pada Tabel 6.7.

Tabel 6,7 Penulangan Gaya Geser Balok

BALOK	Ln (mm)	V _{u,b} (mm)	d (mm)	b (mm)	Lok	SP (mm)	Jarak	V _{u'} (N)	V _c (N)	V _s (N)	S (mm)	S min (mm)	Tul Geser	V _s baru (N)	0,6 (V _s +V _c) ≥ V _{u'}
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1B30X50	9550	7609,394 0	447 447	300 300	Pada SP 300	1000	0-d d-Sp	17718,593 17245,4185	0	29530,988	410,65106	111,75	P12 - 100	121269,312	aman
		17718,5925	447	300	Luar SP		sisa	16660,038	122416	-93673,63	-129,4594	-	P12 - 100	121269,312	aman
1C25X40	4750	-5875,275 0	352 352	250 250	Pada SP 250	800	0-d d-Sp	5875,275 5004,4974	0	9792,125	975,23461	88	P12 - 85	112348,4612	aman
		5875,275	352	250	Luar SP		sisa	3896,235	80332,64	-73838,92	-89,8128	-	P12 - 85	112348,4612	aman
2A45X70	2750	270135,012 294547,2285	636 636	450 450	Pada SP 450		0-d	323713,992	0	539523,32	127,92348	159	4P12 - 125	552141,6192	aman
		323713,992	636	450	Luar SP	825	d-Sp	311322,635	0	518871,06	133,01513	159	4P12 - 125	552141,6192	aman
2B30X50	4775	71027,57936 -77342,013	447 447	300 300	Pada SP 300	1000	0-d d-Sp	71027,5794 70789,3477	0	118379,3	102,44132	111,75	P12 - 100	121269,312	aman
		-68482,7115	447	300	Luar SP		sisa	307640,298	261263,7	251470,17	137,22841	-	2P12 - 125	276070,8096	aman
2C25X40	4500	3732,011402 15862,728	352 352	250 250	Pada SP 250	800	0-d d-Sp	55842,528 51766,3276	0	93070,88	102,60388	88	P12 - 85	112348,4612	aman
		55842,528	352	250	Luar SP		sisa	46578,4362	80332,64	-2701,915	-245,437	-	P12 - 85	112348,4612	aman
3A45X70	2750	312140,6085 349185,6375	636 636	450 450	Pada SP 450		0-d	390985,203	0	651642,01	105,91353	159	4P12 - 100	690177,024	aman
		390985,203	636	450	Luar SP	825	d-Sp	372750,599	0	621251	111,09471	159	4P12 - 100	690177,024	aman
3B30X50	4775	8982,4035 56036,106	447 447	300 300	Pada SP 300	1000	0-d d-Sp	108406,368	0	180677,28	134,23858	111,75	2P12 - 100	242538,624	aman
		108406,368	447	300	Luar SP		sisa	87584,5953	122416	23558,334	514,76183	-	2P12 - 100	242538,624	aman
3CX25X40	2250	441,2415 38804,5035	352 352	250 250	Pada SP 250	675	0-d d-Sp	61092,9165	0	101821,53	93,787821	88	P12 - 85	112348,4612	aman
		61092,9165	352	250	Luar SP		sisa	51604,2989	0	86007,165	111,03283	88	P12 - 85	112348,4612	aman
3CY25X40	2350	58213,31187 75342,86487	352 352	250 250	Pada SP 250		0-d	42897,414	80332,64	-8836,952	-750,4488	-	P12 - 250	26526,72	aman
		90806,06787	352	250	Luar SP	705	d-Sp	90806,0679	0	151343,45	63,098994	88	P12 - 60	159160,32	aman
4A45X70	2750	322790,6115 359835,6405	636 636	450 450	Pada SP 450		0-d	85924,0891	0	143206,82	66,684111	88	P12 - 65	146917,2185	aman
		401635,2165	636	450	Luar SP	825	sisa	81028,2411	80332,64	54714,427	121,20333	-	P12 - 100	66316,8	aman
			636	450	Pada SP		0-d	401635,217	0	669392,03	103,10506	159	4P12 - 100	690177,024	aman
			636	450	Luar SP	825	d-Sp	383400,61	0	639001,02	108,00875	159	4P12 - 100	690177,024	aman
			636	450	Luar SP		sisa	377981,835	261263,7	368706,07	140,39171	-	3P12 - 125	414106,2144	aman

Tabel 6,7 Lanjutan

BALOK	Ln (mm)	V u,b	d (mm)	b (mm)	Lok	SP (mm)	Jarak	Vu' (N)	Vc (N)	Vs (N)	S (mm)	S min (mm)	Tul Geser	Vs baru (N)	0,6(Vs+Vc) ≥ Vu'
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4B30X50	4550	-4655,26351 2696,9565 68748,5505	447 447 447	300 300 300	Pada SP Luar SP	1000	0-d d-SP sisa	68748,5505 61537,2308 52615,8441	0 0 122416	114580,92 102562,05 -19853,94	105,83727 118,23994 -610,8073	111,75 111,75 -	P12 - 100 P12 - 100 P12 - 250	121269,312 121269,312 48507,7248	aman aman aman
4BK30X50	775	-8182,377 -6744,486 -5306,5845	447 447 447	300 300 300	Pada SP Luar SP	232,5	0-d 0 sisa	8182,377 6523,6941 0	0 122416 0	13637,295 -111543,2 0	889,24755 -108,7196 0	111,75 - -	4P12 - 100 4P12 - 250 0	121269,312 48507,7248	aman aman aman
4CX25X40	4500	10602,6024 23183,601 63163,4115	352 352 352	250 250 250	Pada SP Luar SP	800	0-d d-SP sisa	63163,4115 59051,9882 53819,2677	0 0 80332,64	105272,35 98419,98 9366,1377	181,42692 194,05855 1019,5899	88 88 -	2P12 - 85 2P12 - 85 P12 - 250	224696,9224 224696,9224 38198,4768	aman aman aman
4D20X50	4500	-10448,3531 -1007,895 45901,8945	452 452 452	200 200 200	Pada SP Luar SP	1000	0-d d-SP sisa	45901,8945 40241,8252 33379,6173	0 0 82523,53	76503,158 67069,709 -26890,84	111,31148 126,9676 -316,6759	113 113 -	P10 - 100 P10 - 100 P10 - 250	85156,8 85156,8 34062,72	aman aman aman
4F20X30	3841,5	-2381,9985 468,9195 3319,827	252 252 252	200 200 200	Pada SP Luar SP	600	0-d d-SP sisa	3319,827 2945,78886 2429,26	0 0 46008,69	5533,045 4909,6481 -41959,93	858,05917 967,01024 -113,148	63 63 -	P10 - 63 P10 - 63 P10 - 250	73360 73360 18990,72	aman aman aman
5A45X70	2750	283753,0605 320798,1 362597,655	636 636 636	450 450 450	Pada SP Luar SP	825	0-d d-SP sisa	362597,655 344363,051 338944,277	0 0 261263,7	604329,43 573938,42 303643,47	114,20543 120,2528 170,47387	159 159 -	4P12 - 100 4P12 - 100 3P12 - 150	690177,024 690177,024 345088,512	aman aman aman
5B30X50	4250	-34382,3285 25400,692 -18826,374	447 447 447	300 300 300	Pada SP Luar SP	1000	0-d d-SP sisa	34382,3285 32746,2081 30722,1039	0 0 122416	57303,881 54577,014 -67838,98	211,62495 222,19851 -178,7605	111,75 111,75 -	P12 - 100 P12 - 100 P12 - 250	121269,312 121269,312 48507,7248	aman aman aman
5BK30X50	775	-113346,996 -111909,105 -110471,204	447 447 447	300 300 300	Pada SP Luar SP	232,5	0-d 0 sisa	113346,996 111688,313 0	0 122416 0	188911,66 63731,197 0	456,48826 338,27999 0	111,75 - -	4P16 - 100 P16 - 250	862359,552 86235,9552	aman aman
5C25X40	4500	3948,258902 16355,6715 56335,4715	352 352 352	250 250 250	Pada SP Luar SP	800	0-d d-SP sisa	56335,4715 52237,6273 47022,1893	0 0 80332,64	93802,453 87062,712 -1962,326	101,70806 109,68667 -3379,499	88 88 -	P12 - 85 P12 - 85 P12 - 250	112348,4612 112348,4612 26526,72	aman aman aman
5D20X50	7000	-17986,7625 93,11043 41826,41043	452 452 452	200 200 200	Pada SP Luar SP	1000	0-d d-SP sisa	41826,4104 37964,1884 33281,6714	0 0 82523,53	69710,684 63273,647 -27054,08	122,15746 134,58494 -314,7651	113 113 -	P10 - 100 P10 - 100 P10 - 250	85156,8 85156,8 34062,72	aman aman aman

Tabel 6,7 Lanjutan

BALOK	Ln (mm)	V u,b	d (mm)	b (mm)	Lok	SP (mm)	Jarak	Vu' (N)	Vc (N)	Vs (N)	S (mm)	S min (mm)	Tul Geser	Vs baru (N)	0,6.(Vs+Vc) ≥ Vu'
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
5F20X30	2125	21624,0255	252	200	Pada SP	600	0-d	41136,0285	0	68560,048	99,717831	63	P12 - 63	108518,4	aman
		31380,0375	252	200	Luar SP	600	d-Sp	38822,1345	0	64703,557	105,66126	63	P12 - 63	108518,4	aman
		41136,0285	252	200	Luar SP	825	sisa	35626,7571	46008,69	13369,234	355,11983	-	P12 - 200	23738,4	aman
6A45X70	2750	240311,022	636	450	Pada SP	825	0-d	233890,002	0	489816,67	140,90517	159	4P12 - 125	552141,6192	aman
		264723,2595	636	450	Luar SP	825	d-Sp	281498,645	0	469164,41	147,10771	159	4P12 - 125	552141,6192	aman
		293890,002	636	450	Luar SP	1000	sisa	277816,308	261263,7	201763,52	256,55419	-	3P12 - 250	207053,1072	aman
6B30X50	4550	-9438,01237	447	300	Pada SP	1000	0-d	68653,8195	0	114223,03	211,96661	111,75	2P12 - 100	242538,624	aman
		6722,8245	447	300	Luar SP	1000	d-Sp	60981,9406	0	101636,57	238,63323	111,75	2P12 - 100	242538,624	aman
		68653,8195	447	300	Luar SP	255	sisa	51490,7795	122416	-36598,03	-331,3548	-	P12 - 250	48507,7248	aman
6BK30X50	850	-1955,709	447	300	Pada SP	255	0-d	1955,709	0	3259,515	26456,683	111,75	4P16 - 100	862359,552	aman
		-378,6615	447	300	Luar SP	255	0	297,0261	122416	-121920,9	-707,3104	-	4P16 - 250	344943,8208	aman
		1198,386	447	300	Luar SP	255	sisa	0	0	0	0	-	-	-	aman
6C25X40	2250	21485,604	352	250	Pada SP	675	0-d	61465,4145	0	102442,36	93,21944	88	P12 - 85	112348,4612	aman
		49512,9285	352	250	Luar SP	675	d-Sp	55210,7953	0	92017,992	103,77991	88	P12 - 85	112348,4612	aman
		61465,4145	352	250	Luar SP	225	sisa	49471,4714	80332,64	2119,8105	3128,4306	-	P12 - 200	33158,4	aman
6CY25X40	750	71129,6775	352	250	Pada SP	225	0-d	72985,0275	0	121641,71	157,01225	88	P12 - 85	224696,9224	aman
		72057,3525	352	250	Luar SP	225	0	72114,2499	80332,64	39857,775	239,59238	-	P12 - 200	47748,096	aman
		72985,0275	352	250	Luar SP	225	sisa	0	0	0	0	-	-	-	aman
6D20X50	2375	21614,25	452	200	Pada SP	712,5	0-d	44301,075	0	73835,125	115,33372	113	P10 - 100	85156,8	aman
		29660,4525	452	200	Luar SP	712,5	d-Sp	39983,414	0	66639,023	127,78819	113	P10 - 100	85156,8	aman
		44301,075	452	200	Luar SP	712,5	sisa	37495,0275	82523,53	-20031,82	-425,1077	-	P10 - 250	34062,72	aman
7CY25X40	2250	72720,4485	352	250	Pada SP	675	0-d	105465,623	0	175776,04	108,65667	88	2P12 - 85	224696,9224	aman
		87268,419	352	250	Luar SP	675	d-Sp	100342,822	0	167238,04	114,20391	88	2P12 - 85	224696,9224	aman
		105465,6225	352	250	Luar SP	210	sisa	95642,0703	80332,64	79070,809	167,74029	-	2P12 - 150	88422,4	aman
8B30X50	700	-184367,967	447	300	Pada SP	210	0-d	184367,967	0	307279,95	280,64297	111,75	4P16 - 100	862359,552	aman
		-184119,768	447	300	Luar SP	210	0	184043,706	122416	184323,52	233,92553	-	2P16 - 200	215589,888	aman
		-183860,177	447	300	Luar SP	210	sisa	0	0	0	0	-	-	-	aman
8CY25X40	700	-43140,7725	352	250	Pada SP	210	0-d	43140,7725	0	71901,288	944,46714	88	4P16 - 85	798922,3906	aman
		-42274,9425	352	250	Luar SP	210	0	42269,9949	80332,64	-9882,65	-1717,869	-	P16 - 250	67908,4032	aman
		-41409,1125	352	250	Luar SP	210	sisa	0	0	0	0	-	-	-	aman

Tabel 6,7 Lanjutan

BALOK	Ln (mm)	V u,b	d (mm)	b (mm)	Lok	SP (mm)	Jarak	Vu' (N)	Vc (N)	Vs (N)	S (mm)	S min (mm)	Tul Geser	Vs baru (N)	$0,6 \cdot (Vs + Vc) \geq Vu'$
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
8D20X50	4375	20522,0295	452	200	Pada SP	1000	0-d	50891,7885	0	84819,648	100,39749	113	P10 - 100	85156,8	aman
		35333,0565	452	200			d-Sp	47754,1585	0	79590,264	106,99399	113	P10 - 100	85156,8	aman
		50891,7885	452	200	Luar SP		sisa	43950,1293	82523,53	-9273,316	-918,2993	-	P10 - 250	34062,72	aman
8F20X30	850	-73162,0995	252	200	Pada SP	255	0-d	73162,0995	0	121936,83	112,13444	63	2P12 - 63	217036,8	aman
		-71296,617	252	200	Luar SP		d-Sp	71820,3969	46008,69	73691,967	185,54693	-	2P12 - 150	91155,456	aman
		-68636,5155	252	200			sisa	0	0	0	0	-	-	-	aman

Keterangan Tabel 6.7 Penulangan Gaya Geser Balok

- Balok yang ditinjau
- Ln = Panjang bersih balok
- Vu,b terpakai (Tabel 6.6)
- d = tinggi efektif penampang balok
- b = lebar penampang balok
- Menunjukkan lokasi tulangan geser
- Panjang daerah sendi plastis
- $0,3 \cdot Ag \cdot f_c$ dengan $Ag = b \cdot h$, $f_c' = 30$ Mpa
- Daerah penulangan geser
- Vu' = Gaya Geser yang terjadi
- $Vc = 1/6 \cdot b \cdot d \cdot (f_c' / 0,5)$ (gaya geser balok)

11. $V_s = Vu,k - 0,6 \cdot V_c$
(gaya geser tulangan)

12. $S = (A_v \cdot f_y \cdot d) / V_s$ (jarak tulangan)

13. S min = Jarak minimum yang di ijinkan
pada daerah sendi plastis

14. Tulangan geser balok terpasang

15. $V_s \text{ Baru} = (A_v \cdot f_y \cdot d) / s$
dengan : s = Jarak terpasang

16. Kontrol $Vu,k < 0,6 \cdot (V_s + V_c)$, maka aman

6.3 Desain Kolom

Kolom yang akan didesain telah ditentukan terlebih dahulu letak pada denah portal dan ukuran dimensinya. Kolom-kolom yang didesain adalah sebagai berikut:

- 1K50X50 dengan dimensi 500 mm x 500 mm
- KB50X45 dengan dimensi 500 mm x 450 mm
- 3KB45X45 dengan dimensi 450 mm x 450 mm
- 4KB30X30 dengan dimensi 300 mm x 300 mm
- K30X25 dengan dimensi 300 mm x 250 mm
- 6KB30X50 dengan dimensi 300 mm x 500

Desain kolom pada pembahasan ini meliputi.

1. Momen rencana kolom
2. Gaya aksial rencana kolom
3. Perhitungan diagram interaksi kolom
4. Cek kelangsingan kolom dan ϕ actor pembesaran momen
5. Penulangan lentur dan aksial kolom
6. Gaya geser rencana kolom
7. Penulangan geser kolom
8. Perencanaan pertemuan balok kolom

6.3.1 Momen Rencana Kolom

Momen rencana kolom dengan daktilitas penuh yang ditentukan pada muka balok $M_{u,k}$ dihitung berdasarkan terjadinya kapasitas lentur sendi plastis

pada kedua ujung balok yang bertemu pada kolom tersebut. Momen rencana kolom ditentukan dengan mengambil nilai terkecil dari persamaan berikut (Kusuma dan Androno, 1997):

$$M_{u,k} = \frac{h}{h_n} \cdot 0,7 \cdot \omega_d \cdot \alpha \cdot 1,25 \cdot \left[\frac{l_{ki,x}}{l_{nki,x}} M_{nak,b,ki,x} + \frac{l_{ka,x}}{l_{nka,x}} M_{nak,b,ka,x} + 0,3 \cdot \left(\frac{l_{ki,y}}{l_{nki,y}} M_{nak,b,ki,y} + \frac{l_{ka,y}}{l_{nka,y}} M_{nak,b,ka,y} \right) \right]$$

tetapi tidak perlu lebih besar dari

$$M_{u,k_{max}} = 1,05 \cdot \left[M_{D,k,x} + M_{L,x} + \frac{4}{k} \cdot (M_{E,k,x} + 0,3 M_{E,k,y}) \right]$$

Sebagai contoh perhitungan ditinjau pada momen kolom atas 1K50X50

bagian 1 (sejajar sumbu x)

Diketahui:

$$h = 3,3 \text{ m}$$

$$h_n = 2,6 \text{ m}$$

$$M_{E,k_{atas}} = 139,17292 \text{ KN m}$$

$$M_{E,k_{liti-bawah}} = 208,98742 \text{ KNm}$$

$$\alpha_{atas} = \frac{(M_{E,k,liti,atas})}{(M_{E,k,liti,atas} + M_{E,k,liti-bawah})}$$

$$\alpha_{k,atas} = 139,17292 / (139,17292 + 208,98742) = 0,3997$$

$$M_{nak,kiri,b-x} = 302,42 \text{ KNm}$$

$$l_{ki,x} = 4,5 \text{ m}$$

$$l_{nki,x} = 4,025 \text{ m}$$

$$M_{nak,kanan,b-x} = 302,42 \text{ KNm}$$

$$l_{ka,x} = 4,5 \text{ m}$$

$$l_{nka,x} = 4,025 \text{ m}$$

$$M_{nak,kiri,b-y} = 0 \text{ KNm}$$

$$l_{ki,y} = 0 \text{ m}$$

$$l_{nki,y} = 0 \text{ m}$$

$$M_{nak,kanan,b-y} = 679,249 \text{ KNm}$$

$$l_{ka,y} = 4,25 \text{ m}$$

$$l_{nka,y} = 3,75 \text{ m}$$

$$M_{D,k-xatas} = -12,3231 \text{ KNm}$$

$$M_{L,k-xatas} = -1,70362 \text{ KNm}$$

$$M_{Eki,x,atas} = -139,173 \text{ KNm}$$

$$M_{Eki,k-yatas} = -126,151 \text{ KNm}$$

$$M_{u,k-x,atas} = \frac{3,3}{2,6} \cdot 0,7 \cdot 1,0 \cdot 3997 \cdot 1,25 \cdot \left(\frac{4,5}{4,025} \cdot 302,42 + \frac{4,5}{4,025} \cdot 302,42 \right) + 0,3 \cdot \left(\frac{0}{0} \cdot 0 + \frac{4,25}{3,75} \cdot 679,249 \right)$$

$$M_{u,k-x,atas} = 402,7259 \text{ KNm}$$

$$M_{u,k,atasmaks} = 1,05 \cdot \left[-12,3231 + (-1,7036) + \frac{4}{1} \cdot (-139,173 + 0,3 \cdot (-126,151)) \right]$$

$$M_{u,k,atasmaks} = -758,20269$$

Dipakai $M_{u,k-x} = 402,7256 \text{ KNm}$

Dengan cara yang sama hitungan untuk momen rencana kolom disajikan pada Tabel 6.8, untuk momen maksimum kolom disajikan pada Tabel 6.9, dan untuk momen terpakai kolom disajikan dalam Tabel 6.10.



Tabel 6.8 Momen Rencana Kolom

KOLOM	Letak	h (m)	hn (m)	Sejajar Sumbu X								Sejajar Sumbu Y								M _{u,k-x} (kN m)	M _{u,k-y} (kN m)
				M _{E,k} (kN m)	α _k	Kiri		Kanan		M _{E,k} (kN m)	α _k	Kiri		Kanan							
						M _{nak,b}	I _{ki}	In _{ka}	M _{nak,b}			I _{ka}	In _{ka}	M _{nak,b}	I _{ki}	In _{ka}	M _{nak,b}	I _{ka}	In _{ka}		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1K50X50	atas	3,3	2,6	139,1729	0,39974	302,42	4,5	4,025	302,42	4,5	4,025	126,1514	0,44168	0	0	0	679,249	4,25	3,75	402,7259	477,1212
	bawah			208,9874	0,60026	302,42	4,5	4,025	302,42	4,5	4,025	159,4646	0,55832	0	0	0	679,249	4,25	3,75	604,7487	603,116
KB50X45	atas	3,3	2,6	107,7492	0,54623	0	0	0	302,42	4,5	4,05	108,9293	0,53905	141,633	2,5	2,1	679,249	5	4,5	371,8749	471,697
	bawah			89,51201	0,45377	0	0	0	302,42	4,5	4,05	93,14765	0,46095	141,633	2,5	2,1	679,249	5	4,5	308,9329	403,3577
3KB45X45	atas	3,3	2,8	124,9732	0,41558	0	0	0	302,42	7	6,55	56,16103	0,42846	0	0	0	302,42	5	4,775	179,2258	182,7605
	bawah			175,7468	0,58442	0	0	0	302,42	7	6,55	74,91641	0,57154	0	0	0	302,42	5	4,775	252,0409	243,7947
4KB30X30	atas	3,3	2,9	7,869959	0,31578	0	0	0	141,633	4,5	4,2	21,48355	0,5305	0	0	0	141,633	2,5	2,1	63,61803	113,1087
	bawah			17,05203	0,68422	0	0	0	141,633	4,5	4,2	19,01346	0,4695	0	0	0	141,633	2,5	2,1	137,8427	100,1039
K30X25	atas	3,3	2,9	81,60441	0,98789	141,633	5	4,75	0	0	0	45,01808	0,51064	141,633	2,75	2,35	0	0	0	195,5549	107,0094
	bawah			1,000575	0,01211	141,633	5	4,75	0	0	0	43,14218	0,48936	141,633	2,75	2,35	0	0	0	2,397755	102,5504
6K30X50	atas	3,3	2,6	27,33959	0,49189	0	0	0	0	0	0	26,23955	0,48558	679,249	4,25	3,85	679,249	4,25	3,85	245,767	808,7203
	bawah			28,24131	0,50811	0	0	0	0	0	0	27,29778	0,51442	679,249	4,25	3,85	679,249	4,25	3,85	253,8729	856,746
1K50X50	atas	3	2,4	154,1309	0,51265	185,964	4,5	4,025	0	0	0	79,94214	0,50471	0	0	0	570,348	4,25	3,75	225,3091	391,2585
	bawah			146,5249	0,48735	185,964	4,5	4,025	0	0	0	78,45008	0,49529	0	0	0	570,348	4,25	3,75	214,1907	383,9559
KB50X45	atas	4	3,3	106,3247	0,47116	0	0	0	185,964	4,5	4,05	79,96755	0,44726	207,435	2,5	2,1	570,348	5	4,5	235,2815	447,1647
	bawah			119,3389	0,52884	0	0	0	185,964	4,5	4,05	98,82642	0,55274	207,435	2,5	2,1	570,348	5	4,5	264,0801	552,6203
3KB45X45	atas	4	3,5	23,48956	0,52355	0	0	0	185,964	7	6,55	31,09988	0,56204	0	0	0	185,964	5	4,775	134,6357	142,9552
	bawah			21,37621	0,47645	0	0	0	185,964	7	6,55	24,23364	0,43796	0	0	0	185,964	5	4,775	122,5225	111,3935
4KB30X30	atas	4	3,6	22,21058	0,49519	0	0	0	207,435	4,5	4,2	23,11782	0,49532	0	0	0	207,435	2,5	2,1	142,6662	151,0289
	bawah			22,64208	0,50481	0	0	0	207,435	4,5	4,2	23,55445	0,50468	0	0	0	207,435	2,5	2,1	145,4379	153,8814
K30X25	atas	4	3,6	110,4581	0,59053	139,866	5	4,75	0	0	0	22,07907	0,53228	185,964	2,75	2,35	0	0	0	122,0094	135,473
	bawah			76,59047	0,40947	139,866	5	4,75	0	0	0	19,40098	0,46772	185,964	2,75	2,35	0	0	0	84,60003	119,0408
6K30X50	atas	3	2,4	24,24892	0,49547	0	0	0	0	0	0	15,37424	0,50759	570,348	4,25	3,85	570,348	4,25	3,85	204,7178	699,0883
	bawah			24,69223	0,50453	0	0	0	0	0	0	14,91426	0,49241	570,348	4,25	3,85	570,348	4,25	3,85	208,4604	678,1725

Keterangan Tabel 6.8 Momen Rencana Kolom

1. Kolom yang ditinjau

2. Letak yang ditinjau

3. h = tinggi kolom

4. hn = tinggi bersih kolom

5. Me,k = momen pada kolom akibat beban gempa sejajar sb -x

6. α_k = (Me,k,atas)/(Me,k,atas + Me,k,lt bawah)

(faktor distribusi momen sejajar sb -x)

7. Mnak,b = momen nominal balok kiri sejajar sb -x (Tabel 6.4)

8. I_{ki} = bentang bersih balok kiri sejajar sb -x9. I_{ka} = bentang bersih balok sebelah kiri sejajar sb -x

10. Mnak,b = momen nominal balok kanan sejajar sb -x (Tabel 6.4)

11. I_{ka} = bentang bersih balok sebelah kanan sejajar sb -x

12. Inka = bentang bersih balok sebelah kanan sejajar sb -x

13. Me,k = momen pada kolom akibat beban gempa sejajar sb -y

14. α_k = (Me,k,atas)/(Me,k,atas + Me,k,lt bawah)

(faktor distribusi momen sejajar sb -y)

15. Mnak,b = momen nominal balok kiri sejajar sb -y (Tabel 6.4)

16. I_{ki} = bentang bersih balok sebelah kiri sejajar sb -y17. I_{ka} = bentang bersih balok sebelah kiri sejajar sb -y

18. Mnak,b = momen nominal balok kanan sejajar sb -y (Tabel 6.4)

19. I_{ka} = bentang bersih balok sebelah kanan sejajar sb -y

20. Inka = bentang bersih balok sebelah kanan sejajar sb -y

21. Mu,k-x = b/hn 0,7 Wd a.1,25 [I_{ki}x/I_{ka}x . Mnak,b,ki-x + I_{ka}x/I_{ka}x . Mnak,b,ka-x + 0,3 (I_{ki}y/I_{ka}y . Mnak,b,ki-y + I_{ka}y/I_{ka}y . Mnak,b,ka-y)]

(momen rencana kolom sejajar sb -x)

22. Mu,k-y = b/hn 0,7 Wd a.1,25 [I_{ki}y/I_{ka}y . Mnak,b,ki-y + I_{ka}y/I_{ka}y . Mnak,b,ka-y + 0,3 (I_{ki}x/I_{ka}x . Mnak,b,ki-x + I_{ka}x/I_{ka}x . Mnak,b,ka-x)]

(momen rencana kolom sejajar sb -y)

Tabel 6.9 Momen Maksimum Kolom

ELEMEN	Letak	Sejajar Sumbu-X				Sejajar Sumbu-y				Akibat Gempa Kiri				Akibat Gempa Kanan			
		MD (kN m)	ML (kN m)	Meksa (kN m)	Meksi (kN m)	MD (kN m)	ML (kN m)	Meksa (kN m)	Meksi (kN m)	Mu-x (kN m)	Mu-y (kN m)	Mu-x (kN m)	Mu-y (kN m)	Mu-x (kN m)	Mu-y (kN m)	Mu-x (kN m)	Mu-y (kN m)
1	2	3	4	5	6	7	8	9	10	11	12	13	14				
1K50X50	atas	-12,32311	-1,70301561	139,172925	-139,1729246	33,44460188	11,17719372	126,1513978	-126,1513978	-758,2044814	-658,3408704	728,7496077	752,0466411				
	bawah	21,958485	3,44608353	-208,98742	208,987416	-20,2810905	-4,5065152	-159,464579	159,464579	1105,347314	907,04839	-1051,997719	-959,1023619				
KB50X45	atas	0,2438401	0,8191001	107,74919	-107,74919	87,91816809	30,08282724	108,9292825	-108,9292825	-590,401517	-469,3659208	589,1934709	717,168011				
	bawah	-0,04241	0,95922173	-89,51201	89,51201	-104,87706	-28,7035067	-93,147653	93,147653	494,2791369	363,7456802	-492,3538327	-644,2648702				
3KB45X45	atas	-2,042397	-0,46659358	124,97324	-124,9732399	31,33524972	15,0411341	56,16102891	-56,16102891	-598,284944	-344,6474007	593,016064	442,0378067				
	bawah	2,9078177	0,67353366	-175,74678	175,746779	20,13777063	2,03697365	-74,916405	74,916405	836,291561	559,373324	-828,7707232	-512,806361				
4KB30X30	atas	0,1145521	0,05039068	7,86995949	-7,86995949	0,30774874	0,18595715	21,48354543	-21,48354543	-59,9499072	-99,62864858	60,296287	100,6654309				
	bawah	3,7110202	1,0917944	-17,052029	17,0520289	1,01898222	0,22968177	-19,0134559	19,0134559	100,6184312	102,6531684	-90,53252047	-100,030974				
K30X25	atas	1,5761489	0,41480347	-27,33959	27,3395904	6,52238365	1,29256355	26,23955051	-26,23955051	83,85494598	-67,55253368	-79,67394609	83,9639228				
	bawah	-1,907992	-0,41995269	28,2413067	-28,24130665	-6,98809577	-1,56681083	-27,7977832	27,7977832	-86,03262254	72,18399113	81,14393966	-90,14929499				
6K30X50	atas	-1,071611	-0,14922968	81,6044116	-81,60441158	-1,79141184	-0,67932722	45,01807896	-45,01807896	-400,7431913	-294,4917662	398,1794249	289,3032142				
	bawah	-1,348592	-0,26875376	1,00057505	-1,00057505	3,32711602	1,2873174	-43,142184	43,142184	48,45852333	184,7816033	-51,85494993	-175,0912931				
1K50X50	atas	15,843798	5,89028956	-154,13086	154,130863	63,89938332	11,70564899	79,94214127	-79,94214127	569,4433189	-62,16682203	-523,8017343	220,9373899				
	bawah	-20,52849	-7,1434921	146,524886	-146,524886	-62,141395	-11,8347339	-78,450075	78,450075	-545,6130115	67,1940233	487,5018419	-222,543894				
KB50X45	atas	-0,426185	-1,3459099	-106,32468	106,324678	-79,375058	-29,7071042	79,96755333	-79,96755333	343,9438312	-316,4309	-347,6652296	87,3583594				
	bawah	1,4963063	1,11498931	119,338898	-119,338898	75,5192726	28,01515177	-98,826422	98,826422	-373,9602194	373,4151065	379,4439403	-155,9928153				
3KB45X45	atas	-18,27428	-2,39835956	-23,489563	23,4895632	4,92199662	3,51625962	31,09988054	-31,09988054	37,76404694	-92,16247958	-81,17658498	109,8828177				
	bawah	30,59684	10,16730493	21,3762086	-21,37620858	-1,04564575	2,68374629	-24,2336404	24,2336404	-16,44333738	76,56727244	102,0480409	-73,1272613				
4KB30X30	atas	0,8620263	0,97212184	-22,210576	22,2105759	2,60093736	-0,21993453	23,11781794	-23,11781794	66,08182373	-66,60945674	-62,23011262	71,60956269				
	bawah	2,7816311	-0,89115715	22,6420757	-22,64207569	-7,16414258	0,09513568	-23,5544461	23,5544461	-63,43311818	62,97720101	67,40311345	-77,8221155				
K30X25	atas	2,36394	0,90454372	-24,24892	24,2489202	0,40567767	0,37620466	15,37423818	-15,37423818	859,0833261	-33,19718446	-79,04201686	34,83913735				
	bawah	-2,207719	-0,83984044	24,692233	-24,69223301	-0,49312529	-0,43243925	-14,914263	14,914263	881,1534505	30,55584824	81,71546947	-32,49953377				
6K30X50	atas	17,076941	6,55048485	-110,45812	110,458124	4,27718398	1,32770333	22,07906719	-22,07906719	460,9132938	52,33028572	-411,2956985	-40,56002237				
	bawah	22,483691	8,70931468	-76,59047	76,59047	-7,07915074	-2,57546926	-19,4009802	19,4009802	378,8778649	167,850758	-313,3725532	-188,12546				

Keterangan Tabel 6.9 Momen Maksimum Kolom

- Kolom yang ditinjau
- Letak yang ditinjau
- MD = Momen pada kolom akibat beban mati sejajar sb - x
- ML = Momen pada kolom akibat beban hidup sejajar sb - x
- Meksa = Momen pada kolom akibat beban gempa kanan sejajar sb - x
- Meksi = Momen pada kolom akibat beban gempa kiri sejajar sb - x
- MD = Momen pada kolom akibat beban mati sejajar sb - y
- ML = Momen pada kolom akibat beban hidup sejajar sb - y
- Meksa = Momen pada kolom akibat beban gempa kanan sejajar sb - y
- Meksi = Momen pada kolom akibat beban gempa kiri sejajar sb - y
- MD = Momen pada kolom akibat beban mati sejajar sb - y
- ML = Momen pada kolom akibat beban hidup sejajar sb - y
- Meksa = Momen pada kolom akibat beban gempa kanan sejajar sb - y
- Meksi = Momen pada kolom akibat beban gempa kiri sejajar sb - y

Tabel 6.10 Momen Terpakai kolom

Elemen	Letak	Rencana		Momen Maksimum				Terpakai		
		M,u,k - x (kN m)	M,u,k - y (kN m)	Akibat Gempa Kiri	Akibat Gempa Kanan	M,u,k - x (kN m)	M,u,k - y (kN m)			
1K50X50	1	2	3	4	5	6	7	8	9	10
	atas	402,72591	477,12119	758,204481	658,34087	728,749608	752,046641	402,72591	477,12119	
	bawah	468,74918	425,52433	1105,34731	907,04839	1051,99772	959,102362	468,74918	425,52433	
KB50X45	atas	371,87492	613,10553	590,401517	469,365921	589,193471	717,168011	371,87492	469,36592	
	bawah	227,64126	349,14908	494,279137	363,74568	492,353833	644,26487	227,64126	349,14908	
3KB45X45	atas	179,22583	182,76049	598,284944	344,647401	593,016064	442,037807	179,22583	182,76049	
	bawah	203,67538	197,01159	836,291561	559,373324	828,770723	512,806361	203,67538	197,01159	
4KB30X30	atas	63,61803	113,10869	59,9499072	99,6286486	60,296287	100,665431	59,949907	99,628649	
	bawah	72,336932	52,532417	100,618431	102,653168	90,5325205	100,030974	72,336932	52,532417	
K30X25	atas	195,5549	107,00942	83,854946	67,5525337	79,6739461	83,9639228	195,5549	107,00942	
	bawah	1,2582909	53,816255	86,0326225	72,1839911	81,1439397	90,149295	1,2582909	53,816255	
6K30X50	atas	245,76699	808,72027	400,743191	294,491766	398,179425	289,303214	245,76699	289,30321	
	bawah	172,2567	581,31549	48,4585233	184,781603	51,8549499	175,091293	48,458523	175,09129	
1K50X50	atas	225,30912	391,25847	569,443319	62,166822	523,801734	220,93739	225,30912	62,166822	
	bawah	139,42665	238,66859	545,613011	67,1940233	487,501842	222,543894	139,42665	67,194023	
KB50X45	atas	235,28146	447,16473	343,943831	316,4309	347,66523	87,3583594	235,28146	87,358359	
	bawah	166,56252	329,00683	373,960219	373,415107	379,44394	155,992815	166,56252	155,99282	
3KB45X45	atas	134,63566	142,95522	37,7640469	92,1624796	81,176585	109,882818	37,764047	92,16248	
	bawah	83,795919	76,184561	16,4433374	76,5672724	102,048041	73,1272613	16,443337	73,127261	
4KB30X30	atas	142,66625	151,02887	66,0818237	66,6094567	62,2301126	71,6095627	62,230113	66,609457	
	bawah	75,802859	80,203621	63,4331182	62,977201	67,4031134	77,8221155	63,433118	62,977201	
K30X25	atas	122,00944	135,47304	859,058326	33,1971845	79,0420169	34,8391374	79,042017	33,197184	
	bawah	57,632535	81,336795	881,153451	30,5558482	81,7154695	32,4995338	57,632535	30,555848	
6K30X50	atas	204,71782	699,08826	460,913294	52,3302857	411,295699	40,5600224	204,71782	40,560022	
	bawah	128,32632	417,4768	378,877865	167,850758	313,372553	188,12546	128,32632	167,85076	

Keterangan Tabel 6.10 Momen Terpakai Kolom

1. Kolom yang ditinjau
2. Letak yang ditinjau
3. Momen rencana kolom sejajar sb - x (Tabel 6.8)
4. Momen rencana kolom sejajar sb - y (Tabel 6.8)
5. Momen maksimum - x akibat gempa kiri (Tabel 6.9)
6. Momen maksimum - y akibat gempa kiri (Tabel 6.9)
7. Momen maksimum - x akibat gempa kanan (Tabel 6.9)
8. Momen maksimum - y akibat gempa kanan (Tabel 6.9)
9. Momen terpakai - x pilih yang terkecil
10. Momen terpakai - y pilih yang terkecil

6.3.2 Gaya Aksial Rencana Kolom

Gaya aksial rencana $N_{u,k}$ yang bekerja pada kolom portal dengan daktilitas penuh dihitung dengan rumus sebagai berikut, untuk gaya gravitasi dijumlah dengan arah tegak lurus nya, namun untuk gaya gempa arah tegak lurus nya hanya diambil 30% saja. (Kusuma dan Andriono, 1997)

$$N_{u,k} = 1,05.(N_{g,k,x} + N_{g,k,y}) + Rv.0,7,1,25. \left[\left(\frac{\sum M_{nak,b,ki,x}}{l_{nb,ki,x}} + \frac{\sum M_{nak,b,ka,x}}{l_{n,b,ka,x}} \right) + 0,3. \left(\frac{\sum M_{nak,b,ki,y}}{l_{nb,ki,y}} + \frac{\sum M_{nak,b,ka,y}}{l_{nb,ka,y}} \right) \right]$$

tetapi tidak perlu lebih besar dari

$$N_{u,kmaks} = 1,05.(N_{g,k,x} + N_{g,k,y} + 4/k.(N_{E,k,x} + N_{E,k,y}))$$

dengan:

$$\sum M_{nak} = M_{nabb,ki} + M_{nabb,ka}$$

$$N_{g,k} = N_{D,k} + N_{L,k} \text{ (sesuai arah x dan arah y)}$$

Sebagai contoh perhitungan ditinjau pada kolom 1K50X50

$$N_{D,k,x} = 1165,227 \text{ KN}$$

$$N_{L,k,x} = 176,3867 \text{ KN}$$

$$N_{g,k,x} = 1165,227 + 176,3867 = 1341,614 \text{ KN}$$

$$N_{D,k,y} = 1165,227 \text{ KN}$$

$$N_{L,k,x} = 176,3867 \text{ KN}$$

$$N_{g,k,x} = 1165,227 + 176,3867 = 1341,614 \text{ KN}$$

$\Sigma M_{nak,b}$ sebelah kiri kolom sejajar sumbu x

$$M_{nak,b-} = 302,42 \text{ KNm}$$

$$M_{nak,b+} = 244,387 \text{ KNm}$$

$$\Sigma M_{nak,b,ki,x} = 302,42 + 244,387 = 546,807 \text{ KNm}$$

$$l_{nb,ki} = 4,025 \text{ m}$$

$\Sigma M_{nak,b}$ sebelah kanan kolom sejajar sumbu x

$$M_{nak,b-} = 302,42 \text{ KNm}$$

$$M_{nak,b+} = 244,387 \text{ KNm}$$

$$\Sigma M_{nak,b,ka,x} = 302,42 + 244,387 = 546,807 \text{ KNm}$$

$$l_{nb,ka} = 4,025 \text{ m}$$

$\Sigma M_{nak,b}$ sebelah kiri kolom sejajar sumbu y

$$M_{nak,b-} = 0 \text{ KNm}$$

$$M_{nak,b+} = 0 \text{ KNm}$$

$$\Sigma M_{nak,b,ki,y} = 0 + 0 = 0 \text{ KNm}$$

$$l_{nb,ki} = 0 \text{ m}$$

$\Sigma M_{nak,b}$ sebelah kanan kolom sejajar sumbu y

$$M_{nak,b-} = 302,42 \text{ KNm}$$

$$M_{nak,b+} = 244,387 \text{ KNm}$$

$$\Sigma M_{nak,b,ki,x} = 302,42 + 244,387 = 546,807 \text{ KNm}$$

$$l_{nb,ki} = 4,025 \text{ m}$$

$\Sigma M_{nak,b}$ sebelah kanan kolom sejajar sumbu x

$$M_{nak,b-} = 302,42 \text{ KNm}$$

$$M_{nak,b+} = 244,387 \text{ KNm}$$

$$\Sigma M_{nak,b,ka,x} = 302,42 + 244,387 = 546,807 \text{ KNm}$$

$$l_{nb,ka} = 4,025 \text{ m}$$

$\Sigma M_{nak,b}$ sebelah kiri kolom sejajar sumbu y

$$M_{nak,b-} = 0 \text{ KNm}$$

$$M_{nak,b+} = 0 \text{ KNm}$$

$$\Sigma M_{nak,b,ki,y} = 0 + 0 = 0 \text{ KNm}$$

$$l_{nb,ki} = 0 \text{ m}$$

$\Sigma M_{nak,b}$ sebelah kanan kolom sejajar sumbu y

Tabel 6.11 Gaya Aksial Rencana Kolom

Dimensi	Arah	Gaya Aksial			kiri			kanan			N u, k (kN)
		N, D, k (kN)	N, L, k (kN)	Ng, k (kN)	M nak, b, ki - (kN m)	M nak, b, ki + (kN m)	Ln, b, ki (m)	M nak, b, ka - (kN m)	M nak, b, ka + (kN m)	Ln, b, ka (m)	
1	2	3	4	5	6	7	8	9	10	11	12
1K50X50	sb-x	1165,2274	176,38673	1341,6141	302,42	244,387	4,025	302,42	244,387	4,025	3134,940884
	sb-y	1165,2274	176,38673	1341,6141	0	0	0	679,249	460,881	3,75	3154,742596
KB50X45	sb-x	1583,6223	418,60611	2002,2284	0	0	0	302,42	244,387	4,05	4416,319371
	sb-y	1583,6223	418,60611	2002,2284	141,633	74,326	2,1	679,249	460,881	4,5	4551,795654
3KB45X45	sb-x	600,69191	57,60049	658,2924	0	0	0	302,42	244,387	6,55	1485,520847
	sb-y	600,69191	57,60049	658,2924	0	0	0	302,42	244,387	4,775	1504,528297
4KB30X30	sb-x	233,68553	16,69229	250,37782	0	0	0	141,633	74,326	4,2	597,7797553
	sb-y	233,68553	16,69229	250,37782	0	0	0	141,633	74,326	2,1	629,2737762
K30X25	sb-x	365,42981	68,59609	434,0259	141,633	74,326	4,75	0	0	0	975,3593908
	sb-y	365,42981	68,59609	434,0259	141,633	74,326	2,35	0	0	0	947,5120461
6K30X50	sb-x	1119,8079	242,3625	1362,1704	0	0	0	0	0	0	3016,030113
	sb-y	1119,8079	242,3625	1362,1704	679,249	460,881	3,85	679,249	460,881	3,85	3378,798749
1K50X50	sb-x	492,62746	66,05252	558,67998	185,964	127,185	4,025	0	0	0	1305,805258
	sb-y	492,62746	66,05252	558,67998	0	0	0	570,348	351,101	3,75	1408,655486
KB50X45	sb-x	706,24389	163,57868	869,82257	0	0	0	185,964	127,185	4,05	1987,478112
	sb-y	706,24389	163,57868	869,82257	207,435	108,116	2,1	570,348	351,101	4,5	2157,574314
3KB45X45	sb-x	121,01306	0,94356	121,95662	0	0	0	185,964	127,185	6,55	315,1537811
	sb-y	121,01306	0,94356	121,95662	0	0	0	185,964	127,185	4,775	326,0420911
4KB30X30	sb-x	99,86638	2,52245	102,38883	0	0	0	207,435	108,116	4,2	320,2002097
	sb-y	99,86638	2,52245	102,38883	0	0	0	207,435	108,116	2,1	366,2180638
K30X25	sb-x	189,89961	39,79935	229,69896	139,866	95,115	4,75	0	0	0	560,6331993
	sb-y	189,89961	39,79935	229,69896	185,964	127,185	2,35	0	0	0	530,3330177
6K30X50	sb-x	599,00099	95,40142	694,40241	0	0	0	0	0	0	1583,897197
	sb-y	599,00099	95,40142	694,40241	570,348	351,101	3,85	570,348	351,101	3,85	1877,085516

Keterangan Tabel 6.11 Gaya Aksial Rencana Kolom

- Kolom yang ditinjau
- Arah : sejajar sumbu x dan sejajar sumbu y
- ND, k = Gaya aksial kolom akibat beban mati
- NL, k = Gaya aksial kolom akibat beban hidup
- Ng, k = ND, k + NL, k
(Gaya aksial kolom akibat beban gravitasi)
- Mnak, b, ka = Momen nominal aktual negatif balok kiri
- Mnak, b, ka = Momen nominal aktual positif balok kiri
- Ln, b, ki = Bentang bersih balok kiri
- Mnak, b, ka = Momen nominal aktual negatif balok kanan
- Mnak, b, ka = Momen nominal aktual positif balok kanan
- Ln, b, ka = Bentang bersih balok kanan
- Nu, k-x = $1,05 (Ng, k-x + Ng, k-y) + Rv, 0,7, 1,25 [(SMnak, b, ki-x/lnb, ki-x + SMnak, b, ka-x/lnb, ka-x) + SMnak, b, ki-y/lnb, ki-y + SMnak, b, ka-y/lnb, ka-y]$
(Gaya aksial rencana kolom arah -x)
Nu, k-y = $1,05 (Ng, k-x + Ng, k-y) + Rv, 0,7, 1,25 [(SMnak, b, ki-x/lnb, ki-x + SMnak, b, ka-x/lnb, ka-x) + SMnak, b, ki-y/lnb, ki-y + SMnak, b, ka-y/lnb, ka-y]$
(Gaya aksial rencana kolom arah +x)
dengan $Rv = 1$

Tabel 6.12 Gaya Aksial Kolom Maksimum

ELEMEN	Letak	ND (kN)	NL (kN)	Ng (kN)	Neka (kN)	Neki (kN)	Akibat Gempa		Nu,k Maksimum
							Nu,ka	Nu,ki	
1	2	3	4	5	6	7	8	9	10
1K50X50	Sb- X	1165,227	176,3867	1341,614	30,93037	212,4998	2986,269	3977,638	3977,638354
	Sb- Y	1165,227	176,3867	1341,614	30,93037	212,4998	2986,269	3977,638	3977,638354
KB50X45	Sb- X	1583,622	418,6061	2002,228	-31,90706	-113,3466	4030,467	3585,807	3585,807217
	Sb- Y	1583,622	418,6061	2002,228	-31,90706	-113,3466	4030,467	3585,807	3585,807217
3KB45X45	Sb- X	600,6919	57,60049	658,2924	98,61016	156,3469	1920,826	2236,068	2236,06795
	Sb- Y	600,6919	57,60049	658,2924	98,61016	156,3469	1920,826	2236,068	2236,06795
4KB30X30	Sb- X	233,6855	16,69229	250,3778	84,88027	167,466	989,2397	1440,158	1440,157891
	Sb- Y	233,6855	16,69229	250,3778	84,88027	167,466	989,2397	1440,158	1440,157891
K30X25	Sb- X	365,4298	68,59609	434,0259	-20,32258	12,57815	800,4931	980,1311	980,131089
	Sb- Y	365,4298	68,59609	434,0259	-20,32258	12,57815	800,4931	980,1311	980,131089
6K30X50	Sb- X	1119,808	242,3625	1362,17	-26,1698	-163,97	2717,671	1965,282	2717,670732
	Sb- Y	1119,808	242,3625	1362,17	-26,1698	-163,97	2717,671	1965,282	2717,670732
1K50X50	Sb- X	492,6275	66,05252	558,68	1,86738	17,8279	1183,424	1270,568	1270,568292
	Sb- Y	492,6275	66,05252	558,68	1,86738	17,8279	1183,424	1270,568	1270,568292
KB50X45	Sb- X	706,2439	163,5787	869,8226	10,00334	-89,31515	1881,246	1338,967	1881,245633
	Sb- Y	706,2439	163,5787	869,8226	10,00334	-89,31515	1881,246	1338,967	1881,245633
3KB45X45	Sb- X	121,0131	0,94356	121,9566	9,60641	17,09103	308,5599	349,4259	349,4259258
	Sb- Y	121,0131	0,94356	121,9566	9,60641	17,09103	308,5599	349,4259	349,4259258
4KB30X30	Sb- X	99,86638	2,52245	102,3888	0,83471	-1,54613	219,5741	206,5747	219,5740596
	Sb- Y	99,86638	2,52245	102,3888	0,83471	-1,54613	219,5741	206,5747	219,5740596
K30X25	Sb- X	189,8996	39,79935	229,699	-10,29116	-50,76614	426,1781	205,1847	426,1780824
	Sb- Y	189,8996	39,79935	229,699	-10,29116	-50,76614	426,1781	205,1847	426,1780824
6K30X50	Sb- X	599,001	95,40142	694,4024	47,27119	-90,80456	1716,346	962,4522	1716,345758
	Sb- Y	599,001	95,40142	694,4024	47,27119	-90,80456	1716,346	962,4522	1716,345758

Keterangan Tabel 6.12 Gaya Aksial Kolom Maksimum

- Kolom yang ditinjau
- Arah : sejajar sumbu x dan sejajar sumbu y
- ND = Gaya aksial kolom akibat beban mati
- NL = Gaya aksial kolom akibat beban hidup
- Ng = ND + NL
(Gaya aksial kolom akibat beban gravitasi)
- Neka = Gaya aksial kolom akibat beban gempa kanan
(pilih yang terbesar)
- Neki = Gaya aksial kolom akibat beban gempa kiri
- Nu,ka = $1,05 [Ng, kx + Ng, ky + 4k \cdot (Ne, ka - x + Neka - y)]$
(Gaya aksial kolom maksimum akibat gempa kanan)
- Nu,ki = $1,05 [Ng, kx + Ng, ky + 4k \cdot (Ne, ki - x + Neki - y)]$
(Gaya aksial kolom maksimum akibat gempa kiri)
- Nu,k maksimum = Gaya aksial kolom maksimum

Tabel 6.13 Gaya Aksial Kolom Terpakai

Elemen	Arah	Nu,k Rencana	Nu,k Maksimum	Nu,k Terpakai
1	2	3	4	5
1K50X50	sb-x	3134,94088	3977,638354	3134,94088
	sb-y	3154,7426	3977,638354	3154,7426
KB50X45	sb-x	4416,31937	3585,807217	3585,80722
	sb-y	4551,79565	3585,807217	3585,80722
3KB45X45	sb-x	1485,52085	2236,06795	1485,52085
	sb-y	1504,5283	2236,06795	1504,5283
4KB30X30	sb-x	597,779755	1440,157891	597,779755
	sb-y	629,273776	1440,157891	629,273776
K30X25	sb-x	975,359391	980,131089	975,359391
	sb-y	947,512046	980,131089	947,512046
6K30X50	sb-x	3016,03011	2717,670732	2717,67073
	sb-y	3378,79875	2717,670732	2717,67073
1K50X50	sb-x	1305,80526	1270,568292	1270,56829
	sb-y	1408,65549	1270,568292	1270,56829
KB50X45	sb-x	1987,47811	1881,245633	1881,24563
	sb-y	2157,57431	1881,245633	1881,24563
3KB45X45	sb-x	315,156781	349,4259258	315,156781
	sb-y	326,042091	349,4259258	326,042091
4KB30X30	sb-x	320,20021	219,5740596	219,57406
	sb-y	366,218064	219,5740596	219,57406
K30X25	sb-x	560,633199	426,1780824	426,178082
	sb-y	530,333018	426,1780824	426,178082
6K30X50	sb-x	1583,8972	1716,345758	1583,8972
	sb-y	1877,08552	1716,345758	1716,34576

Keterangan **Tabel 6.13** Gaya Aksial Kolom Terpakai

1. Kolom yang ditinjau
2. Arah : sejajar sumbu x dan sejajar sumbu y
3. Nu,k rencana = Gaya aksial rencana kolom (Tabel 6.11)
4. Nu,k,maksimum = Gaya aksial kolom maksimum (Tabel 6.12)
5. Nu,k terpakai = pilih yg terkecil antara Nu,k rencana dengan Nu,k maksimum

6.3.3 Perhitungan Diagram Interaksi Kolom

Sebagai contoh perhitungan diagram interaksi kolom 500 mm x 500 mm ditinjau pada $\rho_g = 0,03925$, dengan diketahui

Tulangan yang dianalisis 6D25 (terdistribusi merata pada tiap sisi)

$$A_s = 2945,243 \text{ mm}^2$$

$$\rho = A_s / A_g = 0,0118$$

$$f_c' = 30 \text{ MPa}, f_y = 390 \text{ MPa}$$

$$b = 500 \text{ mm}, h = 500 \text{ mm}, A_g = 500 \times 500 = 250.000 \text{ mm}^2$$

$$\begin{aligned} d' &= \text{selimut beton} + \text{diameter tul.sengkang} + \frac{1}{2} \cdot \text{diameter tul.pokok} \\ &= 40 + 12 + \frac{1}{2} \cdot 25 = 64,5 \text{ mm} \end{aligned}$$

Pada contoh perhitungan ini digunakan, kondisi $c = 250 \text{ mm}$ (seimbang)

Jarak masing-masing tulangan pada serat beton yang tertekan di tentukan sebagai berikut :

$$\text{Lapis 1, } A_{s1} = 1471,9 \text{ mm}^2$$

$$d_1 = 64,5 \text{ mm}$$

$$f_{s1} = 600 \cdot (250 - 64,5) / 250 = 445,2 \text{ MPa} > f_y, \text{ digunakan } f_y = 360 \text{ MPa}$$

$$C_{s1} = 1471,9 \cdot (390 - 0,85 \cdot 30) = 536498,4 \text{ MPa}$$

$$\text{Lapis 2, } A_{s2} = 981,25 \text{ mm}^2$$

$$d_2 = 64,5 + (2 - 1) \cdot (500 - 2 \cdot 64,5) / 2 = 250 \text{ mm}$$

$$f_{s2} = 600 \cdot (250 - 250) / 250 = 0 \text{ MPa} < f_y$$

$$C_{s2} = 981,25 \cdot (0 - 0,85 \cdot 30) = -25021,875 \text{ MPa}$$

Lapis 3, $A_{s3} = 1471,9 \text{ mm}^2$

$$d_2 = 64,5 + (3 - 1) \cdot (500 - 2 \cdot 64,5) / 2 = 435,5 \text{ mm}$$

$$f_{s1} = 600 \cdot (250 - 435,5) / 250 = -445,2 \text{ MPa} < -f_y, \text{ digunakan } f_y = -390 \text{ MPa}$$

$$C_{s3} = 981,25 \cdot (-390 - 0,85 \cdot 30) = -611564,1 \text{ MPa}$$

$$C_c = 0,85 \cdot f_c' \cdot a \cdot b = 0,85 \cdot 30 \cdot 212,5 \cdot 500 = 2709375 \text{ MPa}$$

$$0,65 \cdot P_n = 0,65 \cdot (\Sigma C_s + C_c)$$

$$0,65 \cdot P_n = 0,65 \cdot (536498,4 + (-25021,875) + (-611564,1) + 2709375) = 1696036,9 \text{ N}$$

$$0,65 \cdot M_n = 0,65 \cdot C_c \cdot (d - a/2) + \Sigma C_s \cdot (d - d')$$

$$0,65 \cdot M_n = 0,65 \cdot 2709375 \cdot (450 - 212,5/2) + 536498,4 \cdot (450 - 64,5/2)$$

$$+ (-25021,875) \cdot (450 - 250) + (-611564,1) \cdot (450 - 435,5)$$

$$= 391584863 \text{ Nmm}$$

Dengan cara yang sama dapat dihitung interaksi kolom yang lain. (untuk 1K50X50 disajikan pada Tabel 6.14, untuk KB 45X50 disajikan pada Tabel 6.15, untuk 3KB45X45 disajikan pada Tabel 6.16, untuk 4KB30X30 disajikan pada Tabel 6.17, untuk K5 30X25 disajikan pada Tabel 6.18, dan untuk 6K30X50 disajikan pada Tabel 6.19).

Tabel 6.14 Perhitungan Interaksi Kolom 1K50X50

Tulangan 8D25		Kondisi									
p = 0,0157		1	2	3	4	5	6	7	8	9	10
n	Asi	0	450	400	350	300	250	200	150	100	50
3	1471,9	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
2	981,25	600	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
3	1471,9	600	266,67	225,00	171,43	100,00	0,00	-150,00	-390,00	-390,00	-390,00
3	1471,9	600	19,33	-53,25	-146,57	-271,00	-390,00	-390,00	-390,00	-390,00	-390,00
3	1471,9	845592,19	536498,44	536498,44	536498,44	536498,44	536498,44	536498,44	465848,44	275976,56	-293639,1
2	981,25	563728,13	236644,79	195759,38	143192,41	73103,125	-25021,875	-172209,4	-407709,4	-407709,4	-407709,4
3	1471,9	845592,19	-9076,563	-115910,2	-253267,6	-436410,9	-611564,1	-611564,1	-611564,1	-611564,1	-611564,1
		6375000	4876875	4335000	3793125	3251250	2709375	2167500	1625625	1083750	541875
		0,65Pn	5609443,1	3666612,1	3218376	2742706,3	1696036,88	1248146,3	696930	221294,53	-501174,4
		0,65Mn	0	252018370	304084166	344861083	376189329	391584863	370892011	326711239	253185992
											118903846

Tulangan 12D25		Kondisi									
p = 0,0236		1	2	3	4	5	6	7	8	9	10
n	Asi	0	450	400	350	300	250	200	150	100	50
4	1962,5	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
2	981,25	600	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	600	349,11	317,75	277,43	223,67	148,40	35,50	-152,67	-390,00	-390,00
4	1962,5	600	184,22	132,25	65,43	-23,67	-148,40	-335,50	-390,00	-390,00	-390,00
4	1962,5	600	19,33	-53,25	-146,57	-271,00	-390,00	-390,00	-390,00	-390,00	-390,00
4	1962,5	1127456,3	715331,25	715331,25	715331,25	715331,25	715331,25	715331,25	621131,25	367968,75	-391518,8
2	981,25	563728,13	317543,4	286770,31	247204,91	194451,04	120595,625	9812,5	-174826	-407709,4	-407709,4
2	981,25	563728,13	155746,18	104748,44	39179,911	-48244,79	-170639,38	-354231,3	-407709,4	-407709,4	-407709,4
4	1962,5	1127456,3	-12102,08	-154546,9	-337690,2	-581881,3	-815418,75	-815418,8	-815418,8	-815418,8	-815418,8
		6375000	4876875	4335000	3793125	3251250	2709375	2167500	1625625	1083750	541875
		0,65Pn	6342289,7	3934705,9	3436747	2897148,1	1663508,44	1119945,9	551721,35	-116427,2	-962312,8
		0,65Mn	0	280448838	337621317	384963969	449432628	431666081	379374212	288857729	131681782

Tabel 6.14 Lanjutan

Tulangan 16D22		Kondisi		1	2	3	4	5	6	7	8	9	10
p = 0,0314		c		0	450	400	350	300	250	200	150	100	50
n	Asi	d	a	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
5	2453,1	64,5 fsi1	600	390,00	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	157,3 fsi2	600	390,00	364,13	364,13	330,43	285,50	222,60	128,25	-29,00	-343,50	-390,00
2	981,25	250 fsi3	600	266,67	225,00	225,00	171,43	100,00	0,00	-150,00	-390,00	-390,00	-390,00
2	981,25	342,8 fsi4	600	143,00	85,88	85,88	12,43	-85,50	-222,60	-390,00	-390,00	-390,00	-390,00
5	2453,1	435,5 fsi5	600	19,33333	-53,25	-53,25	-146,5714	-27,1	-390	-390	-390	-390	-390
5	2453,1	64,5 Cs1	1409320,3	894164,06	894164,06	894164,06	894164,06	894164,06	894164,06	894164,06	776414,06	459960,94	-489398,4
2	981,25	157,3 Cs2	563728,13	357665,63	332275,78	299211,16	255125	193404,375	100823,44	-53478,13	-362081,3	-407709,4	-407709,4
2	981,25	250 Cs3	563728,13	236644,79	195759,38	143192,41	73103,125	-25021,875	-172209,4	-407709,4	-407709,4	-407709,4	-407709,4
2	981,25	342,8 Cs4	563728,13	115296,88	59242,969	-12826,34	-108918,8	-243448,13	-407709,4	-407709,4	-407709,4	-407709,4	-407709,4
5	2453,1	435,5 Cs5	1409320,3	-15127,6	-193183,6	-422112,7	-727351,6	-1019273,4	-1019273,4	-1019273,4	-1019273,4	-1019273,4	-1019273,4
Cc		Cc		6375000	4876875	4335000	3793125	3251250	2709375	2167500	1625625	1083750	541875
0,65Pn		0,65Pn		7075136,3	4202587,2	3655118,1	3051589,8	2364291,7	1630980	1016142	334014,69	-424490,6	-1423451
0,65Mn		0,65Mn		0	310485313	372987409	427157073	476342315	510206698	493835273	434672963	327280272	144459717

Tulangan 20D25		Kondisi		1	2	3	4	5	6	7	8	9	10
p = 0,0393		c		0	450	400	350	300	250	200	150	100	50
n	Asi	d	a	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
6	2943,8	64,5 fsi1	600	390,00	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	138,7 fsi2	600	390,00	362,23	362,23	325,03	274,20	267,12	183,90	45,20	-232,20	-390,00
2	981,25	212,9 fsi3	600	316,13	280,65	280,65	235,03	174,20	89,04	-38,70	-251,60	-390,00	-390,00
2	981,25	287,1 fsi4	600	217,20	169,35	169,35	107,83	25,80	-89,04	-281,30	-390,00	-390,00	-390,00
2	981,25	361,3 fsi5	600	118,27	58,05	58,05	-19,37	-122,60	-267,12	-390,00	-390,00	-390,00	-390,00
6	2943,8	435,5 fsi6	600	19,33	-53,25	-53,25	-146,57	-271,00	-390,00	-390,00	-390,00	-390,00	-390,00
6	2943,8	64,5 Cs1	1691184,4	1072996,9	1072996,9	1072996,9	1072996,9	1072996,9	1072996,88	1072996,9	931696,88	551953,13	-587278,1
2	981,25	138,7 Cs2	563728,13	357665,63	357665,63	330414,91	291529,38	237089,625	155430	19330,625	-252868,1	-407709,4	-407709,4
2	981,25	212,9 Cs3	563728,13	285183,96	250365,94	205599,91	145911,88	62348,625	-62996,25	-271904,4	-407709,4	-407709,4	-407709,4
2	981,25	287,1 Cs4	563728,13	188105,63	141152,81	80784,911	294,375	-112392,38	-281422,5	-407709,4	-407709,4	-407709,4	-407709,4
2	981,25	361,3 Cs5	563728,13	91027,292	31939,688	-44030,09	-145323,1	-287133,38	-407709,4	-407709,4	-407709,4	-407709,4	-407709,4
6	2943,8	435,5 Cs6	1691184,4	-18153,13	-231820,3	-508535,3	-872821,9	-1223128,1	-1223128,1	-1223128,1	-1223128,1	-1223128,1	-1223128,1
Cc		Cc		6375000	4876875	4335000	3793125	3251250	2709375	2167500	1625625	1083750	541875
0,65Pn		0,65Pn		7807982,8	4454905,8	3872245,4	3206031,6	2433494,4	1598451,56	923435,91	173030,81	-691223,8	-1884590
0,65Mn		0,65Mn		0	339432070	408946650	470186264	528613537	572151291	555327314	490789397	371403193	157237653

Keterangan Tabel 6.14 Perhitungan Interaksi Kolom 1K50X50

c = jarak sumbu terhadap serat terluar

a = b1 . C

fai = 0,003 . [(c - d)/c] . Ea

dengan : Ea = 200 000 Mpa

Cs = As . (fs - 0,85 . fc) . (gaya tekan)

0,65 . Pn = 0,65 . (SCs + Cc)

0,65 . Mn = 0,65 . Cc . (d - a/2) + SCs . (d - a)

N = banyaknya garis tulangan

n = jumlah tulangan pada masing-masing sisi

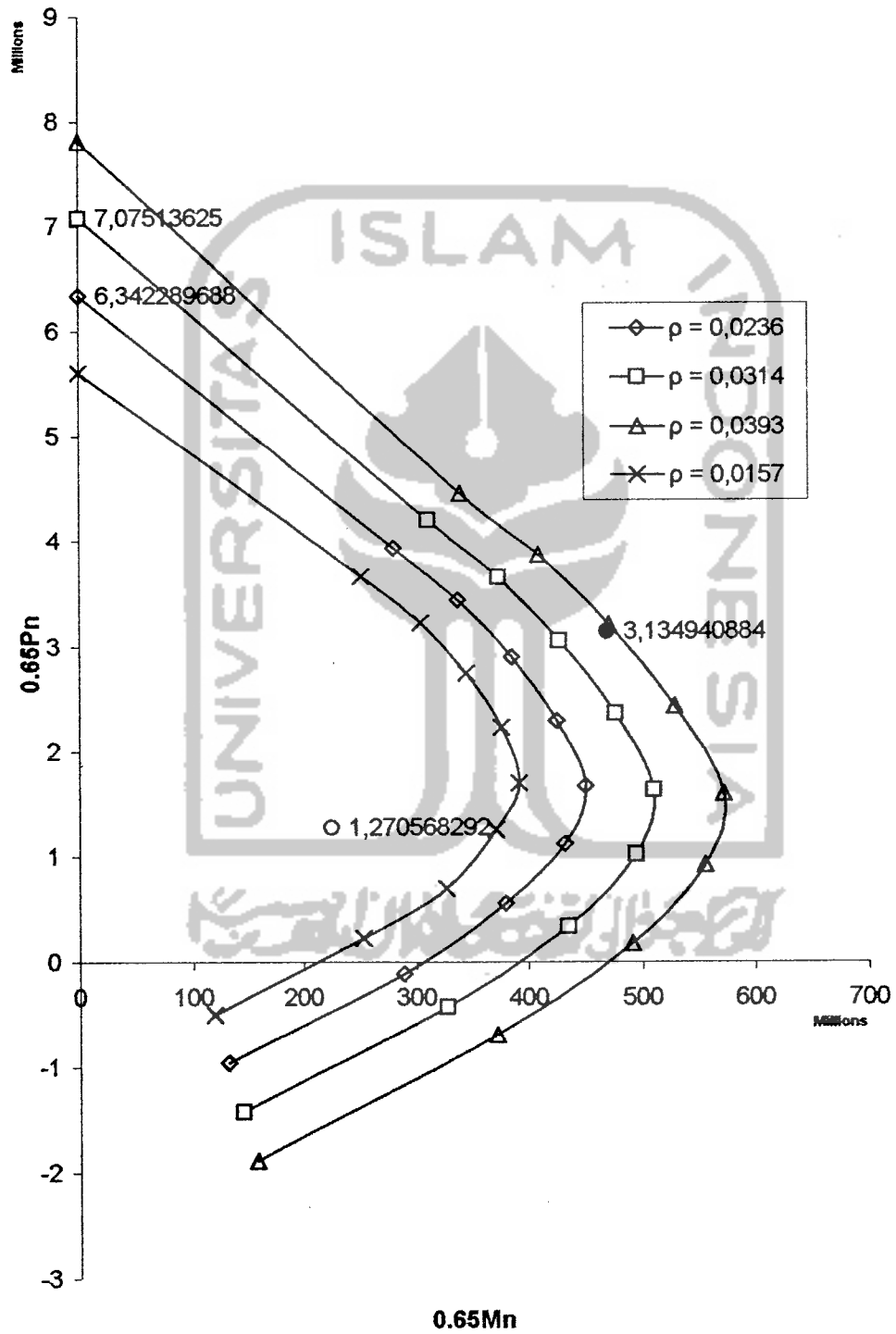
Asi = n . 1/4 . π . (luas total tulangan)

d = d' + [(1 - 1)/(n - 2 . d)] / (N - 1)

(Jarak tulangan terhadap serat beton tekan)

dengan : 1 = nomor lapis tulangan

Gambar 6.5 Grafik PnMn 1K 50X50



Tabel 6.15 Perhitungan Interaksi Kolom KB 50X40

Tulangan 10D25			Kondisi											
n	Asi	d	c		1	2	3	4	5	6	7	8	9	10
			a	b										
3	1471,9	64,5	fs1		600	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	188,2	fs2		600	349,11	317,75	277,43	223,67	148,40	35,50	-152,67	-390,00	-390,00
2	981,25	311,8	fs3		600	184,22	132,25	65,43	-23,67	-148,40	-335,50	-390,00	-390,00	-390,00
3	1471,9	435,5	fs4		600	19,33	-53,25	-146,57	-271,00	-390,00	-390,00	-390,00	-390,00	-390,00
3	1471,9	84,5	Cs1		845552,19	538498,44	538498,44	538498,44	538498,44	538498,44	538498,44	485848,44	275978,56	-293839,1
2	981,25	188,2	Cs2		563728,13	317543,4	286770,31	247204,91	194451,04	120595,63	9812,5	-174826	-407709,4	-407709,4
2	981,25	311,8	Cs3		563728,13	155746,18	104748,44	39179,911	-48244,79	-170839,4	-354231,3	-407709,4	-407709,4	-407709,4
3	1471,9	435,5	Cs4		845592,19	-9076,563	-115910,2	-253267,6	-436410,9	-611564,1	-611564,1	-611564,1	-611564,1	-611564,1
			Cc		5737500	4399187,5	3901500	3413812,5	2926125	2438437,5	1950750	1483062,5	975375	487807,5
			0,65Pn		5561491,4	3503434,3	3063844,6	2589228,3	2062072,2	1503663,3	995322,66	477627,45	-114160,3	-801407,3
			0,65Min		0	2398987,703	288857928	329258451	3600555601	377974360	362277098	31639095	238586914	1170846842

[illegible]

Tulangan 18D25				Kondisi	1	2	3	4	5	6	7	8	9	10
n	Asi	d	a	c	0	450	400	350	300	250	200	150	100	50
					500	392,5	340	297,5	255	212,5	170	127,5	85	42,5
5	2453,1	64,5	fs1		600	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	138,7	fs2		600	390,00	390,00	362,23	322,60	267,12	183,90	45,20	-232,20	-390,00
2	981,25	212,9	fs3		600	316,13	280,65	235,03	174,20	89,04	-38,70	-251,60	-390,00	-390,00
2	981,25	287,1	fs4		600	217,20	169,35	107,83	25,80	-89,04	-261,30	-390,00	-390,00	-390,00
2	981,25	361,3	fs5		600	118,27	58,05	-19,37	-122,60	-267,12	-390,00	-390,00	-390,00	-390,00
5	2453,1	435,5	fs6		600	19,33	-53,25	-146,57	-271,00	-390,00	-390,00	-390,00	-390,00	-390,00

Tabel 6.15 Lanjutan

Tulangan 18D25		Kondisi	1	2	3	4	5	6	7	8	9	10
p = 0,0393	c		0	450	400	350	300	250	200	150	100	50
n	Asi	d	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
5	2453,1	64,5	Cs1	1409320,3	894164,06	894164,06	894164,06	894164,06	894164,06	776414,06	459960,94	-489398,4
2	981,25	138,7	Cs2	563728,13	357865,63	357865,63	330414,91	291529,38	237089,63	155430	252868,1	-407709,4
2	981,25	212,9	Cs3	563728,13	285183,98	250365,94	205599,91	145911,88	62348,625	-271904,4	-407709,4	-407709,4
2	981,25	287,1	Cs4	563728,13	188105,63	141152,81	80784,911	294,375	-112392,4	-281422,5	-407709,4	-407709,4
2	981,25	361,3	Cs5	563728,13	91027,292	31939,688	-44030,09	-145823,1	-287133,4	-407709,4	-407709,4	-407709,4
5	2453,1	435,5	Cs6	1409320,3	-15127,8	-193183,6	-422112,7	-727351,6	-1019273	-1019273	-1019273	-1019273
			Cc	5737500	4389187,5	3901500	3413812,5	2928125	2438437,5	1950750	1463082,5	975375
			0,65Pn	7027184,5	4023634,2	3499342,9	2898111,8	2200477,5	1438606,4	798812,63	98936,906	-688956,9
			0,65Mn	0	298880935	380183261	413480746	463622610	500693023	485938331	427808171	321114378

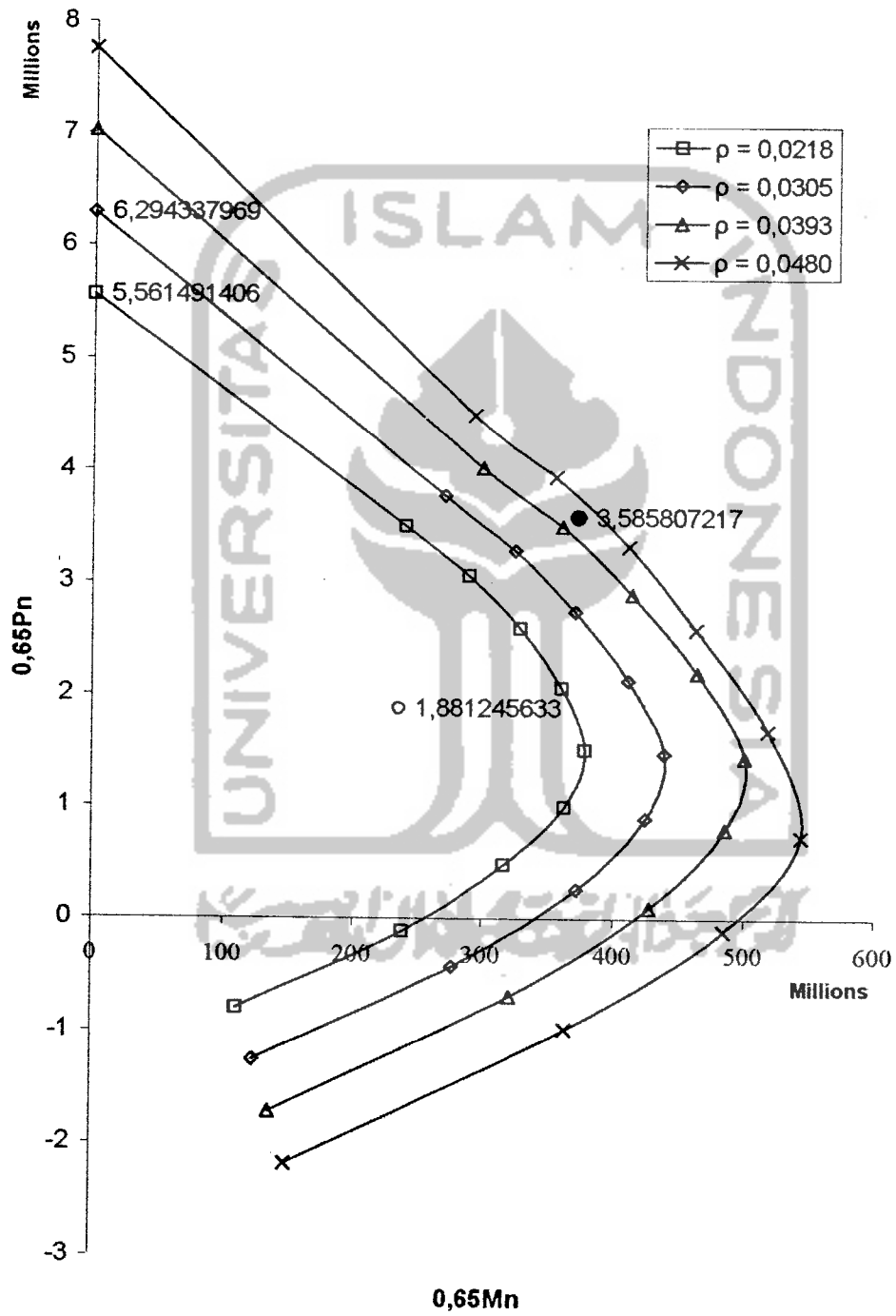
Tulangan 22D25		Kondisi	1	2	3	4	5	6	7	8	9	10
p = 0,0480	c		0	450	400	350	300	250	200	150	100	50
n	Asi	d	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
6	2943,8	64,5	fsi1	600	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	126,3	fsi2	600	390,00	390,00	383,43	347,33	296,80	221,00	94,67	-158,00
2	981,25	188,2	fsi3	600	349,11	317,75	277,43	223,67	148,40	35,50	-152,67	-390,00
2	981,25	250	fsi4	600	286,67	225,00	171,43	100,00	0,00	-150,00	-390,00	-390,00
2	981,25	311,8	fsi5	600	184,22	132,25	65,43	-23,87	-148,40	-335,50	-390,00	-390,00
2	981,25	373,7	fsi6	600	101,78	39,50	-40,57	-147,33	-296,80	-390,00	-390,00	-390,00
6	2943,8	435,5	fsi7	600	19,33	-53,25	-148,57	-271,00	-390,00	-390,00	-390,00	-390,00
6	2943,8	64,5	Cs1	1691184,4	1072986,9	1072986,9	1072986,9	1072986,9	1072986,9	931896,88	551953,13	-587278,1
2	981,25	126,3	Cs2	563728,13	357865,63	357865,63	351217,41	315798,96	268213,13	191834,38	67869,792	-180059,4
2	981,25	188,2	Cs3	563728,13	317543,4	286770,31	247204,91	194451,04	120595,63	9812,5	-174826	-407709,4
2	981,25	250	Cs4	563728,13	236644,79	195759,38	143192,41	73103,125	-25021,88	-172209,4	-407709,4	-407709,4
2	981,25	311,8	Cs5	563728,13	155746,18	104748,44	39179,911	-48244,79	-170639,4	-354231,3	-407709,4	-407709,4
2	981,25	373,7	Cs6	563728,13	155746,18	104748,44	39179,911	-48244,79	-170639,4	-354231,3	-407709,4	-407709,4
6	2943,8	435,5	Cs7	1691184,4	224542,71	41212,5	-194497,8	-508778,1	-848770,6	-1223128	-1223128	-1223128
			Cc	5737500	4389187,5	3901500	3413812,5	2928125	2438437,5	1950750	1463082,5	975375
			0,65Pn	7760031,1	4491547,6	3942511	3322986	2585184,7	1679061,7	729035,94	-102994,5	-2184823
			0,65Mn	0	292648317	354931490	410943188	462732624	518437000	544599310	484528636	363883391

Keterangan Tabel 6.15 Perhitungan Interaksi Kolom KB 50x40

n = jumlah tulangan pada masing-masing sisi
 $Asi = n \cdot 1/4 \cdot \pi \cdot (\text{luas total tulangan})$
 $d = d' + [(1-1)/(h - 2 \cdot d')](N - 1)$
 (Jarak tulangan terhadap serat beton tekan)
 dengan : I = nomor lapis tulangan
 N = banyaknya garis tulangan
 c = jarak sumbu terhadap serat terluar

$n = b1 \cdot C$
 $f_{ci} = 0,003 \cdot [(c - d) \cdot c] \cdot E_s$
 dengan : $E_s = 200.000 \text{ Mpa}$
 $C_s = As \cdot (f_s - 0,85 \cdot f_c') \cdot (\text{garis tekan})$
 $0,65 \cdot P_n = 0,65 \cdot (SC_s + C_c)$
 $0,65 \cdot M_n = 0,65 \cdot (C_c(d - a/2) + SC_s(d - a))$

Gambar 6.6 Grafik PnMn KB 50X40



Tabel 6.16 Perhitungan Interaksi Kolom 3KB 45X45

Tulangan 8D19		Kondisi		1	2	3	4	5	6	7	8	9
p = 0,0112		c		0	400	350	300	250	200	150	100	50
n	Asi	d	a	450	340	297,5	255	212,5	170	127,5	85	42,5
3	850,16	61,5	fsi1	600	390,00	390,00	390,00	390,00	390,00	354,00	231,00	-138,00
2	566,77	225	fsi2	600	262,50	214,29	150,00	60,00	-75,00	-300,00	-390,00	-390,00
3	850,16	388,5	fsi3	600	17,25	-66,00	-177,00	-332,40	-390,00	-390,00	-390,00	-390,00
3	850,16	61,5	Cs1	488414,05	309881,5	309881,5	309881,5	309881,5	309881,5	279275,92	174706,85	-139000,3
2	566,77	225	Cs2	325609,37	134324,49	106998,08	70562,865	19553,565	-56960,39	-184483,6	-235492,9	-235492,9
3	850,16	388,5	Cs3	488414,05	-7013,779	-77789,18	-172156,4	-304270,5	-353239,4	-353239,4	-353239,4	-353239,4
		Cc		5163750	3901500	3413812,5	2926125	2438437,5	1950750	1463062,5	975375	487687,5
		0,65Pn		4203021,8	2820149,9	2439386,9	2037368,4	1601341,4	1202780,6	783000	364877,18	-156029,4
		0,65Mn		0	173156670	210396784	236671748	253485895	247991424	220567804	171811348	87356369

Tulangan 12D19		Kondisi		1	2	3	4	5	6	7	8	9
p = 0,0168		c		0	400	350	300	250	200	150	100	50
n	Asi	d	a	450	340	297,5	255	212,5	170	127,5	85	42,5
4	1133,5	61,5	fsi1	600	390,00	390,00	390,00	390,00	390,00	354,00	231,00	-138,00
2	566,77	170,5	fsi2	600	344,25	307,71	259,00	190,80	88,50	-82,00	-390,00	-390,00
2	566,77	279,5	fsi3	600	180,75	120,86	41,00	-70,80	-238,50	-390,00	-390,00	-390,00
4	1133,5	388,5	fsi4	600	17,25	-66,00	-177,00	-332,40	-390,00	-390,00	-390,00	-390,00
4	1133,5	61,5	Cs1	651218,73	413175,33	413175,33	413175,33	413175,33	413175,33	372367,89	232942,47	-185333,8
2	566,77	170,5	Cs2	325609,37	180657,94	159950,59	132340,8	93687,081	35706,51	-60927,78	-235492,9	-235492,9
2	566,77	279,5	Cs3	325609,37	87991,043	54045,568	8784,935	-54579,95	-149627,3	-235492,9	-235492,9	-235492,9
4	1133,5	388,5	Cs4	651218,73	-9351,705	-103718,9	-229541,9	-405694	-470985,9	-470985,9	-470985,9	-470985,9
		Cc		5163750	3901500	3413812,5	2926125	2438437,5	1950750	1463062,5	975375	487687,5
		0,65Pn		4626314	2973082,2	2559222,3	2113074,7	1615266,9	1156362,1	694215,48	173124,72	-415751,7
		0,65Mn		0	187665410	227881703	258124907	280494589	278047931	249158630	190513844	94945788

Tulangan 16D19		Kondisi		1	2	3	4	5	6	7	8	9
p = 0,0224		c		0	400	350	300	250	200	150	100	50
n	Asi	d	a	450	340	297,5	255	212,5	170	127,5	85	42,5
5	1416,9	61,5	fsi1	600	390,00	390,00	390,00	390,00	390,00	354,00	231,00	-138,00
2	566,77	143,3	fsi2	600	385,13	354,43	313,50	256,20	170,25	27,00	-259,50	-390,00
2	566,77	225	fsi3	600	262,50	214,29	150,00	60,00	-75,00	-300,00	-390,00	-390,00
2	566,77	306,8	fsi4	600	139,88	74,14	-13,50	-136,20	-320,25	-390,00	-390,00	-390,00
5	1416,9	388,5	fsi5	600	17,25	-66,00	-177,00	-332,40	-390,00	-390,00	-390,00	-390,00

Tabel 6.16 Lanjutan

Tulangan 16D19		Kondisi		1	2	3	4	5	6	7	8	9
p = 0,0224		c		0	400	350	300	250	200	150	100	50
n	Asi	d	a	450	340	297,5	255	212,5	170	127,5	85	42,5
5	1416,9	61,5	Cs1	814023,41	516469,16	516469,16	516469,16	516469,16	516469,16	465459,86	291178,09	-231667,2
2	566,77	143,3	Cs2	325609,37	203824,86	186426,85	163229,76	130753,84	82039,958	850,155	-161529,5	-235492,9
2	566,77	225	Cs3	325609,37	134324,49	106998,08	70562,855	19553,565	-56960,39	-184483,6	-235492,9	-235492,9
2	566,77	306,8	Cs4	325609,37	64824,319	27569,312	-22104,03	-91646,71	-195960,7	-235492,9	-235492,9	-235492,9
5	1416,9	388,5	Cs5	814023,41	-11689,63	-129648,6	-286927,3	-507117,5	-588732,3	-588732,3	-588732,3	-588732,3
			Cc	5163750	3901500	3413812,5	2926125	2438437,5	1950750	1463062,5	975375	487687,5
			0,65Pn	5049606,2	3126014,5	2679057,7	2188781	1629192,4	1109943,7	598431,35	29448,53	-675474,1
			0,65Mn	0	202994832	246304543	280672307	308816372	309745801	277940195	213146574	102535207

Tulangan 20D19		Kondisi		1	2	3	4	5	6	7	8	9
p = 0,0280		c		0	400	350	300	250	200	150	100	50
n	Asi	d	a	450	340	297,5	255	212,5	170	127,5	85	42,5
6	1700,3	61,5	fsi1	600	390,00	390,00	390,00	390,00	390,00	354,00	231,00	-138,00
2	566,77	126,9	fsi2	600	390,00	382,46	346,20	295,44	219,30	92,40	-161,40	-390,00
2	566,77	192,3	fsi3	600	311,55	270,34	215,40	138,48	23,10	-169,20	-390,00	-390,00
2	566,77	257,7	fsi4	600	213,45	158,23	84,60	-18,48	-173,10	-390,00	-390,00	-390,00
2	566,77	323,1	fsi5	600	115,35	46,11	-46,20	-175,44	-369,30	-390,00	-390,00	-390,00
6	1700,3	388,5	fsi6	600	17,25	-66,00	-177,00	-332,40	-390,00	-390,00	-390,00	-390,00
6	1700,3	61,5	Cs1	976828,1	619763	619763	619763	619763	619763	558551,84	349413,71	-278000,7
2	566,77	126,9	Cs2	325609,37	206587,67	202312,6	181763,14	152993,99	109840,03	37916,913	-105929,3	-235492,9
2	566,77	192,3	Cs3	325609,37	162124,56	138769,59	107629,62	64033,675	-1360,248	-110350,1	-235492,9	-235492,9
2	566,77	257,7	Cs4	325609,37	106524,42	75226,572	33496,107	-24926,54	-112560,5	-235492,9	-235492,9	-235492,9
2	566,77	323,1	Cs5	325609,37	50924,285	11683,559	-40637,41	-113886,8	-223760,8	-235492,9	-235492,9	-235492,9
6	1700,3	388,5	Cs6	976828,1	-14027,56	-155578,4	-344312,8	-608540,9	-706478,8	-706478,8	-706478,8	-706478,8
			Cc	5163750	3901500	3413812,5	2926125	2438437,5	1950750	1463062,5	975375	487687,5
			0,65Pn	5472898,4	3271707,6	2798893,1	2264487,3	1543118	1063525,2	501615,7	-126163,8	-935196,4
			0,65Mn	0	217942372	265102553	303657403	337663391	342100216	307882259	236180460	110124625

Keterangan Tabel 6.16 Perhitungan Interaksi Kolom 3KB-45X45

n = jumlah tulangan pada masing-masing sisi

Asi = n.1/4 . p² (luas total tulangan)

d = d + [(1-1)/(h - 2.d)](N - 1)

(Jarak tulangan terhadap serat beton tekan)

dengan : l = nomor lapis tulangan

N = banyaknya garis tulangan

c = jarak sumbu terhadap serat tuluar

$$a = b \cdot l \cdot C$$

$$f_{si} = 0,003 \cdot [(c - d)/c] \cdot E_s$$

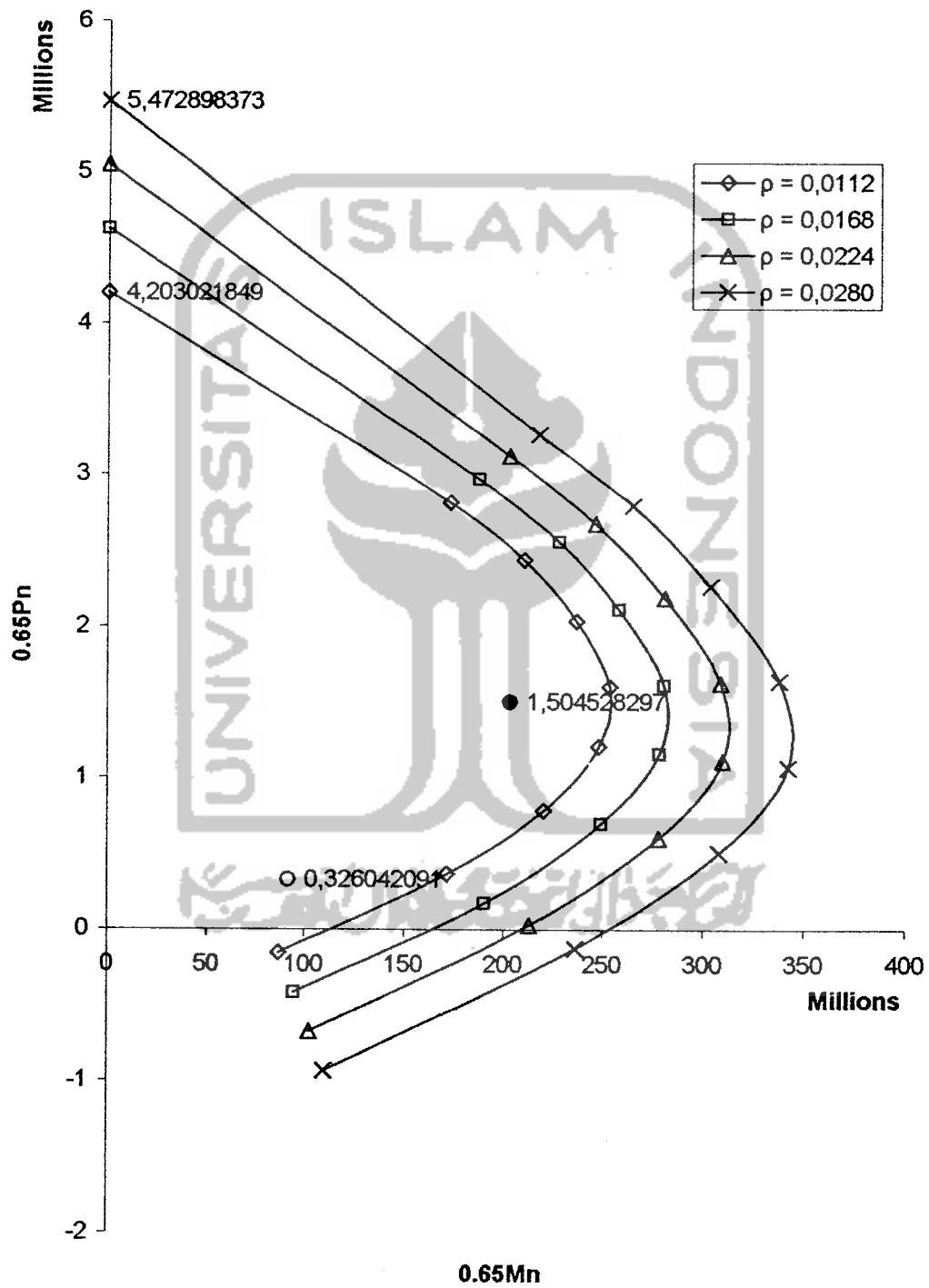
$$\text{dengan : } E_s = 200.000 \text{ Mpa}$$

$$C_s = A_s \cdot (f_s - 0,85 \cdot f_c) \cdot (\text{gaya tekan})$$

$$0,65 \cdot P_n = 0,65 \cdot (C_s + C_c)$$

$$0,65 \cdot M_n = 0,65 \cdot (C_c(d - a/2) + S C_s(d - a))$$

Gambar 6.7 Grafik PnMn 3KB 45X45



Tabel 6.17 Perhitungan Interaksi Kolom 4KB 30X30

Tulangan 8D19			Kondisi	1	2	3	4	5	6
p = 0,0252			c	0	250	200	150	100	50
n	Asi	d	a	300	212,5	170	127,5	85	42,5
3	850,16	51,5	fsi1	600	390,00	390,00	390,00	291,00	-18,00
2	566,77	150	fsi2	600	240,00	150,00	0,00	-300,00	-390,00
3	850,16	248,5	fsi3	600	3,60	-145,50	-390,00	-390,00	-390,00
3	850,16	51,5	Cs1	488414,05	309881,5	309881,5	309881,5	225716,15	-36981,74
2	566,77	150	Cs2	325609,37	121572,17	70562,865	-14452,64	-184483,6	-235492,9
3	850,16	248,5	Cs3	488414,05	-18618,39	-145376,5	-353239,4	-353239,4	-353239,4
			Cc	2295000	1625625	1300500	975375	650250	325125
			0,65Pn	2338334,3	1324999,2	998119,11	596416,9	219858,02	-195382,9
			0,65Mn	0	67260917	84094019	97138277	82503848	47457295

Tulangan 12D19			Kondisi	1	2	3	4	5	6
p = 0,0378			c	0	250	200	150	100	50
n	Asi	d	a	300	212,5	170	127,5	85	42,5
4	1133,5	51,5	fsi1	600	390,00	390,00	390,00	291,00	-18,00
2	566,77	117,2	fsi2	600	318,80	248,50	131,33	-103,00	-390,00
2	566,77	182,8	fsi3	600	161,20	51,50	-131,33	-390,00	-390,00
4	1133,5	248,5	fsi4	600	3,60	-145,50	-390,00	-390,00	-390,00
4	1133,5	51,5	Cs1	651218,73	413175,33	413175,33	413175,33	300954,87	-49308,99
2	566,77	117,2	Cs2	325609,37	166233,64	126389,71	59983,158	-72829,95	-235492,9
2	566,77	182,8	Cs3	325609,37	76910,689	14736,02	-88888,43	-235492,9	-235492,9
4	1133,5	248,5	Cs4	651218,73	-24824,53	-193835,3	-470985,9	-470985,9	-470985,9
			Cc	2295000	1625625	1300500	975375	650250	325125
			0,65Pn	2761626,5	1467128,1	1079627,7	577628,47	111732,48	-433001,2
			0,65Mn	0	76177952	96192859	114467550	98331224	54206761

Tulangan 16D19			Kondisi	1	2	3	4	5	6
p = 0,0504			c	0	250	200	150	100	50
n	Asi	d	a	300	212,5	170	127,5	85	42,5
5	1416,9	51,5	fsi1	600	390,00	390,00	390,00	291,00	-18,00
2	566,77	100,8	fsi2	600	358,20	297,75	197,00	-4,50	-390,00
2	566,77	150	fsi3	600	240,00	150,00	0,00	-300,00	-390,00
2	566,77	199,3	fsi4	600	121,80	2,25	-197,00	-390,00	-390,00
5	1416,9	248,5	fsi5	600	3,6	-145,5	-390	-390	-390
5	1416,9	51,5	Cs1	814023,41	516469,16	516469,16	516469,16	376193,59	-61636,24
2	566,77	100,8	Cs2	325609,37	188564,38	154303,13	97201,055	-17003,1	-235492,9
2	566,77	150	Cs3	325609,37	121572,17	70562,865	-14452,64	-184483,6	-235492,9
2	566,77	199,3	Cs4	325609,37	54579,951	-13177,4	-126106,3	-235492,9	-235492,9
5	1416,9	248,5	Cs5	814023,41	-31030,66	-242294,2	-588732,3	-588732,3	-588732,3
			Cc	2295000	1625625	1300500	975375	650250	325125
			0,65Pn	3184918,7	1609257	1161136,3	558840,05	475,527	-670619,5
			0,65Mn	0	85571563	108887418	132591114	114210007	60956226

Tabel 6.17 Lanjutan

Tulangan 20D19			Kondisi	1	2	3	4	5	6
p = 0,0630			c	0	250	200	150	100	50
n	Asi	d	a	300	212,5	170	127,5	85	42,5
6	1700,3	51,5	fsi1	600	390,00	390,00	390,00	291,00	-18,00
2	566,77	90,9	fsi2	600	381,84	327,30	236,40	54,60	-390,00
2	566,77	130,3	fsi3	600	287,28	209,10	78,80	-181,80	-390,00
2	566,77	169,7	fsi4	600	192,72	90,90	-78,80	-390,00	-390,00
2	566,77	209,1	fsi5	600	98,16	-27,30	-236,40	-390,00	-390,00
6	1700,3	248,5	fsi6	600	3,60	-145,50	-390,00	-390,00	-390,00
6	1700,3	51,5	Cs1	976828,1	619763	619763	619763	451432,31	-73963,49
2	566,77	90,9	Cs2	325609,37	201962,82	171051,19	119531,79	16493,007	-235492,9
2	566,77	130,3	Cs3	325609,37	148369,05	104058,97	30208,841	-117491,4	-235492,9
2	566,77	169,7	Cs4	325609,37	94775,279	37066,758	-59114,11	-235492,9	-235492,9
2	566,77	209,1	Cs5	325609,37	41181,508	-29925,46	-148437,1	-235492,9	-235492,9
6	1700,3	248,5	Cs6	976828,1	-37236,79	-290753	-706478,8	-706478,8	-706478,8
			Cc	2295000	1625625	1300500	975375	650250	325125
			0,65Pn	3608210,9	1751385,9	1242644,9	540051,62	-114907,5	-908237,9
			0,65Mn	0	95155805	121820265	151032396	130762527	67705692

Keterangan Tabel 6.17 Perhitungan Interaksi Kolom 4KB 30X30

n = jumlah tulangan pada masing-masing sisi

Asi = $n \cdot \frac{1}{4} \cdot \pi \cdot (\text{luas total tulangan})$

d = $d' + [(I - 1) \cdot (h - 2 \cdot d') / (N - 1)]$

(Jarak tulangan terhadap serat beton tekan)

dengan : I = nomor lapis tulangan

N = banyaknya garis tulangan

c = jarak sumbu terhadap serat tertuar

a = $b1 \cdot C$

fsi = $0,003 \cdot [(c - d)/c] \cdot Es$

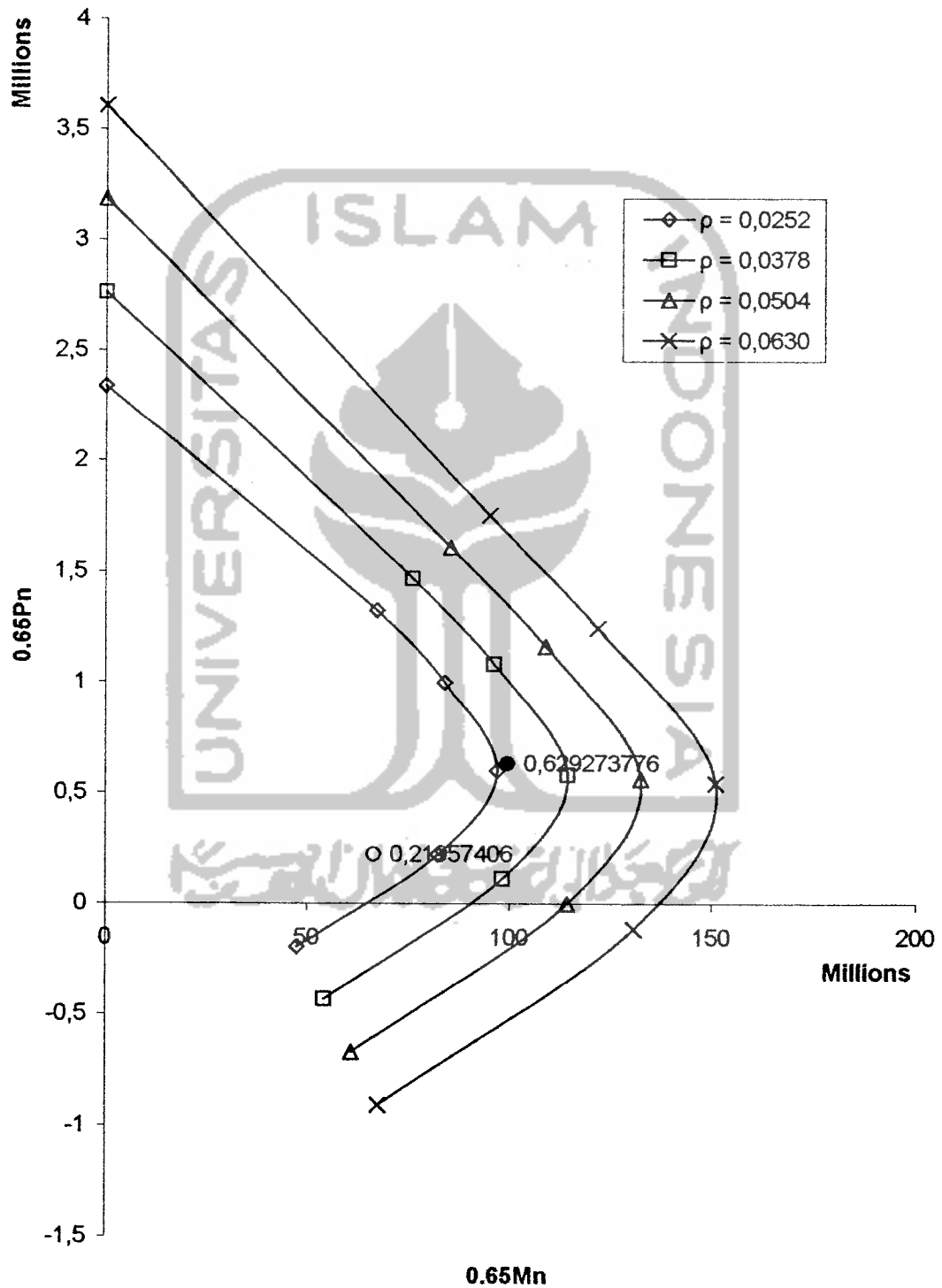
dengan : Es = 200.000 Mpa

Cs = $As \cdot (fs - 0,85 \cdot fc)$, (gaya tekan)

0,65 .Pn = 0,65 .(SCs + Cc)

0,65 .Mn = 0,65 .Cc.(d - a/2) + SCs.(d - a')

Gambar 6.8 Grafik PnMn 4KB 30X30



Tabel 6.18 Perhitungan Interaksi Kolom K5 30 X 25

Tulangan 8D19			Kondisi	1	2	3	4	5	6
$\rho = 0,0302$			c	0	250	200	150	100	50
n	Asi	d	a	300	212,5	170	127,5	85	42,5
2	566,77	51,5	fsi1	600	390,00	390,00	390,00	291,00	-18,00
2	566,77	150	fsi2	600	240,00	150,00	0,00	-300,00	-390,00
2	566,77	248,5	fsi3	600	3,60	-145,50	-390,00	-390,00	-390,00
2	566,77	51,5	Cs1	325609,37	206587,67	206587,67	206587,67	150477,44	-24654,5
2	566,77	150	Cs2	325609,37	121572,17	70562,865	-14452,64	-184483,6	-235492,9
2	566,77	248,5	Cs3	325609,37	-12412,26	-96917,67	-235492,9	-235492,9	-235492,9
Cc				1912500	1354687,5	1083750	812812,5	541875	270937,5
0,65Pn				1878063,3	1085782,8	821588,86	500145,49	177044,31	-146056,9
0,65Mn				0	52545396	65220367	73872511	62575269	36173013

Tulangan 10D19			Kondisi	1	2	3	4	5	6
$\rho = 0,0378$			c	0	250	200	150	100	50
n	Asi	d	a	300	212,5	170	127,5	85	42,5
3	850,16	51,5	fsi1	600	390,00	390,00	390,00	291,00	-18,00
2	566,77	117,2	fsi2	600	318,80	248,50	131,33	-103,00	-390,00
2	566,77	182,8	fsi3	600	161,20	51,50	-131,33	-390,00	-390,00
3	850,16	248,5	fsi4	600	3,60	-145,50	-390,00	-390,00	-390,00
3	850,16	51,5	Cs1	488414,05	309881,5	309881,5	309881,5	225716,15	-36981,74
2	566,77	117,2	Cs2	325609,37	166233,64	126389,71	59983,158	-72829,95	-235492,9
2	566,77	182,8	Cs3	325609,37	76910,689	14736,02	-88888,43	-235492,9	-235492,9
3	850,16	248,5	Cs4	488414,05	-18618,39	-145376,5	-353239,4	-353239,4	-353239,4
Cc				1912500	1354687,5	1083750	812812,5	541875	270937,5
0,65Pn				2301355,4	1227911,7	903097,47	481357,06	68918,766	-383675,2
0,65Mn				0	61462432	77319207	91201784	78402644	42922479

Tulangan 14D19			Kondisi	1	2	3	4	5	6
$\rho = 0,0529$			c	0	250	200	150	100	50
n	Asi	d	a	300	212,5	170	127,5	85	42,5
4	1133,5	51,5	fsi1	600	390,00	390,00	390,00	291,00	-18,00
2	566,77	100,8	fsi2	600	358,20	297,75	197,00	-4,50	-390,00
2	566,77	150	fsi3	600	240,00	150,00	0,00	-300,00	-390,00
2	566,77	199,3	fsi4	600	121,80	2,25	-197,00	-390,00	-390,00
4	1133,5	248,5	fsi5	600	3,6	-145,5	-390	-390	-390
4	1133,5	51,5	Cs1	651218,73	413175,33	413175,33	413175,33	300954,87	-49308,99
2	566,77	100,8	Cs2	325609,37	188564,38	154303,13	97201,055	-17003,1	-235492,9
2	566,77	150	Cs3	325609,37	121572,17	70562,865	-14452,64	-184483,6	-235492,9
2	566,77	199,3	Cs4	325609,37	54579,951	-13177,4	-126106,3	-235492,9	-235492,9
4	1133,5	248,5	Cs5	651218,73	-24824,53	-193835,3	-470985,9	-470985,9	-470985,9
Cc				1912500	1354687,5	1083750	812812,5	541875	270937,5
0,65Pn				2724647,6	1370040,6	984606,08	462568,64	-42338,19	-621293,5
0,65Mn				0	70856043	90013766	109325349	94281427	49671944

Tabel 6.18 Lanjutan

Tulangan 18D19			Kondisi	1	2	3	4	5	6
$\rho = 0,0680$			c	0	250	200	150	100	50
n	Asi	d	a	300	212,5	170	127,5	85	42,5
5	1416,9	51,5	fsi1	600	390,00	390,00	390,00	291,00	-18,00
2	566,77	90,9	fsi2	600	381,84	327,30	236,40	54,60	-390,00
2	566,77	130,3	fsi3	600	287,28	209,10	78,80	-181,80	-390,00
2	566,77	169,7	fsi4	600	192,72	90,90	-78,80	-390,00	-390,00
2	566,77	209,1	fsi5	600	98,16	-27,30	-236,40	-390,00	-390,00
5	1416,9	248,5	fsi6	600	3,60	-145,50	-390,00	-390,00	-390,00
5	1416,9	51,5	Cs1	814023,41	516469,16	516469,16	516469,16	376193,59	-61636,24
2	566,77	90,9	Cs2	325609,37	201962,82	171051,19	119531,79	16493,007	-235492,9
2	566,77	130,3	Cs3	325609,37	148369,05	104058,97	30208,841	-117491,4	-235492,9
2	566,77	169,7	Cs4	325609,37	94775,279	37066,758	-59114,11	-235492,9	-235492,9
2	566,77	209,1	Cs5	325609,37	41181,508	-29925,46	-148437,1	-235492,9	-235492,9
5	1416,9	248,5	Cs6	814023,41	-31030,66	-242294,2	-588732,3	-588732,3	-588732,3
			Cc	1912500	1354687,5	1083750	812812,5	541875	270937,5
			0,65Pn	3147939,8	1512169,5	1066114,7	443780,21	-157721,2	-858911,8
			0,65Mn	0	80440284	102946613	127766631	110833947	56421410

Keterangan Tabel 6.18 Perhitungan Interaksi Kolom K5 30X25

n = jumlah tulangan pada masing-masing sisi

$Asi = n \cdot \frac{1}{4} \cdot \pi \cdot d^2$ (luas total tulangan)

$d = d' + \frac{(I - 1) \cdot (h - 2 \cdot d')}{(N - 1)}$

(Jarak tulangan terhadap serat beton tekan)

dengan : I = nomor lapis tulangan

N = banyaknya garis tulangan

c = jarak sumbu terhadap serat tertier

$a = b1 \cdot C$

$fsi = 0,003 \cdot \frac{(c - di)}{c} \cdot Es$

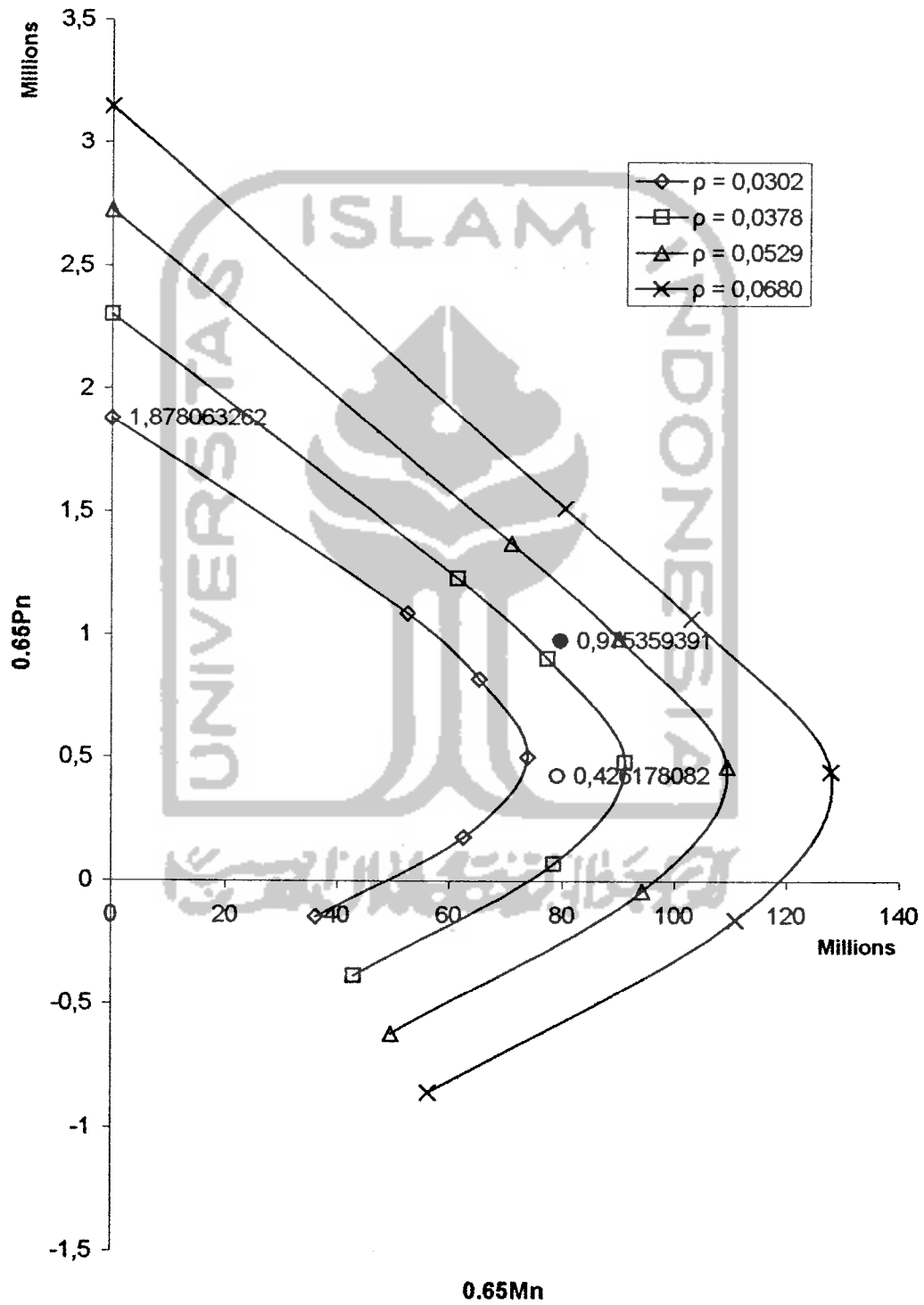
dengan : $Es = 200.000 \text{ Mpa}$

$Cs = As \cdot (fs - 0,85 \cdot fc)$, (gaya tekan)

$0,65 \cdot Pn = 0,65 \cdot (SCs + Cc)$

$0,65 \cdot Mn = 0,65 \cdot Cc \cdot (d - a/2) + SCs \cdot (d - a')$

Gambar 6.9 Grafik PnMn K5 30X30



Tabel 6.18 Perhitungan Interaksi Kolom 6K 30X50

Tulangan 10D25		Kondisi		1	2	3	4	5	6	7	8	9	10
$p = 0,0327$		c		0	450	400	350	300	250	200	150	100	50
n	Asi	d	a	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
3	1471,9	64,5	fs1	600	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	188,2	fs2	600	349,11	317,75	277,43	223,67	148,40	35,50	-152,67	-390,00	-390,00
2	981,25	311,8	fs3	600	184,22	132,25	65,43	-23,67	-148,40	-335,50	-390,00	-390,00	-390,00
3	1471,9	435,5	fs4	600	19,33	-53,25	-146,57	-271,00	-390,00	-390,00	-390,00	-390,00	-390,00
3	1471,9	64,5	Cs1	845592,19	536498,44	536498,44	536498,44	536498,44	536498,44	536498,44	465848,44	275976,56	-293639,1
2	981,25	188,2	Cs2	563728,13	317543,4	286770,31	247204,91	194451,04	120595,63	9812,5	-174826	-407709,4	-407709,4
2	981,25	311,8	Cs3	563728,13	155746,18	104748,44	39179,911	-48244,79	-170639,4	-554231,3	-407709,4	-407709,4	-407709,4
3	1471,9	435,5	Cs4	845592,19	-9076,563	-115910,2	-253267,6	-436410,9	-611564,1	-611564,1	-611564,1	-611564,1	-611564,1
			Cc	3825000	2926125	2601000	2275875	1950750	1625625	1300500	975375	650250	325125
			0,65Pn	4318366,4	2552443,7	2218519,6	1849568,9	1428078,4	975335,16	572660,16	160630,57	-325491,6	-907073
			0,65Mn	0	184027004	221231929	253367939	282391367	302027192	292537786	267350317	194717680	86675830

Tulangan 14D25		Kondisi		1	2	3	4	5	6	7	8	9	10
$p = 0,0458$		c		0	450	400	350	300	250	200	150	100	50
n	Asi	d	a	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
4	1962,5	64,5	fs1	600	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	157,3	fs2	600	390,00	364,13	330,43	285,50	222,60	128,25	-29,00	-343,50	-390,00
2	981,25	250	fs3	600	266,67	225,00	171,43	100,00	0,00	-150,00	-390,00	-390,00	-390,00
2	981,25	342,8	fs4	600	143,00	85,88	12,43	-85,50	-222,60	-390,00	-390,00	-390,00	-390,00
4	1962,5	435,5	fs5	600	19,333333	-53,25	-146,5714	-271	-390	-390	-390	-390	-390
4	1962,5	64,5	Cs1	1127456,3	715331,25	715331,25	715331,25	715331,25	715331,25	715331,25	621131,25	367968,75	-391518,8
2	981,25	157,3	Cs2	563728,13	357665,63	332275,78	299211,16	255125	193404,38	100823,44	-53478,13	-362081,3	-407709,4
2	981,25	250	Cs3	563728,13	236644,79	195759,38	143192,41	73103,125	-25021,88	-172209,4	-407709,4	-407709,4	-407709,4
2	981,25	342,8	Cs4	563728,13	115296,88	59242,969	-12826,34	-108918,8	-243448,1	-407709,4	-407709,4	-407709,4	-407709,4
4	1962,5	435,5	Cs5	1127456,3	-12102,08	-154546,9	-337690,2	-581881,3	-815418,8	-815418,8	-815418,8	-815418,8	-815418,8
			Cc	3825000	2926125	2601000	2275875	1950750	1625625	1300500	975375	650250	325125
			0,65Pn	5051213	2820324,9	2436890,6	2004010,6	1497281,1	942806,72	468856,17	-57076,09	-633555	-1368211
			0,65Mn	0	214063479	256598021	295561043	333687154	362801262	354706978	312649059	233140222	99453766

Tabel 6.19 Lanjutan

Tulangan 18D25		Kondisi		1	2	3	4	5	6	7	8	9	10
p = 0,0589		c		0	450	400	350	300	250	200	150	100	50
n	Asi	d	a	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
5	2453,1	64,5	fsi1	600	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	138,7	fsi2	600	390,00	390,00	362,23	322,60	267,12	183,90	45,20	-232,20	-390,00
2	981,25	212,9	fsi3	600	316,13	280,65	235,03	174,20	89,04	-38,70	-251,60	-390,00	-390,00
2	981,25	287,1	fsi4	600	217,20	169,35	107,83	25,80	-89,04	-261,30	-390,00	-390,00	-390,00
2	981,25	361,3	fsi5	600	118,27	58,05	-19,37	-122,60	-267,12	-390,00	-390,00	-390,00	-390,00
5	2453,1	435,5	fsi6	600	19,33	-53,25	-146,57	-271,00	-390,00	-390,00	-390,00	-390,00	-390,00
5	2453,1	64,5	Cs1	1409320,3	894164,06	894164,06	894164,06	894164,06	894164,06	894164,06	776414,06	459960,94	-489398,4
2	981,25	138,7	Cs2	563728,13	357665,63	357665,63	330414,91	291529,38	237089,63	155430	19330,625	-252868,1	-407709,4
2	981,25	212,9	Cs3	563728,13	285183,96	250365,94	205599,91	145911,88	62348,625	-62996,25	-271904,4	-407709,4	-407709,4
2	981,25	287,1	Cs4	563728,13	188105,63	141152,81	80784,911	294,375	-112392,4	-281422,5	-407709,4	-407709,4	-407709,4
2	981,25	361,3	Cs5	563728,13	91027,292	31939,688	-44030,09	-145323,1	-287133,4	-407709,4	-407709,4	-407709,4	-407709,4
5	2453,1	435,5	Cs6	1409320,3	-15127,6	-193183,6	-422112,7	-727351,6	-1019273	-1019273	-1019273	-1019273	-1019273
Cc				3825000	2926125	2601000	2275875	1950750	1625625	1300500	975375	650250	325125
0,65Pn				5784059,5	3072643,6	2654017,9	2158452,4	1566483,8	910278,28	376150,13	-218060	-900288,2	-1829350
0,65Mn				0	243010235	292557261	338590234	385958375	424745855	416199019	368765503	277263144	112231702

Tulangan 22D25		Kondisi		1	2	3	4	5	6	7	8	9	10
p = 0,0720		c		0	450	400	350	300	250	200	150	100	50
n	Asi	d	a	500	382,5	340	297,5	255	212,5	170	127,5	85	42,5
6	2943,8	64,5	fsi1	600	390,00	390,00	390,00	390,00	390,00	390,00	342,00	213,00	-174,00
2	981,25	126,3	fsi2	600	390,00	390,00	383,43	347,33	296,80	221,00	94,67	-158,00	-390,00
2	981,25	188,2	fsi3	600	349,11	317,75	277,43	223,67	148,40	35,50	-152,67	-390,00	-390,00
2	981,25	250	fsi4	600	266,67	225,00	171,43	100,00	0,00	-150,00	-390,00	-390,00	-390,00
2	981,25	311,8	fsi5	600	184,22	132,25	65,43	-23,67	-148,40	-335,50	-390,00	-390,00	-390,00
2	981,25	373,7	fsi6	600	101,78	39,50	-40,57	-147,33	-296,80	-390,00	-390,00	-390,00	-390,00
6	2943,8	435,5	fsi7	600	19,33	-53,25	-146,57	-271,00	-390,00	-390,00	-390,00	-390,00	-390,00
6	2943,8	64,5	Cs1	1691184,4	1072996,9	1072996,9	1072996,9	1072996,9	1072996,9	1072996,9	931696,88	551953,13	-587278,1
2	981,25	126,3	Cs2	563728,13	357665,63	357665,63	351217,41	315798,96	266213,13	191834,38	67869,792	-180069,4	-407709,4
2	981,25	188,2	Cs3	563728,13	317543,4	286770,31	247204,91	194451,04	120595,63	9812,5	-174826	-407709,4	-407709,4
2	981,25	250	Cs4	563728,13	236644,79	195759,38	143192,41	73103,125	-25021,88	-172209,4	-407709,4	-407709,4	-407709,4
2	981,25	311,8	Cs5	563728,13	155746,18	104748,44	39179,911	-48244,79	-170639,4	-354231,3	-407709,4	-407709,4	-407709,4
2	981,25	373,7	Cs6	563728,13	155746,18	104748,44	39179,911	-48244,79	-170639,4	-354231,3	-407709,4	-407709,4	-407709,4
6	2943,8	435,5	Cs7	1691184,4	224542,71	41212,5	-194497,8	-508778,1	-948770,6	-1223128	-1223128	-1223128	-1223128
Cc				3825000	2926125	2601000	2275875	1950750	1625625	1300500	975375	650250	325125
0,65Pn				6516906,1	3540567	3097186	2583326,6	1951191	1150733,6	306373,44	-419991,4	-1190684	-2290488
0,65Mn				0	236777618	287305490	336052676	385068390	442489832	474859997	425487968	320032156	125009637

Keterangan Tabel 6.19 Perhitungan Interaksi Kolom 6K 30X50

n = jumlah tulangan pada masing-masing sisi

$Asl = n \cdot \frac{1}{4} \cdot p^2$ (luas total tulangan)

$d = d' + \frac{[(1-1)(h-2d')]}{(N-1)}$

(Jarak tulangan terhadap serat beton tekan)

dengan : l = nomor lapis tulangan

N = banyaknya garis tulangan

c = jarak sumbu terhadap serat terluar

$a = b1 \cdot C$

$f_{st} = 0,003 \cdot [(c-d)/c] \cdot E_s$

dengan : $E_s = 200.000 \text{ Mpa}$

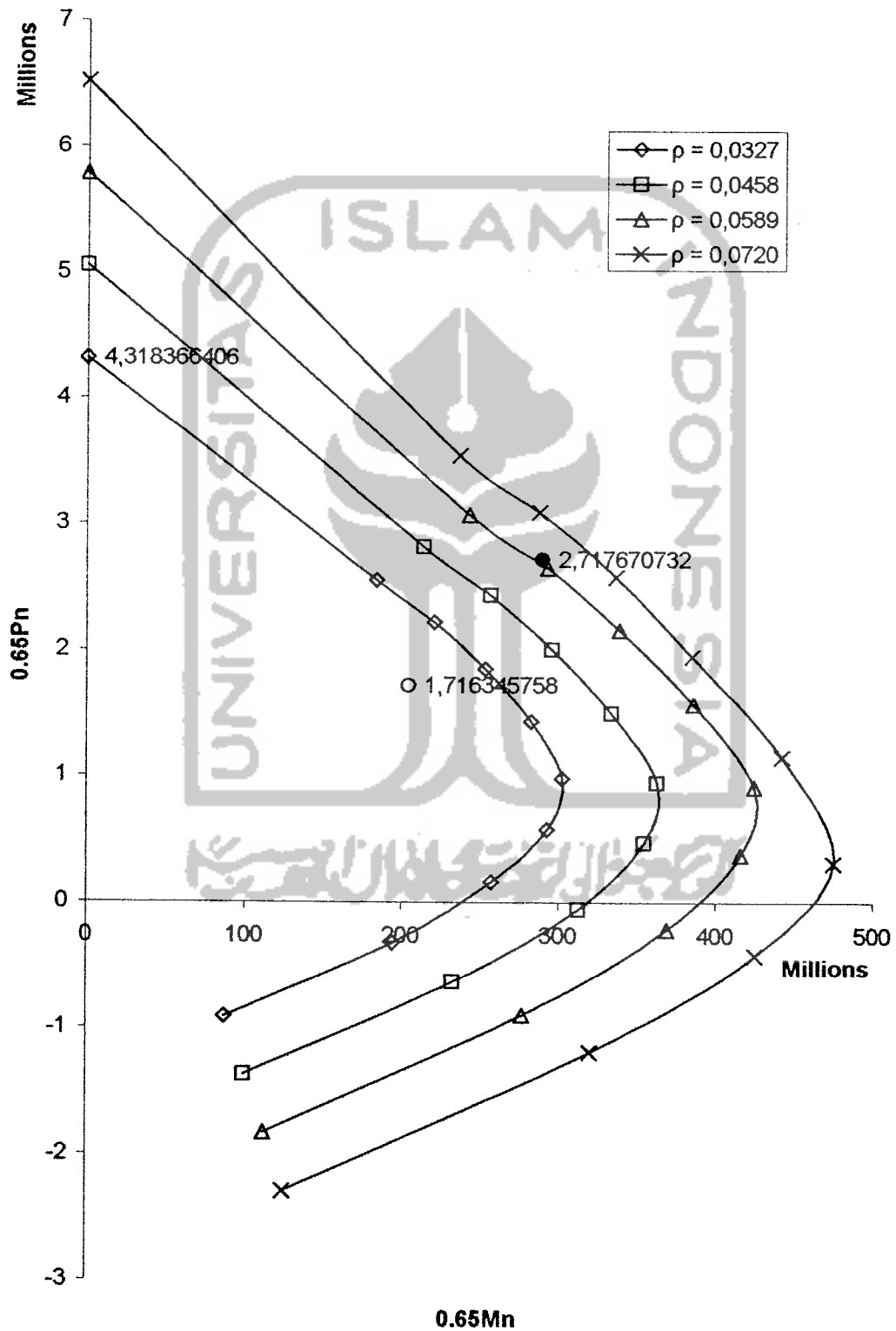
$C_s = As \cdot (f_s - 0,85 \cdot f_c') \cdot (\text{ gaya tekan})$

$0,65 \cdot P_n = 0,65 \cdot (SC_s + C_c)$

$0,65 \cdot M_n = 0,65 \cdot [C_c(d-a/2) + SC_s(d-a)]$



Gambar 6.10 Grafik PnMn 6K30X30



6.3.4 Perhitungan Kelangsingan Kolom dan Faktor Pembesaran Momen

Sebagai contoh perhitungan kelangsingan kolom dan pembesaran momen ditinjau pada kolom 1K50X50 bagian 1 sejajar sumbu x.

$$\beta_d = 0,6918$$

- Ukuran kolom: $b = 500 \text{ mm}$, $h = 500 \text{ mm}$

Gambar

$$Ec = 4700 \cdot \sqrt{fc'} = 4700 \cdot \sqrt{30} = 25742,9602 \text{ Nmm}^2$$

$$I_k = 1/12 \cdot b \cdot h^3 = 1/12 \cdot 500 \cdot 500^3 = 5,2 \cdot 10^9 \text{ mm}^4$$

$$EI_k = \frac{\left(\frac{Ec I_k}{2,5} \right)}{1 + \beta_d} = \frac{\left(\frac{25742,9602 \cdot 5,2 \cdot 10^9}{2,5} \right)}{1 + 0,6918} = 3 \cdot 10^{13} \text{ Nmm}^2$$

$$l_k = 3300 \text{ mm (panjang kolom bagian 1)}$$

$$l_{nk} = 3300 - 700 = 2600 \text{ mm (panjang kolom bersih bagian 1)}$$

$$l_k = 3000 \text{ mm (panjang kolom bagian 2)}$$

$$l_{nk} = 3000 - 600 = 2400 \text{ mm (panjang kolom bersih bagian 2)}$$

- Ukuran balok: $b = 300 \text{ mm}$; $h = 500 \text{ mm}$

$$I_b = 1/12 \cdot b \cdot h^3 = 1/12 \cdot 300 \cdot 500^3 = 3,1 \cdot 10^9 \text{ mm}^4$$

$$EI_b = EI_a = \frac{\left(\frac{Ec I_b}{5} \right)}{1 + \beta_d} = \frac{\left(\frac{25742,9602 \cdot 3,1 \cdot 10^9}{5} \right)}{1 + 0,6918} = 2 \cdot 10^{13} \text{ Nmm}^2$$

$$l_b = 4500 \text{ mm (panjang balok sebelah kiri)}$$

$$l_{nb} = 4500 - 475 = 4025 \text{ mm (panjang bersih balok sebelah kiri)}$$

$l_b = 4500 \text{ mm}$ (panjang balok sebelah kanan)

$l_{nb} = 4500 - 475 = 4025 \text{ mm}$ (panjang bersih balok sebelah kanan)

kekakuan relative kolom bagian atas

$$\psi_A = \frac{\sum \left(\frac{EI_k}{l_{n,k}} \right)}{\sum \left(\frac{EI_b}{l_{n,b}} \right)} = \frac{\frac{5,3 \cdot 10^{13}}{2600} + \frac{5,3 \cdot 10^{13}}{2400}}{\frac{2 \cdot 10^{13}}{4025} + \frac{2 \cdot 10^{13}}{4025}} = 2,0328$$

$$\psi_B = \frac{\sum \left(\frac{EI_k}{l_{n,k}} \right)}{\sum \left(\frac{EI_b}{l_{n,b}} \right)} = \frac{\frac{5,3 \cdot 10^{13}}{2600} + \frac{5,3 \cdot 10^{13}}{2400}}{\frac{2 \cdot 10^{13}}{4025} + \frac{2 \cdot 10^{13}}{4025}} = 2,0328$$

$$\psi_m = (\psi_A + \psi_B) / 2 = (2,0328 + 2,0328) / 2 = 2,0328 > 2$$

Nilai k diambil dengan rumus Furlong (Wang dan Salmon, 1987)

$$k = 0,9 \cdot (1 + \psi_m)^{1/2} = 0,9 \cdot (1 + 2,0328)^{1/2} = 1,567$$

Cek kelangsingan kolom 1K50X50 portal bergoyang

$$A = 500 \cdot 500 = 2,5 \cdot 10^5$$

$$r = \sqrt{(I/A)} = \sqrt{(5,2 \cdot 10^9 / 2,5 \cdot 10^5)} = 144,222$$

$$L = 3300$$

$$(k.L)/r = (1,567 \cdot 3300) / 144,222 = 35,38 > 22 \text{ (kolom langsing)}$$

$$P_{c,1k50X50} = \frac{\pi^2 \cdot EI_k}{(k.L)^2} = \frac{3,14^2 \cdot 3 \cdot 10^{13} \cdot 10^{-3}}{(1,567 \cdot 3300)^2} = 36441860 \text{ KN}$$

$$P_{u,1k50X50} = N_{u,k,1k50X50} = 3134941 \text{ KN}$$

Dengan cara yang sama dapat dihitung kelangsingan dan gaya tekuk euler untuk kolom yang lain dalam satu bagian yang sama dan dalam satu portal arah x yang sama. (Disajikan dalam Tabel 6.20).

$$\Sigma P_u = 2.3134941 + 8.3585807 + 1485521 = 36441860 \text{ KN}$$

$$\Sigma P_c = 2.18821740 + 8.17922707 + 7587827,5 = 1,89.10^8 \text{ KN}$$

$$\delta_s = \frac{1}{1 - \frac{\Sigma P_u}{\Sigma P_c}} = \frac{1}{1 - \frac{36441860}{1,89.10^8}} = 1,4230$$

Dengan cara yang sama didapat perhitungan kolom dan factor kelangsingan kolom-kolom yang lain. Disajikan pada Tabel 6.20.



Tabel 6.20 Perhitungan Kelangsingan Kolom dan Faktor Pembesaran Momen

KOLOM	Arah	I _{b,a} (mm ⁴)	I _{b,b} (mm ⁴)	I _k (mm ⁴)	β _d	EI _{b,a} (Nmm ²)	EI _{b,b} (Nmm ²)	EI _k (Nmm ²)	ψ _A	ψ _B	ψ _M	k	k _{L/r}	P _u (kN)	P _c (kN)	E _{Pu} (kN)	E _{Pc} (kN)	δ _s
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1K50X50	Sb-X	3,13E+09	3,13E+09	5,21E+09	0,6918	1,9E+13	1,9E+13	3,2E+13	2,03283	2,03283	2,03283	1,567	35,834	3134941	18821739,6	36441860	188612963	1,4230
	Sb-Y	1,29E+10	1,29E+10	5,21E+09	0,6867	9,82E+13	9,82E+13	3,2E+13	0,73623	0,73623	0,73623	1,269	29,017	3154743	28791300,8	9974668	84415919	1,2222
KB50X45	Sb-X	3,13E+09	3,13E+09	3,8E+09	0,1601	3,47E+13	3,5E+13	3,4E+13	2,38582	2,38582	2,38582	1,656	42,069	3585807	17922707	36441860	188612963	1,4230
	Sb-Y	1,29E+10	1,29E+10	4,69E+09	0,7234	9,61E+13	9,6E+13	2,8E+13	0,25299	0,25299	0,25299	1,105	25,269	3585807	33443121,7	8119126,5	70136369	1,2167
3KB45X45	Sb-X	3,13E+09	3,13E+09	3,42E+09	0,6098	2,5E+13	2,5E+13	2,2E+13	3,47269	3,47269	3,47269	1,903	48,353	1485521	7587827,5	2971041,7	15175655	1,4310
	Sb-Y	3,13E+09	3,13E+09	3,42E+09	0,6098	2,5E+13	2,5E+13	2,2E+13	2,53162	2,53162	2,53162	1,691	42,966	1504528	9609761,11	1504528,3	9609761,1	1,3173
4KB30X30	Sb-X	3,13E+09	3,13E+09	6,75E+08	0,7183	2,34E+13	1E+13	4E+12	1,03091	1,03091	1,03091	1,352	51,504	597779,8	2595825,13	1195559,5	5191650,3	1,5487
	Sb-Y	1,33E+09	1,33E+09	6,75E+08	0,7689	9,7E+12	9,7E+12	3,9E+12	0,51545	0,51545	0,51545	1,199	45,7	629273,8	3202895,36	8748400,3	73339064	1,2248
K30X25	Sb-X	2,08E+09	2,08E+09	3,91E+08	0,7699	1,52E+13	1,5E+13	2,3E+12	0,43182	0,43182	0,43182	1,171	53,534	975359,4	1943907,87	1950718,8	5831723,6	1,8051
	Sb-Y	3,13E+09	3,13E+09	5,63E+08	0,7699	2,27E+13	2,3E+13	3,3E+12	0,20509	0,20509	0,20509	1,087	41,402	947512	3250125,71	8748400,3	73339064	1,2248
6K30X50	Sb-X	0	0	1,13E+09	0,6597	0	0	7E+12	0	0	0	0	38,105	2717671	10180275,9	5435341,5	20360552	1,6969
	Sb-Y	1,29E+10	1,29E+10	3,13E+09	0,6597	9,98E+13	1E+14	1,9E+13	0,22676	0,22676	0,22676	1,095	25,036	2717671	23583191,1	6081093,6	52146351	1,2186
1K50X50	Sb-X	3,13E+09	3,13E+09	5,21E+09	0,6831	2,39E+13	2,4E+13	3,2E+13	3,57778	3,57778	3,57778	1,926	40,023	1270558	14708956,8	17906258	116084222	1,3112
	Sb-Y	1,29E+10	1,29E+10	5,21E+09	0,6871	9,93E+13	9,9E+13	3,2E+13	0,80985	0,80985	0,80985	1,291	26,829	1270558	33048554,7	4683660,4	95735819	1,0814
KB50X45	Sb-X	3,13E+09	3,13E+09	3,8E+09	0,4547	2,77E+13	2,8E+13	2,7E+13	1,9683	1,9683	1,9683	1,553	47,93	1881246	10085226,1	17906258	116084222	1,3112
	Sb-Y	1,29E+10	1,29E+10	4,69E+09	0,6671	9,93E+13	9,9E+13	2,9E+13	0,20872	0,20872	0,20872	1,088	30,15	1881246	22147006,8	4188669,3	46917864	1,1592
3KB45X45	Sb-X	3,13E+09	3,13E+09	3,42E+09	0,5122	2,66E+13	2,7E+13	2,3E+13	2,86497	2,86497	2,86497	1,789	54,482	315156,8	5982499,8	630313,56	11965000	1,0882
	Sb-Y	1,33E+09	1,33E+09	3,42E+09	0,4209	2,83E+13	2,8E+13	2,5E+13	2,08859	2,08859	2,08859	1,562	48,704	326042,1	7967062,55	326042,09	7967062,6	1,0672
4KB30X30	Sb-X	3,13E+09	3,13E+09	6,75E+08	0,6821	2,39E+13	2,4E+13	4,1E+12	0,36288	0,36288	0,36288	1,146	52,943	219574,1	2392549,18	439148,12	4785098,4	1,1644
	Sb-Y	3,13E+09	3,13E+09	6,75E+08	0,9346	2,08E+13	2,1E+13	3,6E+12	0,18144	0,18144	0,18144	1,077	49,748	219574,1	2356119,35	4408243,4	49273983	1,1596
K30X25	Sb-X	2,08E+09	2,08E+09	3,91E+08	0,461	1,84E+13	1,8E+13	2,8E+12	0,35625	0,35625	0,35625	1,144	63,398	426178,1	1600874,25	852356,16	3201748,5	1,6937
	Sb-Y	3,13E+09	3,13E+09	5,63E+08	0,461	2,75E+13	2,8E+13	4E+12	0,1692	0,1692	0,1692	1,072	49,52	426178,1	2623849,87	4408243,4	49273983	1,1596
6K30X50	Sb-X	0	0	1,13E+09	0,6594	0	0	7E+12	0	0	0	0	34,641	1583697	11949541,3	3167794,4	23899083	1,2562
	Sb-Y	1,29E+10	1,29E+10	3,13E+09	0,6734	9,89E+13	9,9E+13	1,9E+13	0,24943	0,24943	0,24943	1,104	22,943	1716346	27014859,5	3432691,5	54029719	1,1083

Keterangan Tabel 6.20 Perhitungan Kelangsingan Kolom dan Faktor Pembesaran Momen

- Kolom yang ditinjau
- Arah: sejajar sumbu -x dan sejajar sumbu -y
- $I_{b,a} = I_{b,1/2}$, b: I²
(Inersia penampang balok atas)
- $I_{b,b} = I_{b,1/2}$, b: I²
(Inersia penampang balok bawah)
- $I_k = I_{b,1/2}$, b: I²
(Inersia penampang kolom)
- $bd = 1,2 \cdot MD / (1,2 \cdot MD + 1,6 \cdot ML)$
(rasio perbandingan momen beban mati terhadap total momen)
- $EI_{b,a} = (Ec \cdot I_{b,a} / 5) / (1 + \beta_d)$, dengan $Ec = 4700 \cdot \sqrt{f'_c}$
(kekakuan balok atas)
- $EI_{b,b} = (Ec \cdot I_{b,b} / 5) / (1 + \beta_d)$, dengan $Ec = 4700 \cdot \sqrt{f'_c}$
(kekakuan balok bawah)
- $EI_k = (Ec \cdot I_k / 2,5) / (1 + \beta_d)$, dengan $Ec = 4700 \cdot \sqrt{f'_c}$
(kekakuan batang kolom)
- $\psi_A = S(EI_k / I_{b,k}) / S(EI_{b,a} / I_{b,b})$
(faktor kekangan ujung atas)
- $\psi_B = S(EI_k / I_{b,k}) / S(EI_{b,b} / I_{b,b})$
(faktor kekangan ujung bawah)
- $\psi_M = (\psi_A + \psi_B) / 2$
(faktor kekangan rata-rata)
- $k = (20 \cdot \psi_M) / 20 \cdot \sqrt{(1 + \psi_M)}$, jika $\psi_M < 2$
 $k = 0,9 \cdot \sqrt{(1 + \psi_M)}$, jika $\psi_M \geq 2$
(faktor panjang efektif kolom)
- Jika $k \cdot L/r > 22$, maka ada pembesaran momen (kolom longgar)
dengan $r = \sqrt{(I_g / A_g)}$
- $P_u =$ Gaya aksial kolom terpakai (Tabel 6.13)
- $P_c = P_u \cdot EI_k / (k \cdot I)^2$
(beban tekuk euler)
- SPE = jumlah gaya aksial kolom terpakai dalam satu tingkat
- SPE = jumlah beban tekuk euler kolom terpakai dalam satu tingkat
- $\delta_s = 1 / [1 - SPE / (f \cdot SPE)]$, dengan $f = 0,6$
(pembesaran momen)

6.3.5 Analisis Keruntuhan Kolom

Sebagai contoh analisis keruntuhan kolom adalah kolom 1K50X50

Diketahui dari perhitungan sebelumnya :

$$P_{u,x} = N_{u,x} = 3134,9409 \text{ KN}$$

$$e = 149,5241 \text{ mm}$$

$$M_{u,k,x} = 468,7492 \text{ KNm}$$

$$\delta_{s,x} = 1,4692$$

$$M_{c,x} = \delta_{s,x} M_{u,k,x} = 1,4692 \cdot 468,7492 = 688,68709 \text{ KNm}$$

$$P_{u,y} = N_{u,y} = 3154,7426 \text{ KN}$$

$$e = 152,1946 \text{ mm}$$

$$M_{u,k,y} = 477,1212$$

$$\delta_{s,y} = 1,2222$$

$$M_{c,y} = \delta_{s,y} M_{u,k,y} = 477,1212 \cdot 1,2222 = 583,12527 \text{ KNm}$$

Eksentrisitasnya adalah :

$$e_x = M_{c,x} / P_{u,x} = 688,68709 / 3134,9409 = 219,7 \text{ mm}$$

$$e_y = M_{c,y} / P_{u,y} = 583,12527 / 3154,7426 = 184,8 \text{ mm}$$

$e < e_b$ Terjadi keruntuhan akibat adanya gaya desak, maka :

$$P_n = \left[\frac{As' \cdot fy}{\frac{e}{(d - d')} + 0,5} \right] + \left[\frac{b \cdot h \cdot fc'}{\frac{3 \cdot h \cdot e}{d^2} + 1,18} \right]$$

$$P_{n,x} = \left[\frac{9812,5 \cdot 390}{\frac{219,7}{(435,5 - 64,5)} + 0,5} \right] + \left[\frac{500 \cdot 500 \cdot 30}{\frac{3 \cdot 500 \cdot 219,7}{435,5^2} + 1,18} \right] = 6085330,174$$

$$\phi \cdot P_{n,x} = 0,7 \cdot 6085330,174 \cdot 10^{-3} = 4259,7311 \text{ KN} > P_{u,x} = 3134,9409 \text{ KN} \text{ -aman-}$$

$$P_{n,y} = \left[\frac{9812,5 \cdot 390}{\frac{184,8}{(435,5 - 64,5)} + 0,5} \right] + \left[\frac{500 \cdot 500 \cdot 30}{\frac{3 \cdot 500 \cdot 184,8}{435,5^2} + 1,18} \right] = 6683376,284 \text{ KN}$$

$$\phi \cdot P_{n,y} = 0,7 \cdot 6683376,284 \cdot 10^{-3} = 4678,3634 \text{ KN} > P_{u,y} = 3154,7426 \text{ KN}$$

Dari Diagram Interaksi Kolom 500 mm x 500 mm, diambil penulangan 20D25 dengan $A_{st} = 9817,477 \text{ mm}^2$, jadi

$$\rho_g = A_{st} / A_g = 9817,477 / 25 \cdot 10^4 = 0,03925 \text{ . Jadi tulangan kolom 20D25,}$$

dengan penempatan tulangan 6D25 pada masing-masing sisi dapat dipergunakan pada kolom K50X50.

Dengan cara yang sama dapat dianalisis keruntuhan kolom yang lain, disajikan pada Tabel 6.21.

Tabel 6.21 Analisis Keruntuhan Kolom

KOLOM	Arah	δs	Mu.k - x (kN m)	Mc (kN m)	P u.k (kN)	e (mm)	Tul total	Tul sisi	p total	Diagram Interaksi Kolom					$\phi P_n \geq P_u$ (kN)	$f_s > f_y$ (Mpa)
										As fy (a)	e/(d-d')	Ag fc (c)	(3 h.e)/(d^2) (d)	$[a/(b+0,5)] + [C/(d+1,18)]$ Pn		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1KS0X50	Sb-X	1,4692	468,7492	688,687	3134,94	219,7	20D25	6D25	0,039	4E+06	0,59213	8E+06	1,7255239	6085330,174	4259,73	532,6811
	Sb-Y	1,2222	477,1212	583,125	3154,74	184,8	6D25	6D25	0,039	4E+06	0,49822	8E+06	1,4518653	6683376,284	4678,36	538,705
KB50X45	Sb-X	1,4692	371,8749	546,359	3585,81	152,4	22D25	6D25	0,048	4E+06	0,41069	7E+06	1,196795	7462330,821	5223,63	550,593
	Sb-Y	1,2463	469,3659	584,955	3585,81	163,1	7D25	7D25	0,048	4E+06	0,4397	7E+06	1,2813378	7222075,2	5055,45	548,9493
3KB45X45	Sb-X	1,431	203,6754	291,462	1485,52	196,2	8D19	3D19	0,011	884161	0,60001	6E+06	1,7685433	2864117,433	2004,88	471,2721
	Sb-Y	1,3173	197,0116	259,521	1504,53	172,5	3D19	3D19	0,011	884161	0,5275	6E+06	1,5548356	3081835,169	2157,28	480,3662
4KB30X30	Sb-X	1,5487	72,33693	112,026	597,78	187,4	8D19	3D19	0,025	884161	0,95129	3E+06	2,7757892	1291769,537	904,239	444,4558
	Sb-Y	1,2534	99,62865	124,875	629,274	198,4	3D19	3D19	0,025	884161	1,00733	3E+06	2,9393084	1242025,6	869,418	438,2262
K30X25	Sb-X	1,8051	79,67395	143,816	975,359	147,4	10D19	3D19	0,038	1E+06	0,74847	2E+06	2,1839961	1554088,997	1087,86	492,2588
	Sb-Y	1,2534	67,55253	84,6708	947,512	89,4	4D19	4D19	0,038	1E+06	0,45361	2E+06	1,3236021	2057671,112	1440,37	518,6268
6K30X50	Sb-X	1,6969	245,767	417,049	2717,67	153,5	18D25	5D25	0,059	3E+06	0,41363	5E+06	1,1520357	5699413,302	3989,59	563,7192
	Sb-Y	1,2186	289,3032	352,555	2717,67	129,7	6D25	6D25	0,059	3E+06	0,34967	5E+06	0,9738811	6142820,754	4299,97	566,338
1KS0X50	Sb-X	1,3112	225,3091	295,414	1270,57	232,5	8D25	3D25	0,016	2E+06	0,6287	8E+06	1,3785671	4289942,279	3002,96	504,5073
	Sb-Y	1,0814	67,19402	72,6631	1270,57	57,2	3D25	3D25	0,016	2E+06	0,15415	8E+06	1,4437439	5198572,497	3639	521,1981
KB50X45	Sb-X	1,3112	235,2815	308,489	1881,25	164,0	10D25	3D25	0,022	2E+06	0,442	7E+06	1,1114434	4976994,495	3483,9	525,9208
	Sb-Y	1,1592	155,9928	180,83	1881,25	96,1	4D25	4D25	0,022	2E+06	0,25909	7E+06	1,1199402	5455559,536	3818,89	532,4191
3KB45X45	Sb-X	1,0882	37,76405	41,0946	315,157	130,4	8D19	3D19	0,011	884161	0,39876	6E+06	1,7920684	3027789,117	2119,45	478,2307
	Sb-Y	1,0672	92,16248	98,3549	326,042	301,7	3D19	3D19	0,011	884161	0,92252	6E+06	1,572499	2828632,253	1980,04	469,6572
4KB30X30	Sb-X	1,1644	63,43312	73,8617	219,574	336,4	8D19	3D19	0,025	884161	1,70755	3E+06	2,0201009	1244241,233	870,969	438,5142
	Sb-Y	1,1596	66,60946	77,2406	219,574	351,8	3D19	3D19	0,025	884161	1,78566	3E+06	3,0214108	1029471,233	720,63	404,8248
K30X25	Sb-X	1,6937	79,04202	133,87	426,178	314,1	8D19	2D19	0,03	884161	1,59451	2E+06	1,9517774	1140574,772	798,402	453,1974
	Sb-Y	1,1596	33,19718	38,4956	426,178	90,3	3D19	3D19	0,03	884161	0,45852	2E+06	1,3387336	1815734,029	1271,01	507,7842
6K30X50	Sb-X	1,2562	204,7178	257,158	1683,9	162,4	10D25	3D25	0,033	2E+06	0,43762	5E+06	1,0733903	4037726,402	2826,41	548,7881
	Sb-Y	1,1083	167,8508	186,034	1716,35	108,4	4D25	4D25	0,033	2E+06	0,29216	5E+06	0,9472997	4530838,679	3171,59	554,3618

Keterangan Tabel 6.21 Analisis Keruntuhan Kolom

- Kolom yang ditinjau
- Arah : sejajar sumbu x dan sejajar sumbu y
- δs = faktor pembesaran momen
- Mu.k-x = Momen terpasang kolom (Tabel 6.10)
- Mc = ds Mu.k-x
- Pu.k = Gaya aksial terpasang kolom (Tabel 6.13)
- e = Mc/Pu (eksentrisitas)
- Tulangan terpasang
- Tulangan terpasang pd tiap sisi
- r didapat dr diagram Pn/Mn
- $e/(d-d')$
- Ag, fc' dengan Ag = b.h
- $3.h.e/d^2 + 1,18$
- $Pn-x = (As' \cdot fy / (ex/(d-d') + 0,5)) + (b.h.fc' / ((3.h.ex/d^2 + 1,18)))$
 $Pn-y = (As' \cdot fy / (ey/(d-d') + 0,5)) + (b.h.fc' / ((3.h.ey/d^2 + 1,18)))$
 Jika $Pn < Pu$, jumlah tulangan harus diperbanyak
- Kontrol $f_p \geq P_n$, dengan $f = 0,65$
- Kontrol $f_{pb} = (600 \cdot (e-d')/c) > f_y$
 dengan $a = P_n / (0,85 \cdot f_c \cdot b)$
 $c = a \cdot b$

6.3.6 Gaya Geser Rencana Kolom

Gaya geser rencana kolom diperoleh dengan menentukan nilai terkecil dari persamaan berikut (Andriono dan Takim, 1993).

$$V_{u,k} = (M_{u,k,atas} + M_{u,k,bawah}) / h_n$$

tetapi tidak boleh lebih besar dari.

$$V_{u,k,maks} = 1,05 \cdot (V_{D,k,x} + V_{L,K,x} + 4/k \cdot (V_{E,k,x} + 0,3 \cdot V_{E,K,y}))$$

dengan harga $K = 1$

Sebagai contoh perhitungan ditinjau pada kolom 1K50X50 sejajar sumbu-x :

$$M_{u,k,atas} = 402,7259 \text{ KNm}$$

$$M_{u,k,bawah} = 468,74918 \text{ KNm}$$

$$h_n = 2600 \text{ mm}$$

$$V_{D,k,x} = 16,03592 \text{ KN}$$

$$V_{L,k,x} = 3,98732 \text{ KN}$$

$$V_{E,ka,x} = 0,69078 \text{ KN}$$

$$V_{E,ka,y} = 126,754 \text{ KN}$$

$$V_{u,k} = (402,7259 + 468,74918) / 2600 = 439,3341 \text{ KN}$$

$$V_{u,k,maks} = 1,05 \cdot (16,03592 + 3,98732 + 4/1 \cdot (-171,9195 + 0,3 \cdot -6,18787)) = 579,0609 \text{ KN}$$

Dipakai $V_{u,k} = 439,3341 \text{ KN}$

Dengan cara yang sama dapat dihitung gaya geser rencana kolom, gaya geser kolom maksimum, dan gaya geser kolom terpakai kolom-kolom yang lain, disajikan pada Tabel 6.22. Tabel 6.23 dan Tabel 6.24

Tabel 6.22 Gaya Geser Kolom Rencana

KOLOM	Arah	M u,k - a (kN m)	M u,k - b (kN m)	Ln (mm)	V u,k (kN)
1	2	3	4	5	6
1K50X50	Sb-X	402,7259	468,7492	2600	439,3341
	Sb-Y	477,1212	425,5243		447,7262
KB50X45	Sb-X	371,8749	227,6413	2600	325,0272
	Sb-Y	469,3659	349,1491		383,9884
3KB45X45	Sb-X	179,2258	203,6754	2800	177,4403
	Sb-Y	182,7605	197,0116		176,6580
4KB30X30	Sb-X	59,9499	72,3369	2900	61,3570
	Sb-Y	99,6286	52,5324		66,1542
K30X25	Sb-X	79,6739	1,2583	2900	40,4631
	Sb-Y	67,5525	53,8163		50,2236
6K30X50	Sb-X	245,7670	48,4585	2600	166,7476
	Sb-Y	289,3032	175,0913		212,5624
1K50X50	Sb-X	225,3091	139,4267	2400	168,1433
	Sb-Y	62,1668	67,1940		99,4923
KB50X45	Sb-X	235,2815	166,5625	3300	143,8937
	Sb-Y	87,3584	155,9928		110,2741
3KB45X45	Sb-X	37,7640	16,4433	3500	29,6555
	Sb-Y	92,1625	73,1273		51,8720
4KB30X30	Sb-X	62,2301	63,4331	3600	45,7053
	Sb-Y	66,6095	62,9772		46,4682
K30X25	Sb-X	79,0420	57,6325	3600	43,2779
	Sb-Y	33,1972	30,5558		29,0987
6K30X50	Sb-X	204,7178	128,3263	2400	164,8197
	Sb-Y	40,5600	167,8508		128,4683

Keterangan Tabel 6.22 Gaya Geser Kolom Rencana

- Kolom yang ditinjau
- Arah : sejajar sumbu -x dan sejajar sumbu - y
- Mu,k -a = Momen terpakai kolom atas
- Mu,k -b = Momen terpakai kolom bawah
- Ln = tinggi bersih kolom
- $$V_{u,k-x} = (M_{u,k-x-a} + M_{u,k-x-b})/L_n + 0,3(M_{u,k,y-a} + M_{u,k,y-b})/L_n$$

$$V_{u,k-y} = (M_{u,k,y-a} + M_{u,k,y-b})/L_n + 0,3(M_{u,k,x-a} + M_{u,k,x-b})/L_n$$
 (Gaya geser rencana kolom)

Tabel 6.23 Gaya Geser kolom Maksimum

ELEMEN	h (mm)	Ln (mm)	LOC (mm)	Sejajar Sumbu-y				Sejajar Sumbu-X				Akibat Gempa Kanan		Akibat Gempa Kiri	
				VD (kN)	VL (kN)	Vexka (kN)	Vexki (kN)	VD (kN)	VL (kN)	Vexka (kN)	Vexki (kN)	Vu-x (kN)	Vu-y (kN)	Vu-x (kN)	Vu-y (kN)
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1K50X50	atas	2600	350	35,89456	7,74713	-6,18787	126,754	16,03592	3,98732	-171,92	0,69078	579,060873	183,635693	-196,78387	-708,8343
	bawah	2600	3650	35,89456	7,74713	-6,18787	126,754	16,03592	3,98732	-171,92	0,69078	579,060873	183,635693	-196,78387	-708,8343
KB50X45	atas	2600	350	74,15201	22,61013	0,50971	77,7219	0,1101	-0,68397	75,8697	-0,77915	427,050498	94,0546005	199,336851	318,692411
	bawah	2600	2950	74,15201	22,61013	0,50971	77,7219	0,1101	-0,68397	75,8697	-0,77915	427,050498	94,0546005	199,336851	318,692411
3KB45X45	atas	2800	350	4,30672	5,0016	-0,02648	50,4144	-1,90393	-0,43851	115,6616	-0,3254	221,104212	59,695902	155,396073	483,285583
	bawah	2800	2950	4,30672	5,0016	-0,02648	50,4144	-1,90393	-0,43851	115,6616	-0,3254	221,104212	59,695902	155,396073	483,285583
4KB30X30	atas	2900	250	2,54778	-0,13124	-1,11579	15,05073	0,13205	0,77065	-14,6881	0,61503	66,5253708	22,4948808	-20,655944	-62,148038
	bawah	2900	3800	2,54778	-0,13124	-1,11579	15,05073	0,13205	0,77065	-14,6881	0,61503	66,5253708	22,4948808	-20,655944	-62,148038
K30X25	atas	2900	250	-0,55571	0,1919	-0,30534	10,02185	0,68732	0,29278	-21,4871	0,15378	41,9035323	14,302512	-28,738149	-89,601359
	bawah	2900	3050	-0,55571	0,1919	-0,30534	10,02185	0,68732	0,29278	-21,4871	0,15378	41,9035323	14,302512	-28,738149	-89,601359
6K30X50	atas	2600	350	6,76146	2,22695	-1,56257	38,98008	6,04862	2,12139	-46,1885	-0,14383	172,972941	57,0893253	-55,322461	-187,38199
	bawah	2600	3650	6,76146	2,22695	-1,56257	38,98008	6,04862	2,12139	-46,1885	-0,14383	172,972941	57,0893253	-55,322461	-187,38199
1K50X50	atas	2400	350	38,19417	7,13345	-3,52027	47,99764	11,02191	3,94963	-91,1078	0,30301	249,565882	77,4697854	-81,986961	-371,36818
	bawah	2400	3650	38,19417	7,13345	-3,52027	47,99764	11,02191	3,94963	-91,1078	0,30301	249,565882	77,4697854	-81,986961	-371,36818
KB50X45	atas	3300	350	17,19057	4,93265	-1,6319	78,73174	0,68768	-0,08503	-75,6672	0,68761	354,769078	102,722737	-78,965309	-319,22578
	bawah	3300	2950	17,19057	4,93265	-1,6319	78,73174	0,68768	-0,08503	-75,6672	0,68761	354,769078	102,722737	-78,965309	-319,22578
3KB45X45	atas	3500	200	2,15566	0,29782	-5,63825	18,09912	16,1201	4,10012	-14,7127	3,1152	82,51761	57,1199622	-39,64246	-47,666178
	bawah	3500	3250	2,15566	0,29782	-5,63825	18,09912	16,1201	4,10012	-14,7127	3,1152	82,51761	57,1199622	-39,64246	-47,666178
4KB30X30	atas	3600	200	21,74247	0,15648	0,11844	-10,2666	-54,067	-1,59315	2,05178	0,0506	-20,062151	-71,166568	26,0765778	-49,676437
	bawah	3600	950	21,74247	0,15648	0,11844	-10,2666	-54,067	-1,59315	2,05178	0,0506	-20,062151	-71,166568	26,0765778	-49,676437
K30X25	atas	3600	250	3,71401	0,93716	-0,52345	10,49285	1,86971	0,68683	-9,71911	0,78655	49,9447515	19,208868	-9,5608401	-38,795442
	bawah	3600	3750	3,71401	0,93716	-0,52345	10,49285	1,86971	0,68683	-9,71911	0,78655	49,9447515	19,208868	-9,5608401	-38,795442
6K30X50	atas	2400	350	12,96422	4,9797	1,41904	29,38788	19,37479	0,21493	-24,0602	-1,05312	140,943281	53,1748308	-5,514705	-78,695434
	bawah	2400	2750	12,96422	4,9797	1,41904	29,38788	19,37479	0,21493	-24,0602	-1,05312	140,943281	53,1748308	-5,514705	-78,695434

Keterangan Tabel 6.23 Gaya Geser Kolom Maksimum

- Kolom yang ditinjau
- Lokasi bentang kolom yang ditinjau
- VD = gaya geser kolom akibat beban mati sejajar sb - y
- VL = gaya geser kolom akibat beban hidup sejajar sb - y
- Vexka = gaya geser maksimum akibat gempa kanan sejajar sb - y
- Vexki = gaya geser maksimum akibat gempa kiri sejajar sb - y
- Vd = gaya geser kolom akibat beban mati sejajar sb - x
- Vd = gaya geser kolom akibat beban mati sejajar sb - x
- Vu-x = gaya geser maksimum akibat gempa kanan sejajar sb - y
- Vu-y = gaya geser maksimum akibat gempa kiri sejajar sb - y
- Vu-x = gaya geser maksimum akibat gempa kanan sb - x
- Vu-y = gaya geser maksimum akibat gempa kiri sb - y
- Vu-x = gaya geser maksimum akibat gempa kanan sb - y
- Vu-y = gaya geser maksimum akibat gempa kiri sb - y
- Vu-x = gaya geser maksimum akibat gempa kanan sb - x
- Vu-y = gaya geser maksimum akibat gempa kiri sb - x
- Vu-x = gaya geser maksimum akibat gempa kanan sb - y
- Vu-y = gaya geser maksimum akibat gempa kiri sb - y

Tabel 6.24 Gaya Geser Kolom Terpakai

KOLOM	Arah	V u,k Rencana (kN)	V u,k Maksimum (kN)	V u,k Terpakai (kN)
1	2	3	4	5
1K50X50	Sb-X	439,3341299	579,0609	439,3341
	Sb-Y	447,7261688	708,8343	447,7262
KB50X45	Sb-X	325,0271832	427,0505	325,0272
	Sb-Y	383,9884049	318,6924	318,6924
3KB45X45	Sb-X	177,4402972	221,1042	177,4403
	Sb-Y	176,6580172	483,2856	176,6580
4KB30X30	Sb-X	61,35695146	66,5254	61,3570
	Sb-Y	66,15417856	62,1480	62,1480
K30X25	Sb-X	40,46305981	41,9035	40,4631
	Sb-Y	50,2236067	89,6014	50,2236
6K30X50	Sb-X	166,7476417	172,9729	166,7476
	Sb-Y	212,5623701	187,3820	187,3820
1K50X50	Sb-X	168,1433447	249,5659	168,1433
	Sb-Y	99,49232392	371,3682	99,4923
KB50X45	Sb-X	143,8937362	354,7691	143,8937
	Sb-Y	110,2740508	319,2258	110,2741
3KB45X45	Sb-X	29,65551617	82,5176	29,6555
	Sb-Y	51,87198748	57,1200	51,8720
4KB30X30	Sb-X	45,70534114	26,0766	26,0766
	Sb-Y	46,46822972	71,1666	46,4682
K30X25	Sb-X	43,27790599	49,9448	43,2779
	Sb-Y	29,09872173	38,7954	29,0987
6K30X50	Sb-X	164,8197401	140,9433	140,9433
	Sb-Y	128,4683429	78,6954	78,6954

Keterangan **Tabel 6.24** Gaya Geser Kolom Terpakai

1. Kolom yang ditinjau
2. Arah : sejajar sumbu - dan sejajar sumbu - y
3. Vu,k rencana (Tabel 6.22)
4. Vu,k maksimum (Tabel 6.23)
5. Vu,k terpakai pilih yang terkecil

6.3.7 Penulangan Geser Kolom

Sebagai contoh perhitungan geser kolom ditinjau pada kolom 1K50X50, adalah sebagai berikut ini (Kusuma dan Andriono, 1993)

- Penulangan geser sepanjang l_o

Syarat panjang l_o dari muka balok (SK-SNI T-15-1991-03) :

$$- l_o \geq h = 500 \text{ mm, bila } N_{u,k} \leq 0,3 \cdot A_g \cdot f_c'$$

$$- l_o \geq 1,5 \cdot h = 1,5 \cdot 500 = 750 \text{ mm, bila } N_{u,k} > 0,3 \cdot A_g \cdot f_c'$$

$$- l_o \geq 1/6 \text{ bentang bersih kolom} = 1/6 \cdot 3300 = 550 \text{ mm}$$

$$- l_o \geq 450 \text{ mm}$$

$$(N_{u,k} = 3154,7426 \text{ KN}) > (0,3 \cdot 500 \cdot 500 \cdot 30) = 2250 \text{ KN, dipakai } l_o = 750 \text{ mm}$$

$$V_{u,k} = 447,7262 \text{ KN}$$

$$V_{u,k, \text{terpakai}} = (h_n \cdot 0,5 - d) \cdot V_{u,k} / (0,5 \cdot h_n)$$

$$V_{u,k, \text{terpakai}} = (3300 \cdot 0,5 - 435,5) \cdot 447,7262 / (0,5 \cdot 3300) = 297,7379 \text{ KN}$$

$$V_{s,k} = V_{u,k, \text{terpakai}} / 0,6 - V_c = 297,7379 / 0,6 - 0 = 496,22984 \text{ KN}$$

$$S = (A_v \cdot f_y \cdot d) / V_{s,k} = (4 \cdot 0,25 \cdot \pi \cdot 12^2 \cdot 240 \cdot 435,5) / 496,22984 = 95,2376 \text{ mm}$$

Jarak maksimum tulangan geser pada daerah l_o (SK-SNI T-15-1991-03)

$$- 1/4 \cdot b = 1/4 \cdot 500 = 125 \text{ mm}$$

$$- 8 \text{ kali diameter tulangan longitudinal} = 8 \cdot 25 = 200 \text{ mm}$$

$$- 100 \text{ mm}$$

dipakai **4P12 – 95**

Cek tulangan geser,

$$V_{s,k} = (A_v \cdot f_y \cdot d) / S = (4,0,25 \cdot \pi \cdot 12^2 \cdot 240.435,5) / 95 \cdot 10^{-3} = 497,4712$$

$$(0,6 \cdot V_{s,k} = 0,6 \cdot 497,4712 = 298,983 \text{ KN}) \geq (V_{u,k,terpakai} = 297,7379 \text{ KN}) \quad \text{- aman-}$$

- Penulangan geser daerah diluar l_o

$$V_{u,k,terpakai} = (h_n \cdot 0,5 - l_o) V_{u,k} / (0,5 \cdot h_n)$$

$$V_{u,k,terpakai} = (3300 \cdot 0,5 - 750) 447,7262 / (0,5 \cdot 3300) = 189,4226 \text{ KN}$$

$$V_c = \left[1 + \frac{N_{u,k}}{14 \cdot A_g} \right] \cdot \frac{1}{6} \cdot \sqrt{f_c'} \cdot b \cdot d = \left[1 + \frac{3154,7426}{14 \cdot 500 \cdot 500} \right] \cdot \frac{1}{6} \cdot \sqrt{30} \cdot 500 \cdot 64,5 = 179,368 \text{ KN}$$

$$V_{s,k} = V_{u,k} / 0,6 - V_c = 189,4226 / 0,6 - 179,368 = 136,3363 \text{ KN}$$

$$S = (A_v \cdot f_y \cdot d) / V_{s,k} = (2,0,25 \cdot \pi \cdot 12^2 \cdot 240.435,5) / 136,3363 = 173,3205 \text{ mm}$$

dipakai **2P12 – 150**

Cek tulangan geser kolom

$$V_{s,k} = (A_v \cdot f_y \cdot d) / S = (2,0,25 \cdot \pi \cdot 12^2 \cdot 240.435,5) / 100 \cdot 10^{-3} = 157,5325 \text{ KN}$$

$$0,6 \cdot (V_{s,k} + V_c) = 0,6 \cdot (157,5325 + 179,368) = 202,1403 \text{ KN} \geq V_{u,k} = 189,4226 \text{ KN} \quad \text{-aman-}$$

Dengan cara yang sama didapat penulangan geser kolom lainnya yang disajikan dalam Tabel 6.25.

Tabel 6.25 Penulangan Geser Kolom

ELEMEN	1	Ln (mm)	b (mm)	h (mm)	Nu,k (kN)	0,3 Ag fc (kN)	Lokasi	Jarak	Vu,k (kN)	Vc (kN)	Vs (kN)	S (mm)	Tul Geser Terpakai	Vs terjadi (kN)	Vu,k ≤ 0,6(Vc+Vs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1K50X50	3300	2600	500	500	3154,7426	2250	Pada lo	0 - 750 sisa	297,7379	0	496,22984	95,237649	4P12 - 95	497,4712	aman
KB50X45	3300	2600	450	500	3585,8072	2025	Pada lo	0 - 750 sisa	216,1431	0	360,23846	173,32049	2P12 - 150	157,5325	aman
3KB45X45	3300	2800	450	450	1504,5283	1822,5	Pada lo	0 - 450 sisa	137,5115	203,8298	25,355988	98,392665	3P12 - 95	497,4712	aman
4KB30X30	3300	2900	300	300	629,27378	810	Pada lo	0 - 300 sisa	128,2006	0	213,66769	465,96255	1P12 - 200	59,0747	aman
K30X25	3300	2900	250	300	975,35939	675	Pada lo	0 - 450 sisa	51,4972	0	85,828584	182,00167	2P12 - 95	221,8916	aman
6K30X50	3300	2600	300	500	2717,6707	1350	Pada lo	0 - 750 sisa	49,2898	34,05609	48,093612	280,35763	2P12 - 150	140,5313	aman
1K50X50	3000	2400	500	500	1270,5683	2250	Pada lo	0 - 500 sisa	41,6163	0	69,360533	97,198008	1P12 - 95	67,41706	aman
KB50X45	4000	3300	450	500	1881,2456	2025	Pada lo	0 - 500 sisa	34,6370	52,73737	4,9909185	1350,7946	1P12 - 200	70,96532	aman
3KB45X45	4000	3500	450	450	326,04209	1822,5	Pada lo	0 - 450 sisa	124,6090	154,4656	207,6817	528,9337	2P12 - 100	236,2988	aman
4KB30X30	4000	3600	300	300	219,57406	810	Pada lo	0 - 300 sisa	79,2770	0	178,53554	132,35394	1P12 - 200	59,0747	aman
K30X25	4000	3600	250	300	426,17808	675	Pada lo	0 - 300 sisa	98,0836	72,35894	91,113755	129,67242	2P12 - 125	189,0391	aman
6K30X50	3000	2400	300	500	1716,3458	1350	Pada lo	0 - 750 sisa	105,9145	107,0216	176,52418	133,86201	2P12 - 150	78,76627	aman
									100,2896	0	60,127653	196,49762	1P12 - 150	70,26566	aman
									40,3564	0	67,260677	156,70151	1P12 - 150	52,69925	aman
									38,5335	18,51371	45,70875	230,58713	1P12 - 200	67,41706	aman
									40,0530	0	66,755054	100,99169	1P12 - 100	53,93364	aman
									38,7235	11,92759	52,611623	128,14099	1P12 - 125	67,41706	aman
									37,3032	0	62,171918	108,43651	1P12 - 100	44,9447	aman
									36,0649	23,07524	37,03296	182,04609	1P12 - 150	157,5325	aman
									89,7926	0	149,65436	157,89638	2P12 - 150	59,0747	aman
									52,8537	97,59674	-9,507193	-1242,737	1P12 - 200		

Keterangan Tabel 6.25 Penulangan Geser Kolom

- Kolom yang ditinjau
- 1 = panjang kolom
- ln = panjang bersih kolom
- b = lebar penampang kolom
- h = tinggi penampang kolom
- Nu,k = gaya aksial terpasang kolom (Tabel 6.13)
- 0,3 Ag fc' dengan Ag = b · h, fc' = 30 Mpa
- Daerah penulangan geser
- Jarak penulangan geser dari muka kolom
lo = 1,5 · h, bila Nu,k < 0,3 Ag fc'
lo = h, bila Nu,k > 0,3 Ag fc'
- Vu,k = gaya geser terpasang kolom (Tabel 6.24)
- Vc = $\{1 + Nu,k / (4 \cdot Ag)\} (1/6) (fc' - 0,5 \cdot b \cdot d)$
(gaya geser kolom)
- Vs = Vu,k / 0,6 - Vc
(gaya geser tulangan)
- S = (Av · fy · d) / Vs (jarak tulangan)
dengan : fy = 240 Mpa
diameter sengkang = 12 mm
- Tulangan geser kolom terpasang
- Vs terjadi = (Av · fy · d) / s
dengan : s = jarak terpasang
- Kontrol Vu,k < 0,6 (Vs + Vc), maka aman

6.4 Desain Pertemuan Balok Kolom

Perencanaan pertemuan balok kolom (joint) didasarkan dengan memperhitungkan kebutuhan penulangan geser arah horizontal dan vertical. Sebagai contoh perhitungan ditinjau pada pertemuan balok kolom 1K50X50, (Andriono dan Kusuma, 1993).

1. Penulangan Geser Horizontal

Diketahui :

$$M_{nak,b,ki,x} = 302,42 \text{ KNm}$$

$$M_{nak,b,ka,x} = 302,42 \text{ KNm}$$

$$M_{nak,b,ki,y} = 0 \text{ KNm}$$

$$M_{nak,b,ka,y} = 679,249 \text{ KNm}$$

Ditinjau terhadap sumbu - x.

Dihitung 100% dalam satu arah sumbu x dan 30% dalam arah tegak lurusnya yaitu sumbu y.

$$V_{kol-x} = \frac{0,7.1,25 \cdot \left[\left(\frac{l_{ki,x}}{l_{nki,x}} M_{nak,b,ki,x} + \frac{l_{ka,x}}{l_{nka,x}} M_{nak,b,ka,x} \right) + 0,3 \left(\frac{l_{ki,y}}{l_{nki,y}} M_{nak,b,ki,y} + \frac{l_{ka,y}}{l_{nka,y}} M_{nak,b,ka,y} \right) \right]}{\frac{1}{2} (h_{k,a} + h_{k,b})}$$

$$V_{kol-x} = \frac{0,7.1,25 \cdot \left[\left(\frac{4,5}{4,025} 302,42 + \frac{4,5}{4,025} 302,42 \right) + 0,3 \left(\frac{0}{0} 0 + \frac{4,25}{3,75} 679,249 \right) \right]}{\frac{1}{2} (3,3 + 3,3)} = 240,537 \text{ kN}$$

$$C_{ki,x} = 0,7.1,25 \cdot (M_{nak,b,ki,x} + 0,3 M_{nak,b,ki,y}) / Z_{ki}$$

$$C_{ki,x} = 0,7.1,25 \cdot (302,42 + 0,3.0) / 0,6275 = 337,361 \text{ KN}$$

$$T_{ka,x} = 0,7.1,25 \cdot (M_{nak,b,ka,x} + 0,3 M_{nak,b,ka,y}) / Z_{ki}$$

$$T_{ka,x} = 0,7.1,25.(302,42 + 0,3.679,249)/0,6275 = 564,6793 \text{ KN}$$

$$V_{j,h,x} = C_{ki} + T_{ka} - V_{kol}$$

$$V_{j,h,x} = 337,361 + 564,6793 - 240,5357 = 661,5046 \text{ KN}$$

Kontrol tegangan horizontal minimal

$$V_{j,h,x} = V_{j,h,x} / (b.h) < 1,5 \cdot \sqrt{f_c'}$$

$$V_{j,h,x} = 661,5046 / (0,5.0,5) \cdot 10^{-3} < 1,5 \cdot \sqrt{30}$$

$$2,646 \text{ N/mm}^2 < 8,216 \text{ N/mm}^2$$

Penulangan geser horizontal

$$N_{u,k} = 3154,743 \text{ KN}$$

$$V_{c,h} = 2/3 \cdot \sqrt{N_{u,k} / A_g - 0,1 \cdot f_c' b.h}$$

$$V_{c,h} = 2/3 \cdot \sqrt{3154,743 / (500.500) - 0,1 \cdot 30 \cdot 500 \cdot 500} = 516,9077 \text{ KN}$$

$$V_{s,h} + V_{c,h} = V_{j,h}$$

$$V_{s,h} = 661,5046 - 516,9077 = 144,5968$$

$$A_{j,h} = V_{s,h} / f_y = 144,5968 \cdot 10^3 / 240 = 602,4898 \text{ mm}^2$$

digunakan sengkang rangkap 4P12

$$\text{luas yang tersedia} = 4 \cdot 0,25 \cdot 12^2 \cdot \pi = 452,16 \text{ mm}^2$$

$$\text{jumlah lapis sengkang} = 602,4898 / 452,15 = 1,332 = \mathbf{2 \text{ lapis}}$$

2. Penulangan Geser Vertikal

$$V_{c,v} = \frac{A_z'}{A_g} V_{j,h} \left[0,6 + \frac{N_{u,k}}{A_g \cdot f_c'} \right]$$

$$V_{c,v} = 661,5046 \left[0,6 + \frac{3154,743}{500.500.30} \right] = 67,5153 \text{ KN}$$

$$V_{s,v} + V_{c,v} = V_{j,v}$$

$$V_{s,v} = 661,5046 - 67,5153 = 593,9893 \text{ KN}$$

$$A_{j,v} = V_{s,v} / f_y = 593,9893 / 390 = 1523,049 \text{ mm}^2$$

Tulangan pokok terpasang 6D25 = 2943,75 mm² > $A_{j,v} = 1523,049 \text{ mm}^2$

Tulangan pokok kolom dapat menahan geser vertical.

Dengan cara yang sama didapat penulangan geser horizontal dan vertical pada pertemuan balok kolom, yang disajikan pada Tabel 6.26.



Tabel 6.26 Penulangan Geser Horizontal dan Vertikal pada Pertemuan Balok Kolom

KOLOM	Letak	b (mm)	h (mm)	l (m)	V kol	C ki	T ka	V, jh	N u, k	Penulangan Geser Vertikal				Penulangan Geser Horizontal			
										V cv (kN)	V sv (kN)	A, v (mm ²)	(mm ²)	As ≥ A, v (mm ²)	V ch (kN)	V sh (kN)	A, h (mm ²)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1K50X50	Sb-X	500	500	3,3	240,5357	337,361	564,8783	661,5046		67,5153	593,9893	1523,049	6D25	2943,75	516,9077	144,5968	602,4868
	Sb-Y	500	500	3,3	257,9079	101,2083	858,9363	702,2367	3154,743	71,67255	630,5641	1616,831	6D25	2943,75	516,9077	185,3289	772,2038
KB50X45	Sb-X	450	500	3,3	162,5437	47,39909	564,8793	449,5348		50,85276	398,682	1022,262	6D25	2943,75	539,519	-89,9842	-374,934
	Sb-Y	450	500	3,3	271,5519	157,987	858,9363	745,3814	3585,807	84,31983	661,0615	1695,03	7D25	3434,375	539,519	205,8624	857,7599
3KB45X45	Sb-X	450	450	3,3	110,8858	0	438,5692	327,6834		27,77638	299,907	768,9924	3D19	850,155	284,1347	43,54868	181,4528
	Sb-Y	450	450	3,3	109,6744	0	438,5692	328,8948	1504,528	27,87906	301,0158	771,8353	3D19	850,155	284,1347	44,76009	186,5004
4KB30X30	Sb-X	300	300	3,3	53,64888	0	205,3961	151,7472		12,84152	139,1057	356,6812	3D19	850,155	119,8789	31,8683	132,7846
	Sb-Y	300	300	3,3	374,7373	0	205,3961	-169,341	629,2738	-14,1072	-155,234	-398,036	3D19	850,155	119,8789	-289,22	-1205,08
K30X25	Sb-X	250	300	3,3	52,71466	205,3961	0	152,6814		15,77952	136,9019	351,0305	3D19	850,155	158,1518	-5,47036	-22,7932
	Sb-Y	250	300	3,3	55,80563	205,3961	0	149,5904	975,3594	40,37335	294,6738	756,3432	5D25	2453,125	388,8162	-53,469	-222,788
6K30X50	Sb-X	300	500	3,3	119,2896	227,3184	227,3184	335,3472		134,5778	983,2461	2521,144	6D25	2943,75	388,8162	729,0077	3037,532
	Sb-Y	300	500	3,3	397,632	757,728	757,728	1117,824	2717,871	21,62989	259,4935	665,3679	3D25	1471,875	240,5014	40,62197	169,2582
1K50X50	Sb-X	500	500	3	117,1989	207,4499	190,8734	281,1234		37,83615	453,9198	1163,897	3D25	1471,875	240,5014	251,2545	1048,894
	Sb-Y	500	500	3	206,7238	62,23496	636,2448	491,7559	1270,568	32,05074	392,8997	853,0763	3D25	1471,875	347,3105	17,44	72,66668
KB50X45	Sb-X	450	500	4	102,9933	69,42048	398,3233	364,7505		63,5896	660,0861	1692,528	4D25	1962,5	347,3105	376,3652	1588,188
	Sb-Y	450	500	4	206,2057	231,4016	698,4787	723,6757	1881,246	13,95137	199,4801	511,4875	3D19	850,155	0	213,4315	889,2979
3KB45X45	Sb-X	450	450	4	56,25335	0	269,6848	219,4315		13,99154	200,0545	512,9603	3D19	850,155	0	214,0481	891,8586
	Sb-Y	450	450	4	55,63879	0	269,6848	214,0481	326,0421	16,07915	219,9195	563,8961	3D19	850,155	0	235,9886	983,3276
4KB30X30	Sb-X	300	300	4	64,82344	0	300,8221	235,9886		-16,8979	-231,118	-592,611	3D19	850,155	0	-248,016	-1033,4
	Sb-Y	300	300	4	548,8384	0	300,8221	-248,016	219,5741	13,56003	158,2136	405,676	2D19	568,77	81,88978	89,88387	374,5161
K30X25	Sb-X	250	300	4	46,48713	218,2608	0	171,7736		15,5508	181,4412	465,2339	3D19	850,155	81,88978	115,1022	479,5928
	Sb-Y	250	300	4	57,26561	254,2578	0	196,992	426,1781	28,65176	244,9142	627,9852	3D25	1471,875	290,5564	-18,9904	-79,1289
6K30X50	Sb-X	300	500	3	110,1809	190,8734	190,8734	271,566		88,83921	816,3808	2093,284	4D25	1962,5	290,5564	614,8636	2561,098
	Sb-Y	300	500	3	367,2696	636,2448	636,2448	905,22	1716,346								

Keterangan Tabel 6.26 Penulangan Geser Horizontal dan Vertikal pada Pertemuan Balok Kolom

- Kolom yang ditinjau
- Arah : sejajar sumbu x dan sejajar sumbu y
- b = lebar penampang kolom
- h = tinggi penampang kolom
- l = panjang kolom
- $V_{kol} = 0,7 \cdot 1,25 \cdot [(b \cdot x / l) \cdot x \cdot M_{nak,b,ki-x} + l \cdot k \cdot x / l \cdot M_{nak,b,ka-x}] + 0,3 \cdot [(b \cdot y / l) \cdot y \cdot M_{nak,b,ki-y} + l \cdot k \cdot y / l \cdot M_{nak,b,ka-y}] \cdot [1/2 \cdot (b \cdot a + b \cdot b)]$
(Tegangan geser kolom)
- $C_{ki} = 0,7 \cdot 1,25 \cdot (M_{nak,b,ki-x} + 0,3 \cdot M_{nak,b,ka-x}) / Z_{ki}$
(Gaya tekan joint)
- $T_{ka} = 0,7 \cdot 1,25 \cdot (M_{nak,b,ka-x} + 0,3 \cdot M_{nak,b,ki-x}) / Z_{ka}$
(Gaya tarik joint)
- $V_{jh} = C_{ki} + T_{ka} + V_{kol}$
(Tegangan geser horizontal nominal joint)
- $N_{u,k} = \text{Gaya aksial kolom terpasang (Tabel 6.13)}$
- $V_{cv} = A_s / A_s \cdot V_{jh} \cdot [0,6 + N_{u,k} / (A_g \cdot f_c)]$
(Gaya geser beton joint vertikal)
- $V_{sv} = V_{jh} - V_{cv}$
(Gaya geser tulangan joint vertikal)
- $A_{jv} = V_{sv} / f_y$
(Luas tulangan joint vertikal)
- Tulangan terpasang
- $A_{sv} = 1/4 \cdot p \cdot f \geq A_{jv}$, kontrol
- $V_{ch} = 2/3 \cdot \sqrt{(N_{u,k} \cdot A_g) - 0,1 \cdot f_c} \cdot b \cdot j_c$
(Gaya geser beton joint horizontal)
- $V_{sh} = V_{jh} - V_{ch}$
(Gaya geser tulangan joint horizontal)
- $A_{jh} = V_{sh} / f_y$
(Luas tulangan joint horizontal)
- Tulangan terpasang
- Jumlah lapisan sengkang = $A_{jh} / l_{lans} \cdot y_{g terada}$

BAB VII

KESIMPULAN

Berdasarkan hasil perhitungan redesain struktur gedung kampus D3 Ekonomi Universitas Islam Indonesia, dengan menggunakan program komputer SAP 2000 dan hitungan manual, penyusun dapat mengambil kesimpulan sebagai berikut :

1. Dengan SAP 2000 didapat profil baja yang lebih besar dari pada hitungan manual dikarenakan SAP 2000 memperhitungkan rasio panjang tanpa penguat l dan faktor panjang efektif k yang menyebabkan $k.l/r > 200$ batang langsing..
2. Perencanaan balok dengan menggunakan dimensi yang sama diperoleh luasan tulangan lentur yang sama antara desain SAP 2000 dengan desain manual.
3. Perencanaan kolom dengan menggunakan dimensi yang sama, luasan tulangan yang dibutuhkan untuk menahan gaya aksial dan lentur pada SAP 2000 diperoleh lebih kecil dari hitungan manual.

4. Untuk perencanaan tulangan geser, baik balok maupun kolom dengan menggunakan dimensi yang sama, luasan tulangan yang diperlukan untuk tulangan geser, pada SAP 200 diperoleh lebih kecil dari pada hitungan manual, dikarenakan pada hitungan manual dipakai tingkat daktilitas penuh.



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Diagram Alir Perencanaan Struktur Portal
Dengan SAP 2000

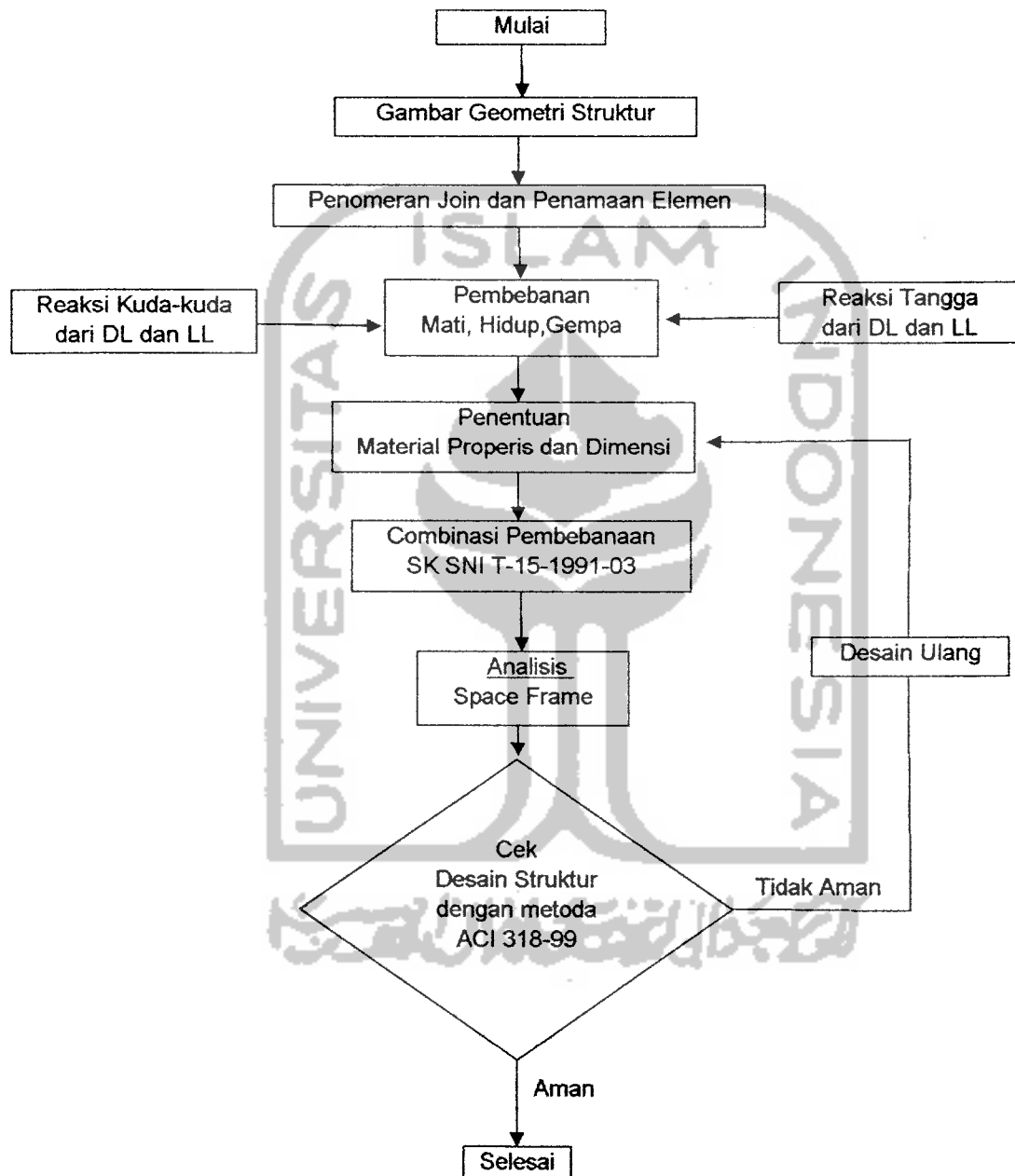
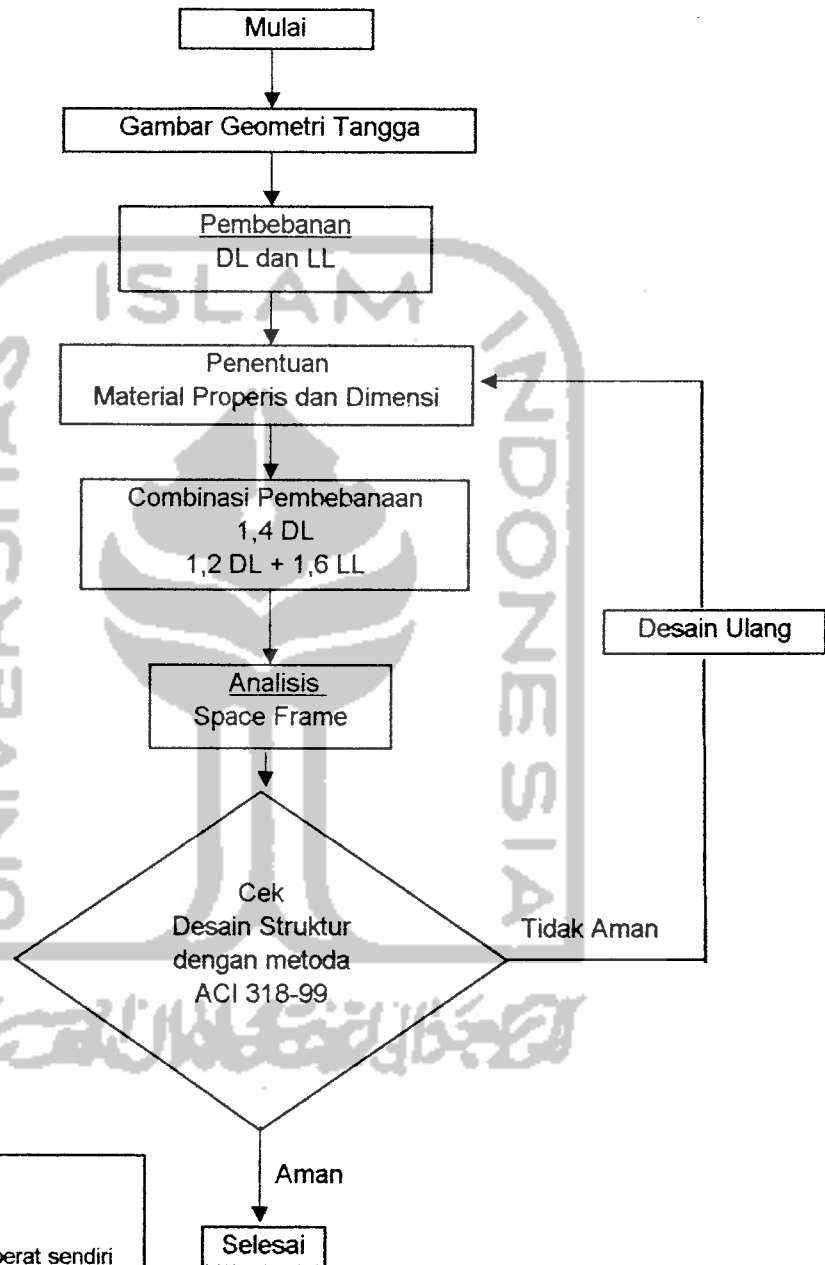


Diagram Alir Perencanaan Tangga
Dengan SAP 2000



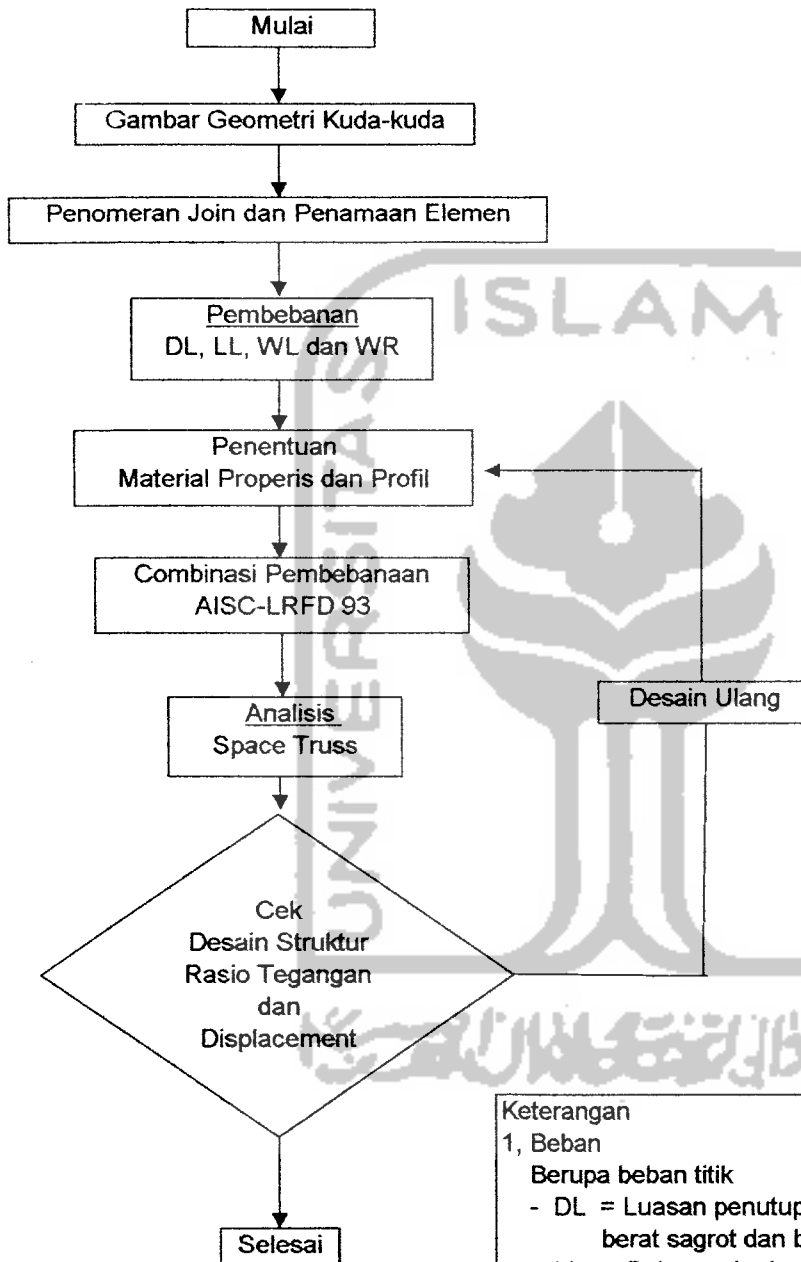
Keterangan

1, Beban
Berupa beban merata
- DL = Beban anak tangga dan berat sendiri plat
- LL = Beban hidup 3 kN/m²

2, Material Propertis
Fy = 240 Mpa
Fc = 30 Mpa

4, Aman bila
- Tulangan yang diperlukan ditampilkan
- Displacement < 1,0 cm

Diagram Alir Perencanaan Kuda-kuda
Rangka Baja Dengan SAP 2000



Keterangan

1, Beban

Berupa beban titik

- DL = Luasan penutup atap, berat gording,
berat sagrot dan berat sendiri elemen.

- LL = Beban pekerja 1 kN

- WL = Beban akibat angin dari arah kiri

- WR = Beban akibat angin dari arah kanan

2, Material Propertis

Fy = 240 Mpa

Es = 200000 Mpa

3, Pilihan Profil

- 2L 45 X 45 X 5 - 10

- 2L 50 X 50 X 5 - 10

- 2L 55 X 55 X 5 - 10

4, Aman bila

- Rasio Tegangan < 1

- Displacement < L/360

Diagram Alir Langkah - langkah
Perencanaan Plat Lantai

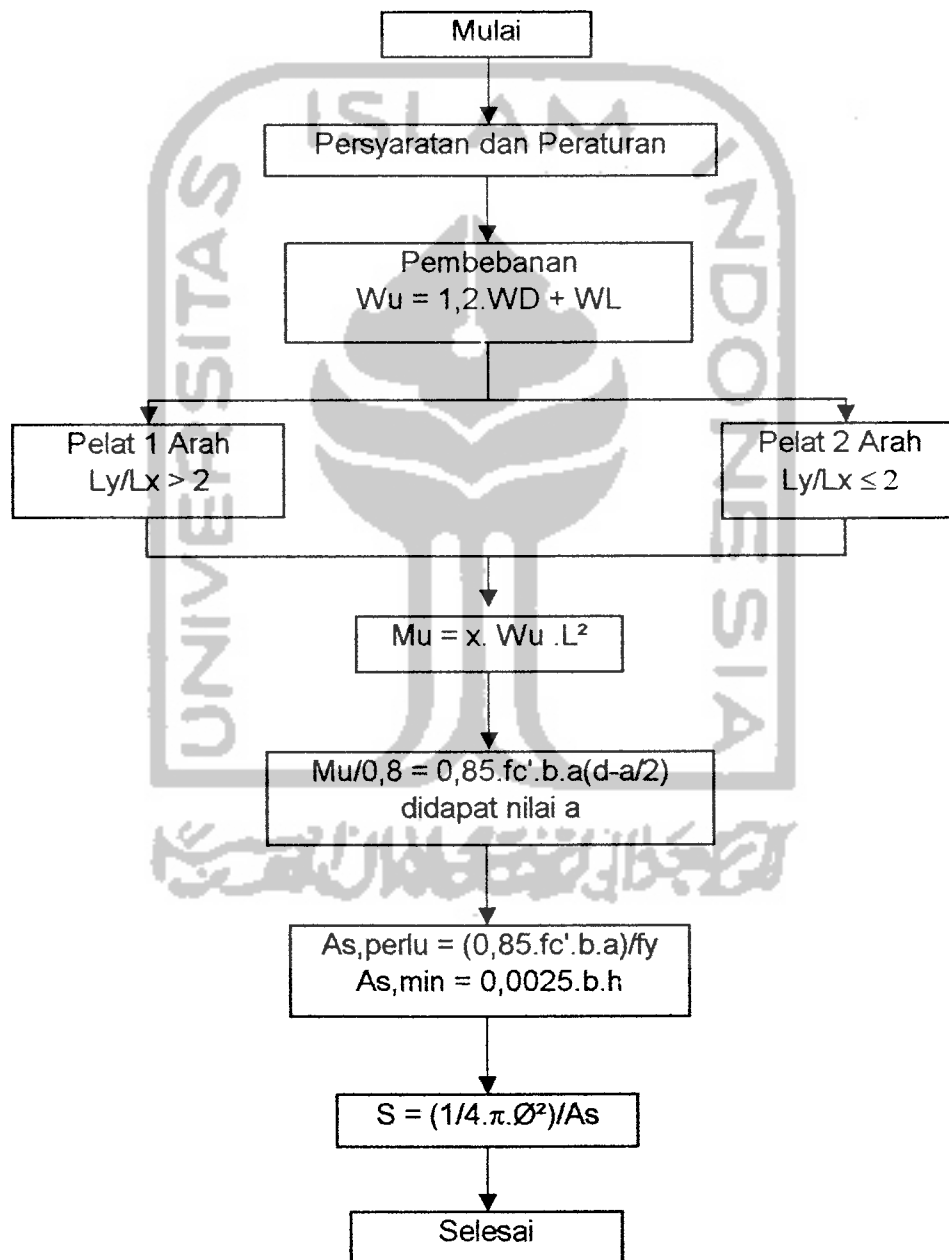


Diagram Alir Langkah - langkah
Perencanaan Atap

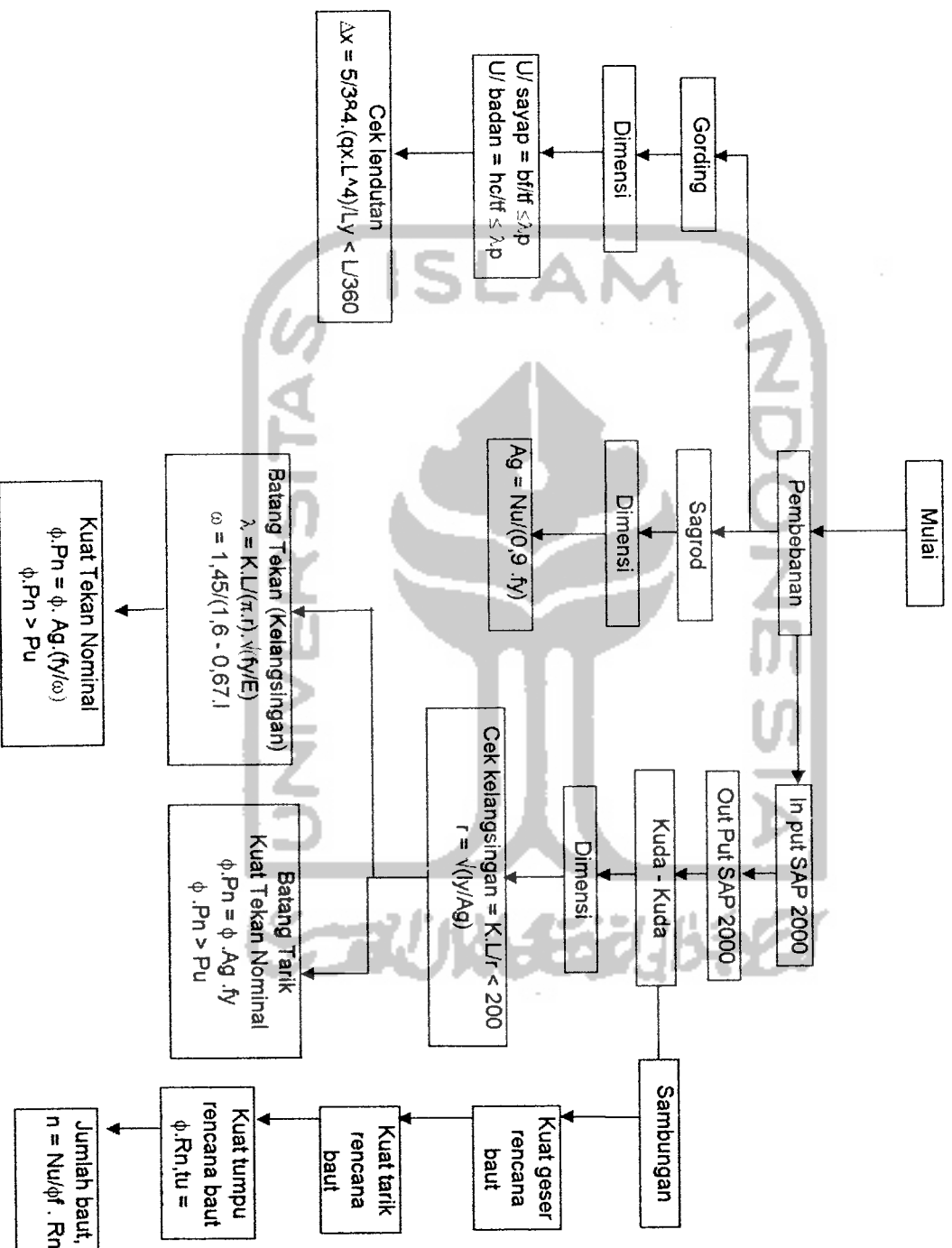
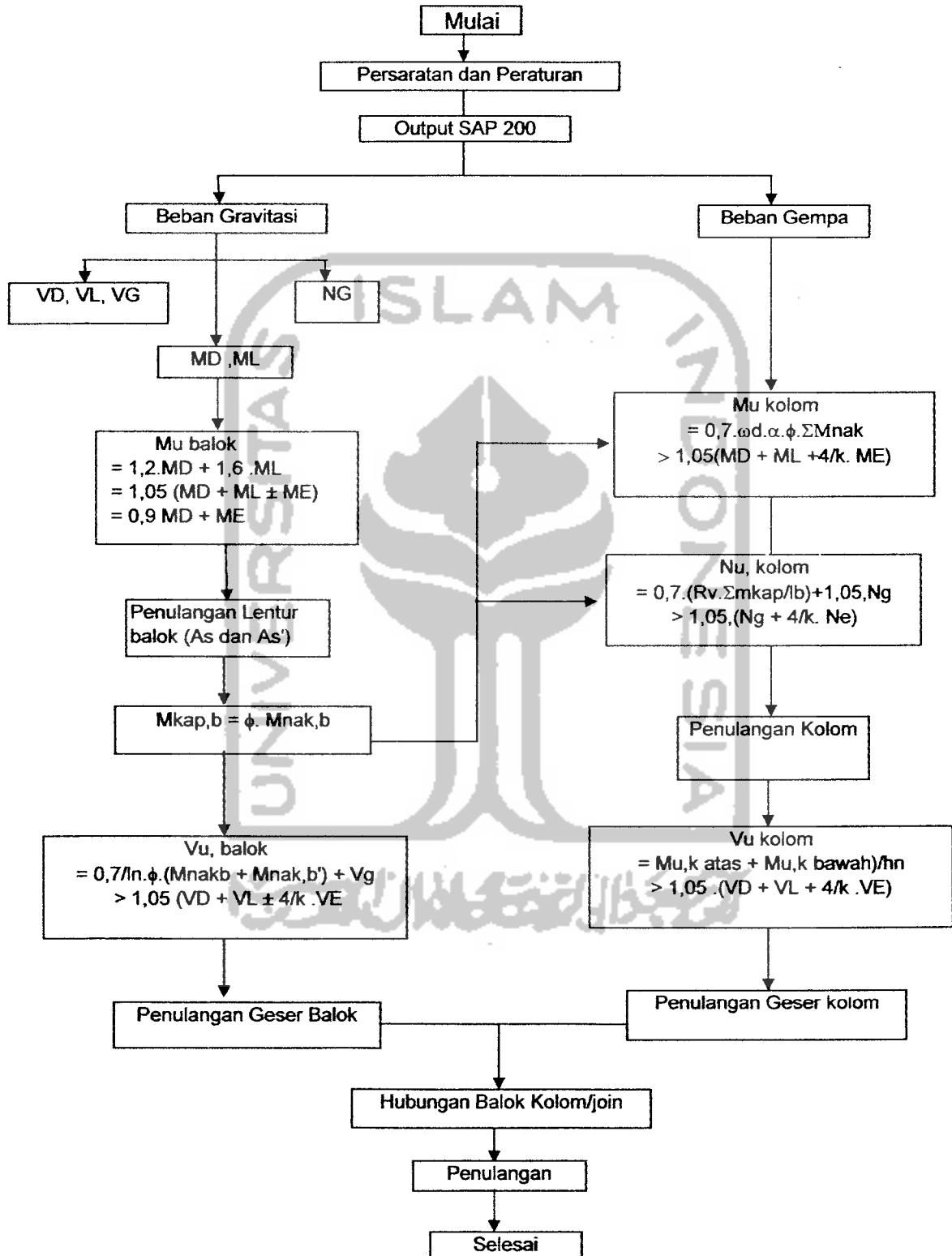


Diagram Alir Langkah - langkah Perencanaan
Struktur Rangka dengan Daktilitas Penuh



[illegible]

	1240	613541.57	0	0	0	716246.884	644218.649	644218.649	652197.413	652187.413
	2375	-872364.42	0	0	0	-1052387.3	-921202.641	-921202.641	-733607.878	-733627.979
1018	125	-8321530.75	0	0	0	-8397036.94	-848107.32	-8498107.32	-2998377.7	-2998377.7
	2250	1943874.7	0	0	0	2385484.84	2697268.44	2697268.44	1734087.23	1734087.23
	4375	-8331530.75	0	0	0	-8997876.94	-8498107.32	-8498107.32	-2998377.7	-2998377.7
1019	124	-8331530.75	0	0	0	-8997876.94	-8498107.32	-8498107.32	-2998377.7	-2998377.7
	2250	1987874.7	0	0	0	2385484.84	2697268.44	2697268.44	1734087.23	1734087.23
	4375	-8331530.75	0	0	0	-8997876.94	-8498107.32	-8498107.32	-2998377.7	-2998377.7
102	130	-864468.27	0	0	0	-877349.304	-802601.184	-802601.184	-608012.443	-608012.443
	1300	810596.60	0	0	0	737116.206	641126.42	641126.42	549536.93	549536.93
	2330	811838.19	0	0	0	-874226.828	-851430.1	-851430.1	-706654.371	-706654.371
1020	126	-8331530.75	0	0	0	-8997876.94	-8498107.32	-8498107.32	-2998377.7	-2998377.7
	2250	1987874.7	0	0	0	2385484.84	2697268.44	2697268.44	1734087.23	1734087.23
	4375	-8331530.75	0	0	0	-8997876.94	-8498107.32	-8498107.32	-2998377.7	-2998377.7
1021	125	-8331530.75	0	0	0	-8997876.94	-8498107.32	-8498107.32	-2998377.7	-2998377.7
	2250	1987874.7	0	0	0	2385484.84	2697268.44	2697268.44	1734087.23	1734087.23
	4375	-8331530.75	0	0	0	-8997876.94	-8498107.32	-8498107.32	-2998377.7	-2998377.7
1022	126	-4190498.86	0	0	0	-5029588.74	-4400013.4	-4400013.4	-3771440.06	-3771440.06
	2460	2464316.28	0	0	0	3944929.65	3576874.6	3576874.6	2929749.66	2929749.66
	4875	-4190498.86	0	0	0	-5029588.74	-4400013.4	-4400013.4	-3771440.06	-3771440.06
103	260	-564458.27	0	0	0	-677249.324	-626011.184	-626011.184	-608012.443	-608012.443
	1200	610596.60	0	0	0	737116.206	641126.42	641126.42	549536.93	549536.93
	2330	-811838.19	0	0	0	-874226.828	-851430.1	-851430.1	-706654.371	-706654.371
104	260	-564458.27	0	0	0	-677249.324	-626011.184	-626011.184	-608012.443	-608012.443
	1300	610596.60	0	0	0	737116.206	641126.42	641126.42	549536.93	549536.93
	2358	-811838.19	0	0	0	-874226.828	-851430.1	-851430.1	-706654.371	-706654.371
105	260	-748620.75	0	0	0	-896724.9	-785946.788	-785946.788	-673568.676	-673568.676
	1425	738440.29	0	0	0	887328.348	776412.305	776412.305	665496.261	665496.261
	2600	-1026350.7	0	0	0	-1230420.84	-1076618.24	-1076618.24	-922815.63	-922815.63
106	150	-1026350.7	0	0	0	-1230420.84	-1076618.24	-1076618.24	-922815.63	-922815.63
	1375	742365.21	0	0	0	890867.371	779504.678	779504.678	668146.378	668146.378
	2600	-1026350.7	0	0	0	-1230420.84	-1076618.24	-1076618.24	-922815.63	-922815.63
107	760	-748620.75	0	0	0	-896724.9	-785946.788	-785946.788	-673568.676	-673568.676
	1425	738440.29	0	0	0	887328.348	776412.305	776412.305	665496.261	665496.261
	2600	-1026350.7	0	0	0	-1230420.84	-1076618.24	-1076618.24	-922815.63	-922815.63
108	150	-1026350.7	0	0	0	-1230420.84	-1076618.24	-1076618.24	-922815.63	-922815.63
	1325	738440.29	0	0	0	887328.348	776412.305	776412.305	665496.261	665496.261
	2600	-748620.75	0	0	0	-896724.9	-785946.788	-785946.788	-673568.676	-673568.676
109	150	-1026350.7	0	0	0	-1230420.84	-1076618.24	-1076618.24	-922815.63	-922815.63
	1325	738440.29	0	0	0	887328.348	776412.305	776412.305	665496.261	665496.261
	2600	-748620.75	0	0	0	-896724.9	-785946.788	-785946.788	-673568.676	-673568.676
2A1	260	-2600092.6	-4996139.43	180680939	-180680939	31814834	146722183	-197030788	138321006	-165322684
	1625	14684855.3	-4775574.16	72899008	-72899008	24921765	96879154	-57289782.7	78717287	-52500917.4
2A10	3000	26025493.1	3874837.63	17892918	17892918	44753231.7	18899618.8	6474746.6	7780201.67	38978543
	260	-183818422	-5056560.1	136119762	-136119762	-243593848	-95194164.4	-372046666	-14749384	-289785566
	1625	-14264427.9	-5826443.32	86647945.6	-86647945.6	-26142030.7	80037644.9	-120612741	73209166.9	-58771185.9
2A11	3000	104029698	38645167.4	54876128.8	-54876128.8	188107175	204326682	88975791.3	143104896	44147664.1
	260	-18732706.1	-6078893.9	170752359	-170752359	301255445.2	154721948	-203856004	132917386	-171430561
	1625	-14401254.8	-4322250.47	75437338.1	-75437338.1	24198296.3	99040746.3	-60327660.6	91302781.6	-55882479.4
2A12	3000	26930437.2	7897244.99	-18477685.7	18477685.7	43672118.6	14821034.8	64484176.8	834747.87	40327311.5
	2	-31837861.7	12512306.6	21179463.8	-21179463.8	583024787.2	67408468.6	22931622.8	87394838.9	5831811.08
	660	-7627464.82	-3901184.02	11704065.8	-11704065.8	-15745748.9	94299644.5	278891.673	17363023.4	3389995.6
2A13	1100	-61180233	-20947512.8	-44687626	44687626	-94922300.1	-120351650	-28717838	85191071.2	-5933347.2
	0	29507403	11117813.7	18310769.2	18310769.2	63197086.6	80724706.2	32253130	43044490.1	10068844.1
	565	-11137936	-6426837.11	16510671.3	-16510671.3	-22094238.2	-33118811.3	-648411.809	23883866.5	3935371.88
2A14	1100	-65497349	-12822382.1	-49340939	49340939	-103107430	-131642678	-28026604.3	-94349959.2	-5636269
	0	26827001.4	3866320	-17879332.3	17879332.3	43917713.7	19856044.8	67852489.3	3362961.75	42305610.8
	875	-664701.36	1741708.42	-77344868	77344868	-2512447.1	-80982044.1	78679616.4	-70064832.6	68378112.2
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	0	28206461.3	9719794.7	18859679.7	-18859679.7	47835688.7	18896866.4	67883301.3	8441377.64	42394112.3
	875	-1261902.04	-2121703.96	-80978710	80978710	-4892007.17	-83242151.9	81601139.1	-73817550.8	71864127.2
	1750	-39669984	-14637945.2	-142900467	142900467	72884669.1	-204216905	94376159.4	-184049379	90177443.7
2A16	0	102176830	36557665.9	636718914.5	-636718914.5	164456913	206060075	87561155.1	140167444	42730798.3
	2000	138476681	61886862.1	105950.29	105950.29	290358861	186263308	186475803	126423568	126423568
	4000	150163540	38400479.3	-63763811	63763811	181861345	84999727.6	197940827	41742860.3	138551716
2A17	0	117777320	-44404326.2	86418676	-86418676	212379788	205366098	26686458.7	68573579	-89228623.3
	3000	154081167	6792037.6	485903.31	-485903.31	278677129	216447172	216426776	139118054	139244729
	4000	113786084	43513830.9	-65447070	65447070	206166188	81878272.4	229316218	43565604.9	181109821
2A18	0	184757474	39762160.2	66405826.6	-66405826.6	189328415	217296493	77344677.4	184049795	34618667.5
	2000	137510443	51584132.2	2023520.03	2023520.03	247676160	195338272	181083830	125588673	121938799
	4000	83644495.2	36999447.8	-81368508	81368508	171412610	87720180.6	186675216	29157316.6	140461775
2A19	0	123832605	43688805	51377596	-51377596	218037214	117478150	228371082	68290508	167776181
	2000	141083075	51437180	-2372595.99	2372595.99	261676194	184233042	199216705	134621340	128062185
	4000	81674637.7	32508911	-46632201.3	46632201.3	149903811	166338092	87410468.1	115365147	31448185.3
2A2	260	-182475904	-80895671	126230011	-126230011	-192404194	-88891978	-367400302	-26867830.5	-268689061
	1625	-13632189.1	-5866896.78	93124369.9	-93124369.9	-25603811.8	7804887.3	-117533709	716415692.7	-95999603.1
2A20	3690	104233917	39441937.3	53646723.7	-53646723.7	168185562	203044511	90368531.8	14206321.3	45226618.2
	0	104443523	38770876.8	67015463.6	-67015463.6	183965630	217815404	76381951	164313079	33686262.4
	2000	137249016	51618462.5	18874113.6	-18874113.6	247288359	184889188	190793829	125021707	121728443
2A21	4000	86435588.8	3979831.6	-83020627	83020627	171001719	56111123.3	199054440	27773463.9	140810592
	0	117820495	44633116.8	57502123	-57502123	212277579	209367543	94603984.7	186620566	46018634.5
	2000	153628329	57301369.2	600079.9	-600079.9	276038168	215886444	214833586	138716280	137814896
	4000	113117220	43402931.2	-86500380	86500380	205186364	89861473.1	229614228	41965174.1	181896822
2A22	0	101943811	38782183.6	54580903.1	-54580903.1	194352067	201315131	88027217.3	141158614	42340248.2
	2000	139686077	51866749	-149404109	149404109	250304481	105627889	185841438	126582005	170880932

2A33	4000	1000029410	38262840.2	-55197804	55197804	18224762.5	54000182.5	200000678	41028355.3	140324508
	9	83044372.7	22454972.9	49171037	49171037	162581220	67181981.5	172441123	312860102.1	514803366
	1308	30242450.6	9409135.06	13005171.2	-13005171.2	51007727.8	55556334.4	20077875.5	37839468.8	15646178.7
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	0	82912170.8	31565047.1	-50591120	50591120	160510761	84054002.3	170387946	280203548	120058264
	1308	28562822.8	8061883.25	10401247	-10401247	46897272.0	47912993.7	15550453.0	37607781.1	14725499.1
	2000	-60126494	-54604140.3	71289533.8	-71289533.8	-111619617	-11052810	-51632147	10504025.7	-118705315
2A35	250	-26134424.4	-4171123.97	179188022	-179188022	381351074	166764579	-214532391	107748247	-184790271
	1125	12485132.5	4325490.39	10611370	-10611370	13703745.5	13019183	32848030.3	100080950	-37515711.3
	3000	46091774	1139282.71	20093793.5	-20093793.5	73711209.1	93857184.8	24674801.3	71218824.8	11748981.5
2A36	0	5737002.3	21942644.4	17241314.8	-17241314.8	160746884	62401626.8	81732815.4	87117753.4	20076486.8
	975	13811868.4	3713517.52	75764824.1	-75764824.1	10811269.4	94401875.8	64800451.1	27510104.1	18448500.5
	1750	-45881676	17416431.3	114201932	-114201932	-51649554.1	75523171.4	-236440382	76843745.1	-102838362
2A37	0	68647142.1	24832466.4	17275461.1	-17275461.1	10755881	90718724.3	81200279.9	67073378.1	54044558.1
	975	9878991.24	3140479.93	78362311.7	-78362311.7	15797558.5	94723365	68686719.1	78522110.4	-21454527.1
	1750	-40657762	-10785583.7	131850368	-131850368	-28015964.2	75286404.7	-218119384	80204141.1	16988520.2
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	675	60056232.8	9462103.19	-20465509.9	20465509.9	75143460.0	29810490.4	85045452.3	33077408.6	86127412.4
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	2620	17367910.5	7914403.83	100438.86	-100438.86	34214418.7	26460771.9	28209593.3	18261422.7	18880638.2
	4275	19878177	-9359875.07	-275877.11	275877.11	-36986612.5	-28851808.9	-2827496.8	-17858649.7	-17482069.9
2B4	225	-20605263.7	-3509525.39	602695.82	-602695.82	-30204517.1	-14208942.9	26475393	-17913901.5	-18997973.1
	2250	18786667.4	2296296.88	118831.03	118831.03	25430075.5	20867873.7	20635126.5	15218748.6	15017252.7
	4275	-10298681	-3556800.05	-380933.28	380933.28	-30047057.2	-26072765.5	-24272805.7	18809852.9	-17924172.9
2B5	225	-20885262.8	-3926686.88	2020666.63	2020666.63	31342765.0	27760353.2	-23516948.3	-20815264.2	-18679880.8
	2250	18194704.2	3110722.48	112847.89	-112847.89	24410801	20062697.4	18824476.9	14676836.9	14473580.7
	4275	-21121888.9	-3503606.83	-2245664.31	2245664.31	-30861773.6	-23129788.3	-27847563.3	-18987504.1	-21031409.9
2B6	225	-19689184.2	-3261521.15	-186298.33	186298.33	29045464.9	24129938.8	-23740772.9	-13048024.8	-17715561.8
	2250	18022666.4	3127386.56	31053.34	-31053.34	24231006.2	19812090.6	19746248.5	14448808.8	14891172.7
	4275	-23481784.3	-5142624.1	248000.82	-248000.82	-32682260.5	-27261388	-271821198	23810406.4	-20456036.4
2B7	250	-19865355.8	-3522983.26	-1714870.02	1714870.02	29485188.2	-26893437.4	-22492210.4	-19512200.2	-18425437.2
	2262.5	15067905.9	2957750.1	-396648.79	396648.79	20181887.2	18604965.8	18337354.1	13465133.2	14179097.4
	4275	-22948739.5	4072298.58	321575.57	-321575.57	-39936209.1	-28872797.7	-28898108.5	-19735937.8	-21384175.5
2B8	0	4789071.91	416158.09	5227336.23	-5227336.23	6090391.55	18234416.9	-922987.047	9104586.16	-484617.268
	375	-2619195.64	-515379.68	-850455.34	850455.34	-5187534.11	-518051.74	-3394137.6	-4022588.88	-2491883.2
	750	-12754419.8	-629600.15	7828206.05	7028206.05	-17488384				

		2500	4415091.01	-482101.16	5065115.09	-5065115.09	4528747.02	9490131.79	-1127010.9	8023185.49	576001.8721
2001	150	-4388062.24	759002.08	-1065072.06	3060072.06	-5400072.06	-3756570.1	-5707039.8	-31405310	25506797.9	2980032.6
	1200	-409379.15	-249798.12	64443.89	544441.54	-961515.972	-21976.8954	-1352409.15	212951.295	-345311.750	34266146.2
	2250	873814.35	167426.75	31793710.8	31793710.8	1240000.02	34007299.6	-32199552.8	26494272.6	-27730426.8	-1699115
2002	0	-10005824	-19306713.9	-1114436.40	1114436.48	32582940.5	64833024.7	-62241707.1	29728134.6	-37730148.8	-34490110.9
	2250	10401907.5	6431146.39	-64546.06	64545.08	26371357.2	20079368.3	20217580.9	13001915.2	12119937.3	
	4500	-3067677.69	-2615293.63	983040.7	-983040.7	-633956.12	-4977730.49	-7042737.72	-2145533.25	-391531.56	
2003	0	44003490	19031992.6	-2998631.88	2998631.88	-50264815.8	67232120.8	-11144900.8	-4221135.4	20984348	
	2250	11100208.1	6597295.10	-140021.52	140021.52	22775922	16796634.7	17692850.1	9893267.79	10117018.1	
	4500	-7003535.82	-4591458.89	2615788.55	2615788.55	-17749377.8	8943983.94	-14639215.9	3947170.26	-8867393.85	
2004	0	18292011.1	9199390.75	952628.81	-952628.81	-37269426.3	2739282	2965179.9	-16495440.3	-19229195.7	
	2250	16271372.3	7201409.94	234661.12	234661.12	24860032.8	23092753.1	22591957.1	1690646.4	17501427.3	
	4500	-23387655.9	-11215611.1	-486722.4	486722.4	-65439004.3	-56644705.2	34024688.2	-21468040.5	-20696740.2	
2005	0	-20362361.4	11064297.7	107103.5	-107103.5	45773710	-34951632.1	-35115549.2	-20926772.1	-21113616.4	
	2250	15109041.1	7077564.48	235165.31	-235165.31	29581726.6	22993146.2	22399315	1982976.4	1346637.2	
	4500	-194657970.3	-9568204.93	360207.15	-360207.15	-3059655	-2091155.1	-24854287.1	-17185398.6	-1733802.4	
2006	0	-9800222.66	5062618.78	4395475.43	-4395475.43	-21838233.2	-11574475.1	30793070.5	5017632.51	-1201169.5	
	2250	14690821.9	6918084.92	51040.23	-51040.23	18654893.5	71387915.1	21207920.8	12710399.8	12613264.4	
	4500	-35108149	-14826427.9	-4279794.77	4279794.77	-66000062.4	-50499770.2	-48470201.2	35447345.4	-27745715.8	
2007	0	-29526233.8	-10263623.4	-465014.80	465014.80	-66544473	-42939306.2	-43986211	-28154175.1	2895121.1	
	2250	14409525.5	6651128.41	165495.68	-165495.68	27711257.9	21464107.8	11176550.3	15188615.7	12828715.1	
	4500	-10713843.1	-9111784.32	-164037.45	164037.45	3705587.5	-23421911.3	29096432.7	-16991092.5	-10730825.1	
2008	0	-7924451.97	-5271271.73	-361249.94	361249.94	-17945377.2	17306119.6	-3296932.87	-10563229.7	-3760783.9	
	2250	1212222.5	6139168.14	30271.1	-30271.1	34369344.8	16633940.6	18426671.5	10969463.1	10031565.3	
	4500	41037500	-17268107.8	4009011.36	-4009011.36	15873870.5	-50198274.6	6267190.2	33325609.4	40541880.8	
2009	0	-23013600.1	-11058400.1	-583749.77	583749.77	-48304760.3	-25227466.5	-34001630.5	-21237814.5	-20185885.3	
	2250	16338495.3	7111078.24	272613.96	-272613.96	29781520.7	22537045.4	23109534.7	12457344.1	14048199.2	
	4500	-19512824.2	-9657154.96	38521.89	-38521.89	-38683237	-29467978.9	-29640874.8	-17332172.1	-17802611.5	
2010	0	-20781967.8	-8568766.21	495553.41	-495553.41	40445218.4	-30477366	37498157.1	10275530	-19150085.2	
	2250	14921553	7050640.29	27757.1	-27757.1	20142963.1	23392706.7	22354415.6	13454379.1	13404418.5	
	4500	-22571313.2	-10557105.1	-450309.2	450309.2	-4418941.1	-34666199.4	33602497.1	-49701487.3	-19826875.7	
2011	0	-39895072	1753908.8	115184.65	-115184.65	-75493025.3	-59143273.7	-15894261.5	-55681898.6	-36803231	
	2250	11272190.8	5836758.2	62250.09	-62250.09	4232436.8	17967732.2	17218447.5	18069394.6	19200999.8	
	4500	-10766863.3	5826112.66	239634.84	-239634.84	22552136.8	-17251537.5	-18748319.4	8909937.79	-9474551.08	
2012	0	-1460743.4	-4808109.63	-55063128	55063128	34003120	25435472.5	-38774676.8	16720807.6	-44939497	
	2250	5920425.23	-2429130.45	-849703.31	849703.31	-10991114	-9404183.24	-7619768.28	6893115.86	-4563649.73	
	4500	-212409.81	50348.01	33303114.3	-33303114.3	186249.562	35239366.8	-34607823.8	20764516.3	-29782179.4	
2013	0	-43879690	18702130.3	186236.42	-186236.42	82139366	-63746824.3	-60029320.6	-39490573.8	-38132549.4	
	2250	13471490.4	8491430.29	75998.26	-75998.26	26551879.7	20317179.6	20241583.3	12556606.9	12091870	
	4500	-2683628.15	-2133717.5	270234.65	-270234.65	-8112713.78	-520431.38	-5843984.77	-1031962.85	-2684495.77	
2014	0	-43065604	-12682394.8	-37044.12	37044.12	276644.12	61399992.6	63053637.8	-62484856	38898700.3	
	2250	13562163.8	6505825.34	10717.93	-10717.93	26535118.8	20400581.7	20378074	43216493.5	2197201.2	
	4500	-3024465.66	-3228154.5	182279.91	-182279.91	292279.91	-8789400.87	5914674.81	-6529402.78	-2459458.03	
2015	0	-4094986	-1773138.5	-13746.17	13746.17	-7705408.6	-69355186.2	-63868121.4	-3547382.1	-36921116.7	
	2250	11177484.8	5900877.29	68923.44	-68923.44	22374385.4	15695813.2	17101582.9	9597700.72	10131772.9	
	4500	-21090329.2	-8759739.21	459704.74	-459704.74	-489704.74	40923977.8	30853698.2	-31891999.3	-15540560	
2016	0	-14824047.3	7052306.1	38904.02	-38904.02	25255526.8	22413022.8	22331623.6	15496566.2	13398828.6	
	2250	128576221.7	11182798.6	-810882.83	810882.83	910882.83	-46163470.8	25946190.6	-34663037.8	-2130836.1	
	4500	-16295428.3	7117552.58	-290946	290946	29733616.3	22498203.8	20076894.6	10513418	14018244.4	
2017	0	-3803681.1	-9400667.5	49168.85	-49168.85	3743325.5	-28805076.5	-28954126.9	-17090592.8	-17179063.2	
	2250	12153247.4	6040803.37	28509.01	-28509.01	2429192.3	18547703.4	18485734.5	16964493.8	10911264.6	
	4500	-40412547	-17358528.3	4022960.52	-4022960.52	76165501.7	-54518568	-62566829.1	-32716869.1	-39991902.8	
2018	0	-29030442	-10237551	127034.23	-127034.23	-58076612	-49510583.9	-43177305.7	-20058067	-26286728.6	
	2250	14799555.5	6727178.22	250215.58	-250215.58	29511071.8	22125048.1	21644596.4	12517894	12103495.8	
	4500	-18398576.7	-8724757.65	335306.93	-335306.93	-16037864.3	-27313334.7	-27313368.2	-16258601.5	-16358778.3	
2019	0	-19697644.2	-1304566.25	57368197.2	-57368197.2	14924639	18299771	-41199443.1	15001697.7	-34257497.3	
	2250	4968575.83	759853.43	95457.65	-95457.65	7058056.43	3770260.26	5571731.37	4203356.39	4575000.41	
	4500	-2465420.04	666214.15	27558111.6	-27558111.6	3995446.88	3213430.6	2672770.8	27812175.6	22592421.4	
2020	150	-3107493.5	-230918.12	-26407817.4	26407817.4	-4109166.79	-31214951.5	24241466.1	-26553769	20970602.3	
	1375	5236100.23	-63011.79	105170.77	-105170.77	1819301.48	5648013.45	6238054.63	4868143.9	4536036.51	
	2500	-3068258.56	120894.64	28900180	-28900180	-3512478.68	26011742	31268594.1	21340711.3	26839676.7	
2021	0	-173662.04	-1514645.18	31331306.5	-31331306.5	3280064.77	30716987.4	-35078759.1	27655709	26940442.7	
	1435	3849817.0	7853795.10	-145461.47	145461.47	727635.34	5490717.28	376995.15	30410492.44	2895827.26	
	2500	-6743789.62	-1963365.62	-315246.11	315246.11	11214316.4	-42124591.8	24782169.1	-24528866.8	22396439.2	
2022	0	-14781349.4	-4928943.12	-36773760	36773760	-24623928.3	67740719.1	17384179.9	-4549609.5	18993169.6	
	250	58989218.78	-2435390.42	-586171.77	586171.77	10948493.2	-9273863.18	-7575642.47	-6095962.4	-4523943.21	
	1350	407420.5	78186.35	34061417.1	-34061417.1	613970.896	36261148.8	-35262829.1	3102193.9	-30288566.8	
	1325	17327776.53	-1063985.45	1338267.78	-1338267.78	378441.518	2219122.93	-591239.413	7763941.68	356059.875	
2023	0	-12277218.8	-4185308.1	38657600.8	-38657600.8	-21439230.3	21844209.8	-6536752.1	21842344	-44041537.5	
	150	-4265634.72	-865599.69	-39218570	39218570	-5899585.17	-59827167.2	29426579.8	-33760444.2	29024841.8	
	1325	1812538.9	-127136.91	1834221.03	-1834221.03	219835.224	2471001.45	-960862.716	3120082.14	178484280	
2024	0	-15189107.5	-5397944.43	36484512	-36484512	-26840240.2	17279532.1	-59337893.1	19181341	-46499787.8	
	150	-2319776.67	-146221.56	33031712	-33031712	-269366.46	-27153061.5	32213513.7	-3725438.6	27731642.1	
	1325	6232244.52	102065.97	1598013.84	-1598013.84	9072317.11	9141157.94	6896327.87	7008303.12	-4149878.21	
2025	0	-14474223.3	-4583459.23	36207730.9	-36207730.9	24792802.7	18499323.4	-57547430.3	19660164.9	-46613768.8	
	150	-2140583.84	-148159.9	33222653	-33222653	33722653	-2605765.46	-37270774.8	32496531.5	-31828573.2	
	1325	6232244.52	102065.97	1598013.84	-1598013.84	9072317.11	9141157.94	6896327.87	7008303.12	-4149878.21	
2026	0	-14483065.5	-4851451.82	36494857.4	-36494857.4	24863093.5	18910277.5	-57833923	19690556.7	-4662955.6	
	150	-4144943.96	-490707.63	-33633630	33633630	-5789705.04	-40025906.4	30994716.6	-39810498.6	26450287.4	
	1325	1842115.71	-1258239.89	1850919.34	-1850919.34	166743.676	2402950.56	954481.401	2148235.72		

2013	101	-6647744.21	-1444617.24	-144666774	-144666774	-10372962.31	-444466902.7	30774173.2	-10763070.9	15997131.8
	1126	-379946.74	-1054099.107	1072265.44	-1371285.44	2062668.1	-58475.01	3445834.11	353174.10	2110801.96
2014	2500	-206672.93	-406035.43	37811700.1	-37811009.5	-10767210.2	24366422.6	-5781327.57	2602199.3	-1157015.4
	270	674070.58	-311850.14	5305206.4	-3736296.4	906099.420	-341254.2	3503507.1	3041095.0	-1254190.2
	1425	2408654.08	1731220.42	458418.51	58918.51	7644603.44	5765226.43	6873887.3	363672.82	3642318.14
2015	2500	-7871018.82	-2184095.81	-3940402.	33440402.	-110041775	45849111.6	24548735.5	-37318276	2704045.6
	14035	2100100.67	766746.867	29114044.5	29114044.5	4601628.16	2713300.5	34121900.1	24196597.5	-35710652.6
	2600	-1601977.29	-605137.54	-29614388.1	29614388.1	3819155.77	2600440.26	1029519.51	1059596.37	3121664.62
2016	1131	308237.16	269816.22	1296221.48	-1296221.48	705692.768	1987488.38	-724467.871	1443119.09	-837001.652
	1151	770894.06	120510.24	205301.24	205301.24	1059828.4	8810742.16	-116549.43	7198420.68	6171124.7
	2375	-6070478.88	-1236303.46	-923564.78	894464.78	-4163657.7	-105101.62	-555814.58	6305637.59	-1031726.67
2017	124	-10621847.7	3349510.86	1277421.24	1277421.24	13317260.7	15915619.81	-11212104.9	-19443445.4	-2943847.29
	1260	-16216.91	127092.18	74197.42	-74197.42	34108.4	277300.158	121045.45	51200.104	-31074.76
	2015	1840091.66	250046.51	1493977.88	-1493977.88	236103.49	-45557.29	401023.772	2759300.29	192623.12
2018	250	-4575607.82	-706991.76	-11766623	11766623	6554907.94	-30712610.91	28047434.4	-33554170.5	14920075.8
	1700	-397561.26	241722.28	676403.21	676403.21	-944629.28	-84541379.1	-1403462.4	2504971.665	-264558.112
	2050	912736.44	203000.17	3148468.4	-3144493.4	1514382	96010054.1	-1451782.5	30710154.4	-2691912.6
2019	135	5296164.35	-2056503.23	376061.03	-376061.03	10694030.2	704325.21	-848054.07	-848054.07	-374903.94
	2350	8718903.8	3600423.81	-141520.24	-141520.24	10223058.5	12405649.7	12705042.1	115642.32	7074778.74
	4275	-12359800	1656475.31	-458101.84	458101.84	31622134.5	16180689.7	-1809565.5	-11030134.3	10111.51
2020	125	-6157012.71	2487404	511100.51	-511100.51	-11204481.7	-7827985.07	-4751112.5	-4751112.5	-6343201.6
	1200	10789645	4226274.29	-33469.87	33469.87	1346093.21	16881156.9	1643121.3	1643121.3	-663012.43
	4275	-7755652.54	-2958623.39	-2958623.39	2958623.39	373038.21	-1416184.1	116930.1	-991490.16	-756924.08
2021	135	7267292.55	-276149.05	581114.32	-581114.32	1316671.1	-3051561.7	13074016.3	-3044018.61	-1062434.88
	2150	1064030.31	6214060.35	-45210.60	-45210.60	-7732.04	1300683	1510623.1	3449553	9034870.09
	4875	6712944.98	2705800.54	-670630.45	670630.45	326538.45	1204384.41	-10315801.8	8894916.57	600145.96
2022	125	-6447699.6	-211598.17	297165.65	-297165.65	-8954742.92	-1486646.37	-3050455.23	-483581.46	-5173277.44
	2200	7880798.51	308518.44	-67825.37	67825.37	14179680.9	10927482.4	1106085.7	656861.83	8950452.49
2023	4275	-14263464.2	-556446.61	-402701.17	402701.17	22907078.1	-12889418.4	-16790748.6	13274087	13462204.6
	135	-18346700.3	6059514.7	-677671.88	677671.88	29610304.1	-23877537.6	-22464836.3	-15210446.2	-1413681.5
	2500	1065057.1	4952392.14	-97066.62	97066.62	37090.62	13666704.7	16206318.9	15234225.8	3464824.28
2024	4875	-6802866.57	2915667.55	603374.92	-603374.92	12448740	9475431.47	10632518.61	-673632.49	-6664637.34
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2027	4600	-12687943.7	-11274569.4	-426795.21	426795.21	-6944431.8	-36872672	-34971643.8	-21616518.8	-20847786
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2029	0	-43504062	-1942771.3	-966275.64	966275.64	81406110.9	65158209.6	6312730.1	-1011200.9	-34074007.7
	1200	10277824.2	4411608.7	-40772.6	40772.6	28181875.3	14958808.2	20044452.6	11013364.7	11996746.4
	4600	-1015806.77	2568217.08	834730.48	-834730.48	7782777.81	4563605.63	-1563536.63	-1840773.86	-2438276.53
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3A22	0	10019927.3	75745825.7	25895862.9	25895862.9	158924004	109153781	164634628	84991810.9	111864158
	1000	46981729.3	11113826.3	13554139.8	-16554139.8	73222011.5	76147474.6	43933863.9	58154245.1	2566854.7
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	0	99205716	25798990.2	25014216.8	25014216.8	159126598	100287255	154707110	65053248.3	111708830
3A24	1300	48153314.2	112991780	15911210.1	-10911210.5	24415805	78782681.3	41459139.7	58683071.3	20407803.2
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3B10	0	11816764.3	2117434.36	6647048.15	6647048.15	17678521.6	21297413.7	7438821.1	10626518.1	5680340.46
	375	1669484.44	1031565.56	1515153.52	1515153.52	-2477081.21	-4540965.11	1186512.71	-2488287.58	-15682329
	750	16932138.9	-4186446.9	-9679769.9	9679769.9	-2707480.4	-31003153.6	1156057.8	-23960146.7	-5627780.9
3B11	225	-33366664	-501828.71	-1210179.18	1261079.18	503449.82	-4340202.5	-4083075.4	32964058.8	-36844126.4
	1626	12177731.6	2670847.12	2842763.78	-1242763.78	16715407.9	17663118.1	12963314.2	13104601.7	8837628.08
	3000	12744916.4	2454252.12	5948606.27	-5448606.27	13138031.5	2182451.2	9407563.70	7631292.4	8118511.84
3B12	225	-36645318	-641259.09	-757228.31	757228.31	-52761656.1	-44427289.0	-42986666.8	-1537739.8	27243832.5
	1626	12319994.9	2648566.5	2332483.11	-2332483.11	18867012.0	1770308	1289118.1	1412626.1	897810.5
	3000	14178812.9	2710570.75	5421865.76	-5421865.76	21345208.5	35141094.1	11753498	17893920.7	7678822.92
3B13	0	13070410.2	2340110.81	8726243.25	-8726243.25	1044139.5	33404130.4	8111189.05	10374192.7	8158746.78
	375	-94617.72	748878.72	-2101132.27	2101132.27	-1367626.42	-3008847	1400169.65	-1374726.07	1305494.18
	750	-14994863.2	887686.01	-10423452.7	10423452.7	-2415245.9	3017537.4	-842768.69	2287833.5	-4112451.45
3B14	250	-2256246.8	-6520400.67	-2142741.18	2142741.18	-367581.1	-3002472.3	-26448416.1	12105198.2	-18158455.1
	2262.6	18513610.3	3034417.14	-681911.22	681911.22	22542389.7	17924458.2	-1926647.18	13185328.1	1496980.3
	4275	-23647438	-773991.24	781918.82	-781918.82	29084933.2	-20374836.8	26018656.1	17783958.3	-18156412.1
3B15	225	-22520044.8	-1494324.51	670108.94	-670108.94	-2829134.7	-28280164.6	-27603826.5	-9752142.4	-20063838.5
	2262.6	18513610.3	3194732.66	-21971.04	21971.04	24705839	26749229.7	26226265.5	14962892.3	14748542
	4275	-19053006.3	-3837427.79	-736645.07	736645.07	29018562	-2441661.1	-22886060.7	-17502234.4	-15495720.9
3B16	225	-2153378.4	-4133593.52	-2713030	2713030	-32468003.7	-29371799.7	23858138.7	-21423567.6	-18534713.9
	2262.6	18513610.3	3194732.66	3118967.29	-3118967.29	31171413	-12673132.1	-29127912.8	16821223	-22428347.1
	4275	-19053006.3	-3837427.79	2730486.25	-2730486.25	28534790.2	19174849.1	-44910070.3	15346839.5	-19284114.8
3B17	225	19004811.6	8410288.48	260061.64	-260061.64	73292513.9	23487731.0	22404067.1	17339052.2	16886508.1
	4275	-17714572.3	-1249013.93	-2210882.17	2210882.17	-23075809.1	24977034.4	-26204193.6	17832906	-10865321.1
3B18	225	21921039.3	3102494.51	3778901.18	-3778901.18	-30149398.4	-21836201.8	-28917384.2	18018014.8	22318958.4
	2262.6	18513610.3	3194732.66	-124243.66	124243.66	28800462	22112589	22378484.8	18894368.7	17027980.2
	4275	-17714572.3	-1249013.93	-4141451.09	4141451.09	-4037288.13	-46394920.3	-38650165.8	-20942860.4	-23974121.8
3B19	225	-23058193.5	-617536.17	4194983.74	-4194983.74	34171121	-39950011.8	-32546365.6	17504465.3	-20725002.5
	2262.6	18513610.3	3194732.66	-73483.26	73483.26	37190645.1	22421836.7	22676098.1	1591634.6	17140760.6
	4275	-17714572.3	-1249013.93	-4306594.51	4306594.51	34459225.7	-30117927.8	-24011079.2	-20063044.3	-17767173.2
3B20	1626	12730482	-629123.12	-1507759.49	1507759.49	-215684	10094087.5	13208081.1	11133493	12832414.5
	3000	38924587.4	12481043.5	7964519.48	-7964519.48	7964519.48	38057174.7	38057908.6	65783397.4	2636582.1
3B21	135	1260032.3	-252770.05	-10308346.4	10308346.4	100447.20	9740729.48	11897318	-8152491.24	10405000.3
	1200	6243682.31	1343944.28	-1862818.79	1862818.79	8641910.2	5079379.38	9571274.81	4152884.32	7115760.72
	225	-14994304.5	-2676283.43	6882723.4	-6882723.4	-24146347	12033419.3	-20667630.4	732421.99	-19740332.5
3B22	225	-1109544.2	-183034.19	9539441.65	-9539441.65	-10145029.3	3275960.24	-23307667.3	-1020092.39	1849267.2
	1626	8213727.23	1729257.18	723818.15	-723818.15	10218084.1	7090987.84	8422605.85	4890918.15	8250690.82
	2075	-278638.06	-166708.69	-10908078	10908078	-4382628.17	15886188.8	7130764.22	-1045424.4	7381155.98
3B23	225	-2877440.9	-403366.69	-854812.71	854812.71	-33870821.7	-27505800.8	-25501414	-19062021.9	-17837899
	2262.6	18513610.3	3194732.66	491569.76	-491569.76	35044159	29150508.1	28116131.3	19959764	10083186.5
	4275	-130643440	-9130896.80	19399721.29	-19399721.29	54281583.2	41287697.5	45500926.4	-17993428.1	-31484765.1
3B24	225	-23050673.0	-4631113.29	-1361174.75	1361174.75	-34501589.2	-28781042.8	-26902875.8	-22207603.5	-18753649
	2262.6	18513610.3	3194732.66	70706.94	-70706.94	33718015.8	19314443	19462937.8	14126013.5	14263286
	4275	-18772452.9	-3570901.88	1219760.85	-1219760.85	-29440306.2	-22854918.7	-25418326.5	-15657422.5	18897092.4
3B25	225	-24234167.5	-4101350.84	-1748091.74	1748091.74	-25642162.3	631165812	7783282.8	2203220.5	-20138295.7
	2262.6	18513610.3	3194732.66	12538.49	-12538.49	28226432	13008520.4	18938198.7	18875723.5	15817182.9
	4275	-14942022	-3594386.12	1811124.6	-1811124.6	-19045895.2	-21047421.0	25607754.8	-5827969	19053026.6
3B26	0	2809887.2	5054230.25	-117687.4	117687.4	327087.3	43401121.3	3609371.6	3635703.1	25172441.8
	1012.6	12550242	3000383.89	838431.2	-838431.2	20356612.6	18975894.3	1682088.8	11870704.5	10719739.7
	2025	-25004628.5	-5300093.3	1406469.75	-1406469.75	-39730581.9	-3086468.8	-30818426.4	-21188262.9	24888995.4
	360	-28749967.5	9457875.05	2142941.48	-2142941.48	-49554231	-4134898.1	-6844821	27803008.3	-30945314.7
3B27	1250	8401477.20	1167274.84	-1094566.25	1094566.25	9649412.17	8874696.15	8974256.35	6776911.84	6748727.15
	2250	2736680.7	3986726.92	-48331	48331	42889765.8	34749478.7	34848820.3	24949546.7	3693342.5
	250	-30144081.1	-9866771.17	-2631409.82	2631409.82	-618629931.2	-40576254.2	-28319203.8	-29407341.8	-24351404.2
	1250	5962461.37	1009653.92	-1241769.05	1241769.05	8758399.92	5000329.96	8500944.82	4239626.01	6474824.46
3B28	2250	28284754.0	6042680.38	-47821.7	47821.7	48855837.3	35485704.9	35385256	25491529.21	25395228.6
	0	26581774.1	6179221.03	-24673.9	24673.9	36022.9	44130883	34923951.3	25897602	26701075.2
	1012.6	1402680.4	3721558.02	974862	-974862	27782908.7	19265340.1	17218132.9	13498300.8	11743934.2
3B29	2025	-23562422.3	-4624768.86	1984747.88	-1984747.88	36963548.8	-27016475.1	-31184445.8	-19410915	-32883462.2
	225	-28184147.8	-4984468.11	-2453231.8	2453231.8	-41786126.0	-3667570.9	-5172784.2	-27573641.1	-23167824.4
	2250	15340743.9	2865723.18	21764.03	-21764.03	23154049.8	1803341.7	18887537.3	13828207.1	13787001.9
3B30	4275	-16530636.7	-2704204.28	2496754.86	-2496754.86	-2618093.4	-5851989.4	1742376.4	-48291611.9	13496140.8
	0	-14800429.1	-5107730.77	-28548919	28548919	31941496.3	46780161.9	3176888.05	24086222.2	-256331.85
	2807.6	17481652.4	6566254.90	20679136.6	-20679136.6	51941496.3	46780161.9	3176888.05	24086222.2	-256331.85
	4275	-8895692.98	2699320.36	77907309.2	-77907309.2	-12410106.9	72114971.5	-91490377.8	63910104.7	-76322972
3B31	2250	15721618.7	2991572.91	-80856.23	80856.23	26838016.7	-27919158.8	-28066907	-20311585.5	21321034.1
	4275	-18824040.7	-3219269.19	-748044.99	748044.99	-3949883.5	-24041734.8	-22073150.4	-19513887.1	-17189786.1
	225	-26133976.4	-6182541.39	-2077978.37	2077978.37	-41252717.0	-85464834.1	-31101509.5	-26090299.3	-21850673.2
	2250	20388216.5	5818470.52	23917.8	-23917.8	33177590.1	26931178.8	26809951.8	19170900.1	18327864.5
	4275	-38259763.5	8661003.28	2125513.47	-2125513.47	-60217321.4	-37767510.9	-42231188.9	-26366626	-29192746.3
3B32	224	-34841812	-8113890.83	1061066.8	-1061066.8	-6811071.4	-43871687.8	-46099802	-39222724.7	

3E8	2500	26129410	7815305.06	153793.59	-153793.68	4838336.1	37116492.4	36730061.9	25499125.2	24181708.8
	4275	32388892	9495308.42	1741539.64	1741539.64	54616926.6	-44207110.6	-42709937.4	-30286108.5	-28451327.7
	0	5558261.9	829523.06	18409768.2	18409768.2	8156887.15	27039946.8	18881154.9	22467204.1	12467278.7
	2387.5	161943700.4	8147467.15	-125735.12	179726.12	23466495.8	24359478.8	25545711.7	14328270.2	14369231.9
3E5	4275	-63038586	-20003676.1	-20558721.3	20956721.1	-124908902	111830691	77516768.3	70398767.7	46176177.3
	0	-14715376.1	-6129240.29	38353779	38753779	25944071.3	58925519.5	19247414.3	46320163.3	1963852.1
	2387.5	17798468.4	6521615.07	20759532.9	20759532.9	31004746.8	46711932.2	1123004.41	34898590.6	-2562747.67
	4275	-71345440.4	76211000.87	54187042.8	-78267042.8	-12337468.2	72749028.8	-92211775.4	53957175.9	76813401.2
3E6	2250	15467061	-2237830.93	1750763.97	-1750763.97	32860081.3	-16959957.4	-20053354.7	-12744667.3	-15190327.6
	4275	18873864.3	3184086.79	297941.01	-297941.01	38070362.3	23304649.1	27089965.9	17560016.8	18773721.9
	0	20709512.2	-4644123.19	-1152881.88	1102881.88	32319011.9	37046210.3	-24944158.4	19712154.8	-17818907.4
	2387.5	14771027.8	-3710405.77	-3070002.81	1370002.81	33757942.7	37801153.7	-20784749.6	30626938.9	-14750912.3
3E7	2250	15525517.2	3193557.02	104020.08	-104020.08	21734471.9	19557779	10121207.9	-1414683.5	18381847.4
	4275	-1584207.3	-3492388.62	1738042.29	-373804.29	3088938.4	34198761.6	21956652.1	-17961848.4	-24590014.6
	0	20730482.4	-3045957.08	-82451.67	82451.67	24749960.2	-24732125.9	24698767	-16731820.8	-13802047.5
	2387.5	10742621.1	3195789.13	15467.9	15467.9	24762338.3	20195839.6	20120257.2	14771989.9	14751555.1
3E9	4275	-12017335	4212895.14	49896.08	-49896.08	-44656498	31941099.4	-25932051.4	26096429.1	-16790212.9
	2500	-29565040.8	-5192857.57	-3019044.96	3019044.96	-12842621.1	-28665499.5	-27248406	-17274677.2	-15731366.3
	2250.5	15416757.5	1670039.58	150787.47	716797.47	22764044.2	17921437.9	19426712.5	13339964	14628199.4
	4275	-2112345.5	-2167845.58	1585450.11	-1585450.11	31803002.2	-24546651	-27876186.3	-18474202.3	-21312872.6
3CX1	0	587018636	5526324.59	5896409.44	-5896409.44	19481350.7	-6345591	20731050.8	2664472.23	10399009.2
	2250	14486866.6	6023081.88	189814.2	-189814.2	28456181.1	21937341.4	21637371.4	13100662.7	50738500.3
	4500	-35365537	-15436531.5	-551552.13	551552.13	67117888.2	-6745200.6	-45263480.3	38819997.3	-25891931.5
	0	-9367490.57	-5542880.89	6203624.42	-6203624.42	-20100753.1	-3556781.4	21819182.7	-3820559.64	14548913.5
3CX10	2250	14621216.4	5927630.31	176120.68	-176120.68	28557555.2	22004736.6	21657235.0	10227572.7	1210515.9
	4500	-14736493	-15359470.5	-5891129.05	5891129.05	88350844.3	-6726202.6	-44876821.3	36808859.8	-26023827.8
	0	-27039545.6	42761843.9	600776.32	-600776.32	-52914092	-3997282.8	41024134.6	-23963673.3	64834708.7
	2500	14246567.8	6526179.54	140040.71	-140040.71	27537732.8	21973150.2	20979058.4	12847923.1	12595844.8
3CX11	4500	-21474710	5612653.27	-328437.97	222497.97	-47146295.2	31660766.8	-21987749.3	-15323678.1	-19128099.9
	0	-7561520.39	-4975245.58	-4725106.18	4725106.18	18574121.4	-17582822.9	-7510583.02	-111222043	-2489903.69
	2250	12569224	8198807.84	300284.22	-200284.22	26033651.1	19295446.9	18874891	11615339.4	11159063.8
	4500	-49448460	-17540851.2	619833.88	-619833.88	73813801.8	-53595761.3	-64509112.6	31724954.4	-41078965.6
3CX13	0	-18975500.7	8277738.79	167095.43	-157895.43	-37508402.8	-23533851.2	-298527561.6	16588449.2	-17219281.6
	2250	14738631.2	7137131.32	-307446.29	307446.29	28070787.8	21954033.3	22659670.5	1299866.4	13547499.7
	4500	-26012463.8	11183799.8	771987.97	-771987.97	-47854506.4	-37810244.7	-35885070	20300807.7	-31816609.3
	0	-17645174.9	-3765138.14	-135130.81	135130.81	1261102.81	-38908350.3	23077115.5	27930540.6	-16182475.1
3CX14	2250	14060301.9	7112834.32	-298558.01	298558.01	28252897.2	21771455.5	21798432.4	17086556.6	12822974.9
	4500	-27242657.8	10565704.6	-481987.18	481987.18	-60081892.6	-39349442	-33376280.9	-24914182	-24102555.6
	0	30094771.3	6586632.79	165314.11	-165314.11	45148324	38781298	37109165.7	98938511.5	27234076.9
	1125	17347409.6	1426745.34	-1018701.08	1018701.08	28346119.9	13465768.2	23495221.4	13835783.7	17339507.8
3CX16	2250	-21684776.1	-5871991.8	-3871267.88	3871267.88	34072817.3	-31983927.9	-24262165.3	42280339.2	-18190357
	0	-63221213	-17089277.1	3814467.25	-3814467.25	-101322858	-78430069.9	86604420.1	-63376880.2	-6042103.2
	1125	3266815.14	2213705.82	1834183.41	-1834183.41	-7481857.18	-3606005.13	-7447790.29	1299188.36	-4560718.7
	2250	30421394.9	5734718.34	-248490.61	248490.61	88982358.3	37604800	37611300	27159138.4	27803271.3
3CX17	0	-38891829	16344746	839301.81	-839301.81	-70248778.8	63811733.7	-55361685.8	88336367.2	-35023817
	2250	10331404.6	6174795.35	265548.83	-265548.83	32167369.6	16580131.5	18206183.2	944959.24	8986571.95
	4500	-14661779.5	7100019.18	-296207.31	296207.31	-28891540.9	22407498.4	-21815443.1	174601187.2	-12925014.1
	0	-17559533	-15264011.6	616980.7	-616980.7	68611558.2	63109265.6	-44824735.8	-33158378.1	54623781.3
3CX18	2250	10346214.8	8206832.97	262750.26	-262750.26	22404790.2	17068426.2	16504849.7	849368.33	9120117.86
	4500	-13454454.2	7142034.11	-201290.15	201290.15	-29130159.6	25447568.9	-10184399.5	-13541299.9	32018757
	0	-60498630	-17077826.7	3871387.12	-3871387.12	-10386771.7	78980274.6	-87220145.6	-63863466.8	-60613807.9
	1125	-3501038.73	2272102.24	1875680.58	-1875680.58	7872612.48	3885347.43	7824108.81	1489892.56	-4869577.59
3CX2	2250	39272574	6799618.96	-220165.96	220165.96	4550674.6	66870130.6	37438479.1	27347187.2	27443489
	0	-24710390.6	-11080239.4	-274054.08	274054.08	-47320851.8	-36704493.1	-38128079.6	-22496080.2	-21992702.9
	2250	14345570.5	7165554.28	358838.61	-358838.61	26785789	22303374.8	21554117.8	13331386.4	12670860.5
	4500	-19324584.1	-9408367.18	947727.24	-947727.24	-38600048.4	-28458931.7	-30582258.2	-167734412	18861356.2
3CX20	0	29945553	8049474.79	-137308.37	137308.37	44974623.1	36637883	36926230.6	26827420.2	27674575.2
	1125	17287971.2	3515499.42	-1904346.34	1904346.34	26371953.5	1945538.5	23475024.9	18985233.7	17273095.4
	2250	-21834493.5	-5633243.95	-3671387.62	3671387.62	34847612.3	-31819535.6	64105520.2	-23779230.4	-18166799.1
	0	-18273640.1	18555405.91	117676.71	-117676.71	-39517451.5	-30762976.8	29894482	-12048014.1	-17726391.6
3CX21	2250	14195734.8	71077915.42	-389354.47	389354.47	803024.97	2879688.4	3106862.9	2191413.3	13028663.3
	4500	-26001393.9	-10747335.5	-499075.23	499075.23	-47187401.5	-38665719.3	-35948881.9	-23895422.2	-22106066.8
	0	-33929808.1	-11292757.7	-812562.18	812562.18	-96784151.2	-38551432.6	-34844440.3	-2228388.1	-20605260.3
	2250	14810389.2	7197115.18	-323369.56	323369.56	29271852.8	32803195.4	22652271.6	13038217.6	13520382.9
3CX22	4500	-19558826.2	-9150741.2	185114.62	-185114.62	-38778181	28111651.4	29480480.3	-17540743.7	-17386748.9
	0	-8811532.27	-6066358.29	-6947007.13	5947007.13	-13429557	-18159776.9	-630651.82	-62882344.3	-3227731.48
	2250	12927842.1	6155357.22	115295.64	-115295.64	24843042.1	18882842.2	16640721.4	11195644	10381111.6
	4500	-39959960	-17436659.1	6277588.68	-6277588.68	-75929798.6	-52875014.3	-83957971.5	-31196149.2	-40695820.8
3CX24	0	-28407949.7	-12830000.2	427805.28	-427805.28	-64777646.8	-41666060	-42496459.6	26182126.4	-25952183.1
	2500	14821638.4	5693895.85	290786.43	-290786.43	28467388.9	22184839.2	21584166.7	10602091.3	13078657.2
	5000	-19005192.8	-90989807.38	163753.8	-163753.8	-37384215.1	-28392258.1	-28715203.7	-18466187.3	-17242597.8
	0	-12603484.9	-9205901.52	818146.86	-818146.86	-2973036.3	20871292.4	-22685200.8	-10518613.2	-11667677.6
3CX4	2250	15551871.2	7180570.67	141626.85	-141626.85	30155963.2	20266547.2	22969436.6	14124060	13883308.1
	4500	-28599179.3	-11244863	-630389.14	630389.14	-53510475	-42285083.4	-41145031.2	-27118041.8	-26159491.1
	0	-48002332	-18294344.6	-3497586.33	3497586.33	-86873737.8	-71363059.3	-64019128	-40349917.6	-48054282.1
	2250	3010285.4	6718302.78	37280.87	-37280.87	24761628.9	19025451.7	19183799.9	11675704.8	11742906.9
3CX5	4500	819475.10	5088761.56	3423026.1	-3423026.1	7159546.34	-35513.37	-754986.18	3615661.13	-3346995.85
	0	-35442722	-16312166.4	877873.18	-877873.18	-89110735.8	-6202588.5	-54075822.2	-31378384	-33138636.8
	2250	11886884.4	8289589.33	-128526.80	128526.80	24031074.6	18301411.7	18594518.1	10582422.8	10869369.3
	4500	-13583926.7	-5826528.86	-1218925.05	1218925.05	-25780156.7	-21143582.9	-18583820.3	-10322666.7	-1112580

30Y8	4500	957776.15	-4677582.93	3351335.44	-3511325.44	-681460.13	176269.189	7717047.82	3970161.43	-2154194.46	
	0	13246008.8	-0331009.8	882613.40	-882613.40	-31105672.6	-23089097.7	-23089097.7	-11416558.5	-13088577.7	
	1250	15822132.9	7183163.99	129424.83	129424.83	38239588.3	2327239.3	23555410.5	14175460	384577.3	
	4500	-25416244.8	-11376373.7	-603769.39	501768.70	-51970941.7	-48235967.4	36780063	-26117112.2	-25303323.4	
30Y9	0	-34410929.7	11185792.7	270148.61	270148.61	-47148880.2	-3545454.2	-35811987	-32204882.9	-2713852.9	
	2150	14655466.9	7165961.99	375028.98	375028.98	35408069.6	32428868.8	21639199.8	13420292.3	12745440.1	
	3500	19772574.1	6138895.64	1012204.49	-1012204.49	-18591040.2	-20457159.3	-30664895.7	-18899332.8	-18679308.7	
30Y1	150	-6349338.2	-2572490.46	-1297250.67	-1297250.67	-15518663.0	-4094299.9	-8829807.19	-596812.68	-3662476.08	10732176.4
	3250	10797732.1	2615631.59	-152615.7	162625.7	18361877.1	14773566.1	15094082	8471589.78	8848313.02	-6485129.14
	4500	-5173441.82	2408419.43	302801.27	-3935072.25	-10874401.1	-7361147.87	-6424012.55	-4311755.73	-6330439.74	
	250	1450010.35	-1756474.26	-11244790.1	-11244790.1	-10702171.2	40189721.2	-43444134	33405136.3	34515297.4	
30Y10	1425	1819246.33	20076.37	3484439.12	-4444439.12	1810671.94	10802097.7	7207924.5	8102316.05	-6157674.77	
	2600	-7455041.99	-1672976.59	-2425591.71	-2425591.71	-11686812.5	-34354566.4	16091450.4	-2851780.1	16147754.5	
	150	-6148771.81	1812201.82	39476247	39476247	-10197028.9	-49979806.2	372004370.4	-41241426.2	29814817.3	
	1325	-5730777.49	-1309539.64	1098651.67	1098651.67	-3402231.41	-5185701.45	-8158489.67	5827968.31	-6687341.15	
30Y11	2600	-14328297.5	-3746267.9	42975551	42975551	21365262.3	21365262.3	-63649404.7	2559404.7	51481863.7	
	150	-2851512.69	-1011323.65	-568945.91	668945.91	-5032922.34	-4534581.21	-3840836.36	3087611.74	2055110	
	1325	2818010.58	771276.36	1613665.28	-1573665.28	3667314.53	4831376.31	1198939.70	3233596.26	4611163.79	
	2600	-2313361.37	-832200.05	3704076.05	3704076.05	-4126729.77	652619338	7118868.77	1240720.21	-5424711.58	
30Y12	0	-1148823.46	53769.32	401664.98	-432644.98	1203187.35	609454462	-1807550.62	-642742.632	-1421638.8	
	1252.5	703268.11	-24547.55	-828466.5	828466.5	698531.25	5568.34425	1014211.31	71910.694	120050.05	
	2525	-1191905.94	-242564.35	-1699599.02	1699599.02	1818871.17	-756008.91	261250.928	-269364.37	447422.062	
	150	-3444111.41	-1009833.95	-568448.68	568448.68	-5029754.03	-4627034.74	-3354297.84	-683011.3	-2637599.16	
30Y14	1325	1966535.85	768091.47	1677551.02	-1677551.02	3820089.37	4426611.25	1185124	3235776.19	276188.368	
	2600	-2376301.52	-344119.61	3713549.81	-3713549.81	-3201588.3	304394173	7119466.33	1201841.68	5483091.4	
	150	-6022782.97	-1633993.98	-19858419	19858419	-9873577.57	-48736093	31886288.8	-41281281.5	30486172.7	
	1325	-5870086.5	100407.67	1718287.98	-8686511.87	-6388617.23	-6942822.05	-3736408.67	8837751.73		
30Y15	2500	-14930670.3	-3712260.63	-43286996.1	-43286996.1	-13056661.4	16267946.8	-646389.46	-2552113.2	-51997679.7	
	240	13788939.35	1698940.85	42278608.5	-42278608.5	-42278608.5	41403048.8	-47261516.1	36980722.5	-39261794.8	
	1425	3054641.95	20625.73	8739876	-8739876	3714571.51	12412975.2	-5840344.44	10834886.2	5118533.55	
	2600	-7008984.24	-1726630.46	-24799155.7	24799155.7	-11172720.2	-36129884.2	17048542.8	-26526975	15011509.3	
30Y17	250	5878720.05	405985.59	37264882.9	-37264882.9	7750844	45713734.5	-32542619.8	38829242.7	-2824546.6	
	1425	6842111.93	2811981.5	6461162.54	6461162.54	12384666.7	16336721.9	2863301.53	11972889	347885.461	
	2600	7988770.46	-198875.66	-24342579	24342579	12021209.2	-35174928.6	16945887.5	28540217.2	15379426	
	250	-2232498.78	1077427.04	36098782.2	-36098782.2	-4462081.3	34541429	-41266013.8	30494665.1	-34488162.9	
30Y18	1425	1813676.81	82232.58	269176.73	269176.73	3813723.88	2604754.88	3078058.04	1460049.17	1954567.19	
	2600	-3158664.11	574852.09	36627138	36627138	-4702377.06	-1232319.6	34615170.2	35817321.0	30136126.5	
	125	6677230.37	1891579.59	2870304.51	-2870304.51	10918664.2	11707766.4	6880682.9	858282.89	3336198.87	
	1250	10126738.8	1850289.9	1060118.23	1060118.23	15114188.4	13455342.4	11269096.3	10887816.5	8158951.29	
30Y19	2375	-5609398.79	-170650.76	-760101.67	760101.67	-10636367	-23584111.26	7183867.15	-6823551.53	-5273368.04	
	150	-5995791.05	-2687532.33	-824887.71	824887.71	-11495031	-9701478	-7869210.81	6138610.88	-4863810.5	
	2250	10792746.3	3316194.22	-167367.77	167367.77	18057128.5	14773414.2	15103885.6	6571949.88	9885089.05	
	4050	-6111540.66	3382311.31	610172.21	-610172.21	-9997387.72	-7054277.05	-8125638.71	-4141231.93	-5058641.81	
30Y20	125	-1683897.7	-4504612.8	-2605194.63	2605194.63	-26214093.3	219513173.1	-18162399.4	-108394707	1181361.7	
	1250	44148.15	263019.99	184098.98	-184098.98	935049.764	586349.377	509740.519	683362.417	231974.253	
	2375	7513196.86	1471726.63	2873392.82	-2873392.82	1137801.5	12461702.9	8167678.41	9437932.33	4064826.02	
	125	-1168930.5	166875.51	893892.84	-893892.84	-6248895.9	-4058919.78	-5529501.75	7271260.89	-3479214.01	
30Y21	1250	9129193.25	3711260.41	-631625.46	631625.46	15812778.8	11484428.1	12810808	6837812.79	7974736.08	
	4375	16489440.8	-4921839.34	-1862108.96	1862108.96	28337371.9	22953216.5	-15832786.6	-15887485.7	12166697.8	
	125	-10121280.8	-47570.25	1839662.09	-1839662.09	-19826805	-10229642.8	-17081463.9	7454095.57	-10764977.8	
	2250	9464422.97	5622716.68	206817.27	-206817.27	18081862.5	11503718.6	13681860.2	6721276.22	8298795.13	
30Y23	4375	-6583521.89	-20544130.26	-1367327.65	1367327.65	-10563402.7	9743914.92	6872626.44	6687854.77	-4238061.54	
	0	6584043.37	-281883.93	334082.34	-334082.34	7181649.59	5778852.29	-6480226.2	-473464.84	-532613.14	
	2187.5	1069305.02	-162729.7	213123.33	-213123.33	1021598.5	1131729.2	744181.208	1152285.52	769883.821	
	4375	-3663173.8	-42773.47	82184.28	82184.28	-4533885.05	3675424.57	-3869669.98	-3114607.75	-3200093.45	
30Y24	0	-5501171.37	-293026.98	34608.46	-34608.46	-7022247.21	-5681443.11	-8388129.87	-4639819.82	-5282488.88	
	2187.5	1086130.56	-183232.62	213874.40	-213874.40	1018884.68	1188805.64	759459.237	1151184.62	76660.544	
	4375	-3641594.02	-61439.06	81913.37	-81913.37	-4472375.32	3799467.74	-3870409.62	320435.36	-3161873.95	
	125	16799192.3	-4912349.15	1630726.2	-1630726.2	26617887.3	14336132	17517554.9	2160420.3	-11036726.8	
30Y25	2250	8793670.82	3002618.82	332404.04	-332404.04	18618114.1	14036952.4	13338806.4	8112877.37	8616060.1	
	4375	-4875424.51	-1793990.63	-965917.11	965917.11	-809889.40	7814584.08	6786128.42	-6267207.46	-3516556.66	
	125	5685487.48	-1434943.98	352161.52	-352161.52	-658016.34	-4750720.82	-5490270.01	3909993.36	-3748864.1	
	2250	8259360.44	3293027.48	243926.05	-243926.05	14903762.5	11017933.5	11020078.3	7030847.94	7472714.85	
30Y26	4375	-1539080.0	-5876177.48	-840013.6	840013.6	-27869992.8	-22594597	-20330668.6	14607093.7	-13095889.2	
	125	16799192.4	6314227.85	1946186.29	1946186.29	-30262530.6	-24704195.8	27509304.5	16080565.1	-14176188.9	
	2500	10461045.6	4188750.02	-207146.26	207146.26	78783175.4	14891877.2	15088922.5	8174810.34	8547372.04	
	4875	-6948597.01	-1073004.1	830395.46	-830395.46	-13255123	-9337575.47	-10462466	5885931.37	-6821642.26	
30Y28	150	4759857.31	263062.18	40401093.6	-40401093.6	6180728.23	47504082.2	-37227204.4	40751655.9	-32172112.7	
	1200	834615.52	472786.43	1261161.76	-1261161.76	1757884.91	2847330.42	-1109.27665	1886189.66	-3818811.6	
	2250	-10082649.1	-1781696.09	-37968773	37968773	-14865932.5	-52147145.9	27688727			

4A39	0	51304429.1	15156176.7	-14349434.4	24840415	78456167.8	07936020.3	90111637.7	24238107.6	88011878.9
	1275	19267997.7	-10751913.5	-16675273.1	-76615292	-40352859.8	-112918600	63280061.3	-35294452.6	58526566.8
	2750	-129297176	-36511524	-1135041.4	131604178	211777206	-209518666	-31259934.3	-295711178	2796282.2
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	1275	13886309	103044607.9	-31004688	74006688	-32774843.2	-115044301	53013147.2	-28104093.6	54106663.4
	2750	-129602743	-36494841	-132150752	103161732	213198037	-30975009	-30130115.2	-136910046	3755009.1
4A41	0	88831074.6	28483844.4	-67211496	67211496	177051121	67748328.8	209839468	26511623.8	149482314
	1275	-173902047	1566285.2	-118611914	118611914	-32672087.9	-172406431	58778663.7	-138162266	27136173.4
	2750	197319646	-68964013	-172012122	172012122	-348397999	-461602589	-93276882.5	-332002771	20286591.6
4A42	0	119500720	38260102.5	-81903689	81893689	20182087	73848681.7	348826397	03936250.9	16104406
	1275	47418929	-17550009.2	-137758137	137758137	-34983718.7	211041324	78235174.2	-166678241	13135185.3
	2750	-152160011	-1111236	18765680.9	-9766620.4	-44427258	-55166807	-146609119	410244134	-6184087.3
4A43	0	83665937.7	30370244.2	-61861167	61861167	144670408	-80790148	282196995	1761687.81	148780959
	1275	-378607206	-18203447.1	-137344635	-137344635	-64894162.7	-210571026	79022151.5	-166817057	81478096
	2750	207443797	-76519374	-19421760.4	19421760.4	371370501	-44818201	-86187002.6	-361814427	11881334.7
4A44	0	11063187.1	-48638436	18006062	-18006062	-145369098	812018.18	380264863	-40706171.3	246846281
	1275	7218092.67	2687911.28	113411187	-113411187	12611823.1	14801578	-1127549811	124777305	-117677305
	2750	121867777	-4826867.7	74961625.7	-74961625.7	218019112	269274077	37460866.9	160782373	36148025.4
4A45	0	63331468.5	13077620	137030711	137030711	92980303.4	87611802	50576169.9	60807071.2	35791548.8
	1275	7145007.13	-808580.8	103411093	-103411093	728827634	-193368489	-16844796	-87089477.2	88940490.2
	2750	-88883391	-29437821.6	-121526246	121526246	-18120866	-351583107	271466232	12125012	12125012
4A46	0	48976171.12	11720983.7	56034370.1	-56034370.1	76883735.4	119483296	4363180.11	94695821.4	-6480218.03
	1275	26110403.9	3096518.26	70126687	70126687	26111881.1	-44124653.7	103061180	-40886541.4	6581279.2
	2750	-37862098	-9993173.90	-184483683	184483683	-61423200.9	-254468300	168057458	-210014645	141387368
4A47	0	-16067884	-16537876.7	-446742.52	446742.52	-9279486.5	-4061001.3	-73054942	43482780.9	-49159327.3
	1275	-12962086.4	-4906646.28	-2614893.4	2614893.4	-23466498.6	-20373425.3	-8121148.5	-13488650.6	-4843146.5
	2750	19765097.2	6944565.58	-2604044.21	2604044.21	94811813.8	24411304	30990295.8	14651717.7	21018997.3
4A48	0	71373043.9	7182041.81	2381638.68	-2381638.68	37106924	31699546.8	20730108.7	21018997.3	17110286.5
	1275	-140220.81	-3776476.87	967947.11	-967947.11	-17014119.8	-12183760	-14174938.8	-7366746.15	-8061000.96
	2750	-47693934	-14714976.4	-446742.52	446742.52	-6393807.4	-80909515.1	-62972455.5	-42773982.9	-41671527.3
4A49	0	8741846.95	2639078.29	142668709	-142668709	14712743.4	181476013	138128274	138128274	138128274
	1275	21468479.3	8106297.15	78462270	-78462270	62814202.8	124121207	-40558455.3	39919628.3	-42294366.8
	2750	24267662.8	11182036.1	14235728.2	-14235728.2	52775721.1	56867444.2	38199414.9	39698502.3	13474194.1
4A50	0	2289468.4	7482516.35	2296227.66	-2296227.66	39321786.8	33320962.4	28488884.2	22481826.5	18588598.6
	1275	-1178203.5	-4420782.23	1804438.84	-1804438.84	21188286.5	-15480842.1	-17589953.7	-989268.18	11489278.1
	2750	-33654470	-1803480.5	-287350.09	287350.09	-80523658.4	-72074714.8	-71471779.8	-48547840.2	-48030410.8
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	4350	-21828595	-2325166.27	2430419.87	-2430419.87	-30016580	22681506.5	-27735408.2	-17408148.6	-21831322.4
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	2250	-1606812.15	2775306.89	2447442.02	-2447442.02	-4884181.24	4432741.71	-706836.532	754046.203	-2651348.75
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	2275	-76517.91	-1982269.82	-12257258.1	12357259.1	1420469.32	10879299.8	-11707001.2	-11100388.4	10962666.3
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1E19	0	-1558801.72	414549.35	485551.23	-485551.23	-1538825.1	-1014763.15	-3256420.71	-1205511.94	2087574.16
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437	150	-26241305.7	-3975211.34	1806980.69	1806980.69	37790710.5	-29345179.3	-33207736.2	-2108928.7	-25070458
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	1200	10012546.7	151291.86	5306007.44	5306007.44	13744024.6	17786732.3	5448567.64	15105737.5	4547044.41
438	150	-21734861.4	-3181591.34	-5357972.51	5357972.51	-31158405.0	-31459350.4	-2013680.8	-2493098.6	-14275717.9
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43K10	650	-52951146	486310.27	-333133.62	176317.82	82315271.6	57020756.1	53390701.5	69256462.1	48397569.7
	0	1558940.13	251588.72	-454663.4	-454663.4	2278876.11	2348230.04	1798246.91	1810073.15	992139.357
	387.5	-27097651.9	421801.28	104080.35	-104080.35	-26537172.3	-22868425.5	20940693.3	-19763271.8	26006131.5
	775	-46274695	592770.78	-185841.7	185841.7	-54831997.2	-4213356.5	-47833499.3	-43814462.5	-4147596.9
43K11	0	-36021.08	806601.04	187883.05	187883.05	1980171.9	-984852.32	617760.195	-174488.690	109044381
	500	-21751150.1	-1875261.82	299158.44	-299158.44	-29166100.6	-24195497.0	26037274.3	10216785.2	-19938275
	1000	-43246761	334591.14	965164.18	965164.18	-67844431.6	49336320.1	-60361765.1	53054355.1	-40776350.7
43K12	0	221992.56	-822027.44	-106130.05	106130.05	-1049672.71	1717786.69	370999.586	50680.349	347843.439
	600	-10026444	1392645.8	418621.46	-418621.46	38130908.8	23030818.2	-24201813.3	1045520.3	-18211388.9
	1000	-42957730	-296325.37	1004142.94	-1004142.94	-56290557.7	-46851603	-40980309.2	33778873.4	39656730.5
43K13	250	7131855.98	-1339130.42	55057632.8	-66037832.3	-8770988.89	50238171.5	85466216.8	43160779.1	-55997718.9
	1425	5914524.75	924695.84	7680242.55	-7680242.55	3676644.32	15022044	854185.276	52127580.8	-1491746.00
	2600	-2969462.74	-1318387.49	-19967148	39967148	-6850591.03	-47368910.9	38882614.9	28524110.7	32407105.7
43K14	150	-5618940.14	-1374307.73	-25234265	35234265	8941184.54	-44184387.0	28757778.7	-26767834.6	28663972.4
	1375	8710098.51	317997.16	1706438.84	-1706438.84	7543322.75	3658666.9	4863305.34	7574883.62	4503293.7
	2600	605361.17	738103.46	38647244.7	-38647244.7	1807398.82	41913743.0	39245469.9	36327345.3	34237695.2
43K15	250	-48398500	-7682685.1	2109546.9	-2109546.9	38176020.2	-45681808.8	-89582453.1	-24570075.7	61542098.3
	1600	-14130571.9	-879380.46	9746500.01	-9746500.01	-24763567	-9211064.41	29686014.4	3842904.7	21492064.7
	2750	1601974.62	41183.32	1696644.68	162654.68	3580384.14	304740.904	3745936.62	4516.046	2878398.09
43K16	350	-104218897	-76817098	3125712.03	-3125712.03	-161356433	-146939882	-147600847	20081168.5	-95607448.1
	1500	-41499233	-14184188.6	2623740.23	-2623740.23	-32689140.2	54037756.6	-59637611.2	-35077943.4	-39820878
	2750	2604015.55	1036184.44	1921788.25	-1921788.25	4276438.58	5815901.49	1780169.15	4145749.82	56855.17
43K17	0	1483001.5	629174.8	298338.74	-298338.74	2781084.16	2481014.97	1939207.71	1807904.42	1372466.28
	1250	-32034147	-11279778.7	7322121.84	-7322121.84	-66488622.3	-35607017.7	61993473.2	-1234022.6	-3542062
	2500	-84098110	-20574312.6	14347906.3	-14347906.3	-149326832	-102120989	-102261593	-62767082.5	-88893314.5
43K18	150	-14472757.9	-3765948.84	-41216576	41216576	-23041627.6	-61817862.2	24847227.4	49891480.5	24456436.3
	1325	-2287712.69	-2109461.26	10311021.1	-10311021.1	7284673.29	9402127.42	16257016.4	5338877.87	-12220893.3
	2500	-8193319.47	-7199366.9	61938620.7	-61938620.7	-23549370.4	48580109.6	81480993.0	47470771.1	-64018746.2
43K19	150	-3694010.77	-1027470.3	888831.88	888831.88	5854679	6687469.17	-3799817.26	-4044143.77	-2420158.02
	1325	-2044810.92	507854.25	-2261495.15	-2261495.15	3474339.87	5125431.11	374214.293	3976655.44	195505.014
	2500	-3158868.21	-1036321.66	6423857.08	-6423857.08	-6823384.51	1365927.34	-10034162	2041074.48	7721569.28
43K2	150	-51157366	52595.57	-2699600.85	2699600.85	-62919799.9	-58042243.8	-52562091.8	-60309812	-45485526.6
	675	-23738988.3	28629.17	1734137.51	-1734137.51	32866187.2	-28494262.3	-23365677.5	-22925523.4	-10604075.9
	1000	5042208.77	-12047.21	-859874.20	859874.20	6821412.59	4075476.06	8178681.94	2776248.23	5315882.9
43K20	0	-8562752.33	163910.72	742762.22	-742762.22	1377052.84	-610080.785	-2369840.46	-319008.499	-2150959.5
	1375	2074306.78	446365.58	1554951.86	1554951.86	3160155.46	1452975.24	2688374.16	881421.228	2789334.68
	2700	-960062	744370.46	-2852966.02	2852966.02	39603.336	-3299530.09	2691047.66	-2401473.22	1700307.82
43K21	150	-3577501.84	-1021877.88	-901172.73	901172.73	-5928042.73	5888314.38	-3778851.84	-403834.11	-2408713.2
	1325	1871453.68	822874.64	2260338.49	-2260338.49	3381543.66	8038776.86	276683.735	2612113.79	-264497.319
	2500	-3319461.77	-1120169.5	5431851.71	-5431851.71	-5775613.32	1159469.76	-10247428.8	1801159.36	-7876173.13
43K23	150	-34730700.4	-3667390.33	-41725017	41725017	-22649605	-61873797.1	22748798.5	-49910149.7	25194884.8
	1325	-3454343.08	-2066321.79	10311040.1	-10311040.1	7484128.58	6324565.26	-15130969.9	6701037.3	-12478844.0
	2600	-9878808.88	7099545.42	62547997.5	-62547997.5	34618120.6	49496376.7	82361328.1	47211612.7	-65271162.7
43K23	0	1065940.76	466911.92	106184.78	-106184.78	1932909.57	184838.02	1425901.98	1045312.98	364780.379
	1250	-32195890	-11166052.1	7533985.95	-7533985.95	56724751.4	36847408.5	-5246639	-22375713.6	-3683888.4
	2500	-84080500	-10168235.1	14961766.7	-14961766.7	-148509908	-101789293	-102804071	-62478995	-89408085
43K24	250	107347011	-34262305	398467.14	-398467.14	-191629701	-149395085	-160231850	-95253665.8	-88070302.3
	1500	-44366666	-15625551.6	908186.71	-908186.71	77126777.6	68303478	61189465	-38223882.0	-39862025.5
	3780	-842067.49	612669.47	153064.22	-153064.22	3310651.24	-4220667.43	100768449	3713014.36	307491389
43K25	250	-86726966	-32036480	6334874.52	-6334874.52	-155447360	-114780080	-128022536	-72441902.4	-63644801.9
	1500	-32620326	-11771802.9	3198487.63	-3198487.63	-67078276.9	-42019094	-48722006.1	-26481464.6	-32135132.3
	2750	3852520.87	1099298.79	59000.42	-59000.42	5421902.87	4304884.5	4183067.82	279466.98	2895068.27
	250	507889.46	-1066046.23	67825564.9	-67825564.9	1096446.02	60347509.6	-61296187.2	6258993.6	61678052.4
	1425	1990088.82	317640.12	7872193.7	-7872193.7	2696330.73	10760566.5	-5381040.21	8866054.27	-5383894.39
	2800	-7367402.18	-1548798.93	-41961180	41961180	-11395780.9	-63324689.4	34825494.9	-44413726.7	31162497.7
43K27	225	-27117866.9	-353448.32	2363648.40	-2363648.40	-3317117.5	-11396006	-26325717.3	-26536832.8	23278625.6
	612.5	-2321978.73	-190919.59	-1125427.02	1125427.02	-2871845.82	-3695190.86	-1331807.61	2012661.58	-889900.129
	1000	-221403255.1	-262898.88	113102.36	-113102.36	26529542.3	23442441.4	2104926.5	20030721.7	19827137.6
	225	-27981762.4	340000.88	2360331.83	-2360331.83	33016850.4	31275494.1	-26255797.6	-28624876.6	-2222278.7
43K28	612.5	-3317961.73	-190721.48	-1130161.91	1130161.91	-2966709.14	-3695763.16	1322422.92	3813211.33	479619.794
	1000	2216177.5	-32443.09	130007.73	-130007.73	26488204	23326786.7	33053769.5	2002056.7	19780682.8
43K29	0	9909888.95	-380377.88	-2648758.92	2648758.92	10826358.8	8683713.82	12426107.4	6175089.03	1042885.1
	387.5	2342389.59	-45170.65	-239968.55	239968.55	2618394.15	2653855.83	2568789.8	1262178.93	2214123.34
	775	5556911.63	270036.47	2188921.99	2188921.99	8234862.03	3301136.69	7855712.8	2040017.69	8062167.05
43K3	150	-63911284	521052.34	-2786004.78	2786004.78	63869867.1	-6802099.6	634		

	327.5	2266748.66	-45918.37	330443.27	214242.27	2095420	-1098682	2160200.67	1861264.65	2223082.74
	735	-5569499.7	264267.01	2202694.3	-2202694.3	-6225680.42	-1116327.46	-7941495.48	21657124.28	-7012174.8
4884	0	6084710.37	31338.02	-528874.25	528874.25	8448991	5046271.52	5200447.44	4340446.7	5330064.36
	435	-23414643.8	185606.11	-1235715.45	1235715.45	-37754604.4	-25701140.4	-23399677.8	-23399672.3	-10956835.5
	800	-47812734	324174.1	-10186768.75	10186768.75	-87776113.3	-57141378.7	-51070487.5	-43261692.6	-46364220.4
4885	150	32807146	247703.41	308000.00	-308000.00	-39764001.0	109156219.5	-30447235.3	-26298728	-32764132
	575	-14113233.8	-154079.11	1263454.6	-1263454.6	-11509944.5	17204407.1	-13652847.0	-16326562.6	-11508851.3
1093	2032340.65	-80454.31	-1088427.35	1088427.35	1088427.35	-4660393.69	2941590.46	6164367.17	2586701.24	6481688.93
4886	0	5552611.47	-101088.09	-1343253.65	1343253.65	6621331.82	4424207.28	1200170.34	3676421.86	5299278.72
	425	-13834361.34	-472279.19	1066611.33	-1066611.33	-17356879.5	-11752556.5	-18192265.4	-9891074.51	-162116776.9
	652	-13356661	-843468.36	7475268.36	-7475268.36	-42101143.9	26803468.3	-44384702	-20931065.1	-31292326.5
4887	0	6613870.14	100194.03	1704256.14	-1704256.14	6376230.28	4315580.54	7283827.44	1787189.5	6307221.65
	421	-13799539.4	-466022.51	3045426.48	-3045426.48	-17013834.6	-11721489.3	-18130305.5	-2874649.82	-15497721.1
	850	-11548075	-831943.07	-492212.12	492212.12	-41252000.5	-28466993.4	-44194640.9	57771178.4	-77127162
4888	150	-12611036	-175172.17	3625960.8	-3625960.8	36486481.1	-30434190.6	-30477104.6	-25948772.6	-31042463.4
	575	14085456	-129641.66	1381826.6	-1381826.6	-17109972.5	-11431271.1	-16143208.4	-11440056.8	-17902453.4
1000	3832598.78	-89110.9	-1104115.26	1104115.26	1104115.26	-4420541.1	2801592.9	5120444.24	2475545.17	-4681172.84
4889	0	1678469.86	261450.82	406441.35	-406441.35	2422855.12	2427826.31	1673300.47	1890220.73	1137625.3
	387.5	-21702356.2	453218.57	69401.94	-69401.94	-25018729.7	-21264703.9	-11452499	19461467.7	19652581.1
	735	46005853	648188.33	-717807.95	717807.95	52693125.6	-47514816.5	43056769.3	-4150141.9	-48940393.5
4890	225	-2048001.24	2275726.84	1706429.33	-1706429.33	7257419.12	-4034677.31	-8814464.96	1657234.27	3627067.96
	2250	3695611.02	3099407.4	29039.11	-29039.11	2047006	5841061.43	5734103.5	3363204.00	7004697.29
4891	4275	-22240662.8	-5175218.16	-1151358.59	1151358.59	-35169952.4	-34502083.6	-23034830.2	-21852987.5	-19380547.5
48910	0	-7934681.24	-5440121.64	-4672574.93	4672574.93	-12026032.2	-3660032.11	18076429.5	-3904806.22	-1384641.1
	2250	8651066.72	6761361.44	71155.58	-71155.58	21151430.4	15319449.8	15370023.4	3849901	7721911.1
48911	4500	-47969721	-15914983.7	-4530263.98	4530263.98	-83027482.6	70164552.1	6056009.3	47245968.4	-26095511.4
	0	-26874077.1	12575947.0	60948.52	-60948.52	-62378029.2	39495207.1	-40745439	-23633930.7	24732299.1
	2500	14762779.7	6188695.07	225970.77	-225970.77	20270247.3	21970958	21496413.8	13489878.1	13683125.4
48912	6500	-20858893.9	-8959574.85	-157640.87	157640.87	-40347108.4	-36988778.8	-26875739.5	-3570470.4	-18468648
	0	-4545228.71	5748077.75	-6702680.95	6702680.95	5752680.95	-13643870.5	-30309402.9	-12170770.7	1995419.02
	2250	11152997.4	5152299.1	64370.32	-64370.32	20219875.6	17800457.0	17484018.2	10037670.8	9386124.26
48913	4500	-46361894	-18756880.3	-6852681.46	6852681.46	-83432817.3	-67287570.3	71747039.3	-35514267.3	-47920946.5
	0	-31490631.4	-11086621.4	1239327.99	-1239327.99	-43517471.9	-31724856.3	34377446.1	18236083.1	20458973.5
	2250	17009383	7147091.85	-460214.29	460214.29	21346496.0	24146156	26059605	14202788.4	16713174.1
48914	4500	-17690149.5	-8441067.2	-2138758.50	2138758.50	-60344671.4	-29752309.5	-25258820.6	-17864118.3	14002654
	0	23800807.2	3007883.04	283089.63	-283089.63	-42980017.5	-38271118	33587451	-21132448.9	-21681641.1
	2250	14848189.2	7037276.31	-60224.56	60224.56	28171059.2	22322186.8	22368800.7	3350768.1	13415772.5
48915	4600	-19707350.6	-11615475.8	-40443.83	40443.83	-42233697.3	-30303821.6	-31244700.1	-18100592.5	-17377632.8
	0	-22672940.5	13384267.3	3079120.95	-3079120.95	-57558044	-40968880.7	-47483047.1	-23828945.1	-29436353.4
	1250	14374760.7	7303258.73	-19236.28	19236.28	15534430	21314697.9	22014876.7	12916873.3	11664692
48916	4500	-14829952.5	-6327557.87	-3117587.61	3117587.61	-27916835.5	-24823400.3	-18279476.2	-15151886.1	-10540228.4
	0	-26712862.8	13943408	3133678.75	-3133678.75	67681079.5	-41094372.6	-47674805	-23821481.2	-29561905
	2250	14425130.1	7316137.98	9918.3	-9918.3	29027976.2	22681851.2	22680227.7	13006543.5	12982890.6
48917	4600	-14823176.9	-8233987.98	-3113742.22	3113742.22	-17519007.2	-24612001.8	-17974143.2	-65931226.3	10358490.3
	0	24495171.7	-8135716.08	232110.3	-232110.3	-44611367.7	-34109475.6	-34808907.2	-21367560.3	-22254530.8
	2250	15426691.5	7038429.44	-57047.97	57047.97	20873116.9	22848201.8	22660692.3	13835779.2	13983686.5
48918	4500	-17945681.3	-11486122.3	-346208.24	346208.24	-3480338.0	-29961417.2	-29234368.4	-18816001.7	-16755090.5
	0	-17110771.5	-11428275.4	1318578.91	-1318578.91	-38341766.4	-27101172.5	-23070169.2	-14215873.3	-8685415.4
	2250	16168313.6	7123838.83	-476335.26	476335.26	30797725.6	23203781.3	24204084.4	14178785.1	14971188.5
48919	4500	-21776004.9	-8424758.57	-2271249.28	2271249.28	-43618819.6	-36980738.7	-31493115.2	-23442428.8	-19364280.1
	0	-22281607.4	6887377.47	6978096.22	-6978096.22	-24162802.4	-26738599	-11134886	-1733420.5	-4722891.26
	2250	10744965.6	6104825.6	-48955.38	48955.38	22851678.6	17001868.7	17100681.4	9628205.63	9712732.52
48920	4600	-18434673	-10717433	-6884476.74	6884476.74	-74089328.4	-49975942.6	-64433342.9	-73290361.1	-41687419.3
48921	225	-4047827.57	2368070.09	1895490.62	-1895490.62	-8649305.02	-4718320.12	-8267810.42	-2125120.33	-5158986.44
	2250	3874750.35	3110728.94	12081.08	-12081.08	9688803.62	6819798.94	8785460.71	3318130.27	3296420.36
48922	4275	-22287949.3	-5060585.08	-1681268.44	1681268.44	-34842491.3	-29928048	-26440172.3	-21554308	-16363922.1
48923	0	-26823347.3	-12086232.4	825046.05	-825046.05	-61006798.6	-38468262	-29772218.6	-28877932	-23604093.1
	2500	15815706.9	8760874.13	464427.91	-464427.91	29328245.7	33523068.5	21605788.1	14870129.4	10788150.3
6000	-18803671.3	4160095.07	383210.57	-383210.57	34817231.5	28875601.2	24586243.4	17334323.7	17962103.7	
48924	0	-692710.19	5290742.01	4411310.15	-4411310.15	6456039.44	1185723.74	10463330.1	8247139.96	-4594088.31
	2250	848631.04	6709955.77	84849.53	-84849.53	21354266.5	15710852.8	18543082.8	8339952.51	7827693.26
48925	4500	-54616443	-10007567.7	-4242511.06	4242511.06	-51391823.9	-77138043.3	86329770.6	-53152629.7	-46616638.7
48926	0	-21658634.8	-10904648.3	811317.97	-811317.97	-47178800.6	-31664576.4	-33268943.8	-18223586.3	-19682957.4
	2250	17502194.7	7101759.36	265740.32	-265740.32	32449449.7	25427347.5	24289286.6	18018144.2	15539300.3
48927	4500	-17063344.1	-10648543.61	-279831.19	279831.19	-35839342.5	-27360206.2	20752568.7	-15621902.8	-15123206.6
48928	0	-23722191.5	-9872609.45	766771.01	-766771.01	-42463886.3	-32575892	-43860660.6	-39688733.8	-23242721.4
	2250	14874175.8	7128242.48	260184.79	-260184.79	29258998.9	32626358.7	22073010.8	13512096.5	13162810
48929	4500	-18735149	-11492417.2	-246442.38	246442.38	-42070042.2	-31843102.1	-31321373.1	-17965229.6	-17538030.3
48930	0	-33354399	-15055845.2	-3219587.29	3219587.29	-64114632.7	-52580376.3	-45888411	-32816651.5	-27121402.5
	2250	16616609.1	6924398.77	22350.34	-22350.34	27288958.2	20768466.3	20712529.9	12185114.7	12144884.3
48931	4500	-12816685.1	-5910191.94	3264207.62	-3264207.62	-24947630.4	-15620158.3	-22475004.8	-8690300.83	-14474804.3
48932	0	-33506235	-15134977	-3095754.06	3095754.06	-64423445.2	-52734642.8	-48230697.4	-37341790.9	-27269452.1
	2250	10464138.2	6817838.67	-88946.46	88946.46	27261188.3	20766511.5	20856671.7	12166678.5	12102476.8
48933	4500	-12711593.5	-5947457.46	3186653.68	-3186653.68	-24610218.1	-15524209.6	-23222482.3	-8573024.34	-14311401.5
	0	-24188737.8	-9143584.83	790324.86	-790324.86	-43556221.2	-33218021.3	-34848703.5	-2108871.6	-22401158.4
	2250	16082158.9	7120279.7	256488.08	-256488.08	29881435.8	35241744.4	22703122.6	14148778.8	13689133.7
48934	4600	-18992386.4	-11415081.3	-277352.72	277352.72	-49476046.2	-30076065.1	-28404624.4	-16632646.3	-16634411.4
48935	0	-16761039.0	-10944915.6	851978.7	-851978.7	37525112.5	-27047488.2	-25806614.5	-14318154.8	-15651718.6
	2250	17630600.4	7128738.24	273416.3	-273416.3	31481839.5	24500400.5	24018223	15303614.3	14811466.4
48936	4500	-22984177.2	-8616322.32	-305147.7	305147.7	-42967128.4	-32541215.7	-32900405.8	-20980392.4	-20411126.5
48937	0	-8866777.39	107114.16	318810.72	-318810.72	-6438800.23	-3940639.98	-7662238.79	-3461387.3	-4937032
	500	-8866046.8								

	5000	58077218.0	-112745.63	1567349.51	-591948.11	-2241620.11	-497111.36	-2012010.57	3941732.04	-4957251.24
	10000	-4946747.29	146281.94	2111667.27	711988.17	-2701162.43	-4303999.54	-5600162	-1311661.11	-1092499.4
4E11	0	-13443741.5	86746.37	5626110.26	-5665130.26	27146117.7	14087616.8	29156289	-12333661.4	37746494.9
	1500	-13469971.47	-1129777.2	763101.36	761101.36	-4499441.34	-1844171.29	-5118444.26	-3619747.3	-4499534.33
	2500	-13849900.7	-111689.28	4070921.85	4070921.85	-4070857.21	-15158466.9	-16664463.5	-11011746.2	-14057067.5
4E12	0	-11150179.8	1444711.08	15048164.9	15048164.9	-10514941.2	-22036014.2	-1465176.36	-12136613	-450621.22
	1500	-109767.67	-1552052.55	-4450454.81	-4450454.81	-6081467.74	-9276677.62	1921710261	5676651.05	1245877.87
	2500	-21347139.1	1071364.23	5115456.8	5115456.8	-32699465.9	-40211974.5	-27612613.5	-14069566	-26215683.2
4E13	0	12444681.2	1341191.81	-15123469.6	16208469.6	-12156667	-32642951.7	1267324.42	16176990.4	2100154.95
	1500	-1237860.56	-444526.61	-4466416.62	-4466416.62	-4018201.62	-7467335.33	1360136.59	6107063.47	3670690.46
	2500	21701568.3	-641964.27	6177616.34	-6177616.34	-21869681	18703697.6	-13261964	1794151.2	34361761.8
4E14	0	-15114493.5	144461.57	5203711.17	5493711.17	12756269	-17449224.3	-26117005.6	-1146714.1	12451273.1
	1500	-4112701.11	111101.31	-14638.61	-14638.61	-1515173.75	12561130.17	6014031.39	1656104.71	-446742.91
	2500	-21125196.8	-416765.92	-412151.31	-412151.31	-2461421.6	25980221.4	-17126479.5	-1764895	1441216.1
4E15	0	19811242.4	611227.1	9215711.25	9215711.25	-12737623.5	8931866.12	-26636444.5	-6046617.44	7651410.5
	1500	10066437.1	-430801.74	-4761201.96	-4761130.74	7631746.15	11094934.7	6993169.07	14676431.3	684916.51
	2500	-4146610.21	1193019.21	-206940.08	-206940.08	-715851.95	-5414151.49	-531747.24	-3512531.95	-3005090.51
4E16	0	-13025695	577555.99	3042771	-3042771	-12131851.5	6965134.44	100038716.8	5467161.8	26115463.4
	1500	-11044461.3	611440.61	5611561.21	5611561.21	-1033037.6	15465269.4	5933219.4	-1546555.4	-540453.37
	2500	-3061066.76	-1444661.8	-160591.95	-160591.95	-8204901.76	-46071101.27	6001357.46	27097101.42	11817991.82
4E17	0	-1899236.34	2769124.84	2927157.87	2927157.87	-6496863.21	-6662107.71	-6151191.68	-4349126.7	946763.106
	1500	6347957.13	-501265.31	-7072359.12	-7072359.12	6214661.79	-1269192.06	1069156.2	-110701.81	11012280.2
	2500	-6265046.42	1006712.04	112277.28	112277.28	-5600666.6	-17417663.7	6161661.26	-15744144.9	4467461.16
4E18	0	-1106791.21	-1076215.5	-1067555.53	-1067555.53	-4608178.78	6461381.1	946871.71	106931.31	1247468.71
	1500	5921305.13	564071.3	249271.33	249271.33	6147061.28	-1171494.25	12475489.31	-117175.49	12355124.7
	2500	-6964406.83	876071.85	-1189466.6	-1189466.6	-5661773.25	-16631394.6	5609595.84	-166713.64	443644.02
4E19	125	11567709.1	-4003891.18	-1661164.41	-1661164.41	-24130574.2	-30141662.6	-1421637.76	-22033594.6	-2369461.63
	1250	3825684.81	162365.93	6270793.51	6270793.51	-1463949.92	76574793.05	4462411.21	-4039761.61	6007308.91
	2271	-5950895.71	-766561.01	872665.42	-873695.49	-6730667.66	-7449324.91	2714646.46	-3210369.2	5662051.32
4E20	0	-30718007.1	460615.15	159221.73	159221.73	-2535224.3	-31175447	-21560248.3	-27057187.4	-27256665.4
	1250	20514948	832275.76	601454.46	601454.46	77111367.9	22774292.8	81581181.3	1683644.2	18018261.1
	4500	-29311279.5	953221.57	903677.14	903677.14	-13644219.6	-26924792.1	-50032400.8	-25566565.5	27193416.6
4E21	0	4371105.92	700478.72	6665876.53	-6665795.51	7300399.94	1003389.4	1109798.28	1083666.1	1236834.64
	1187.5	-5370307.5	2174109.57	-4662077.46	-4662877.46	8667302.11	12756618.1	-1454475.56	-973466.46	-460887106
	3374	-2464861.3	9453835.85	1066461.4	1548461.4	-46024932.2	-61554659.5	-17726596.5	-1747007.4	-7617879.91
4E22	0	6771473.21	-1033389.04	5662467.87	-5661467.87	71613040.6	201361.34	14272821.6	1631111.26	11070639.4
	2366	14655656	5614845.42	-607584.74	-607584.74	28321014.3	25182745.7	16661454.7	16361141.7	6524004.65
	4500	-2963032.02	1438191.68	326947.92	-326947.92	-626063.86	1107700.88	-6666127.47	327191.39	4446342.64
4E23	0	6165166.46	-121040.7	6007846.43	6007846.43	-6666066.67	-1421795.31	-11651692.5	87451.614	-9907149.14
	2250	-10400463.4	336488.14	-5264591.39	-5264591.39	73848574.7	24662940.4	11603302.61	16778944.4	7127981.7
	4600	8022616.83	-125810.75	-4631434.87	-4631514.85	-11666044.5	-4441377.15	-14214435.4	-1424975.55	-1033738.4
4E24	124	-28100818.2	10333202.6	-11787847.1	-11787847.1	10767927.1	-46665522	-46666661.9	95101484.6	-12670110.8
	2117.5	-4232266.83	1762925.06	-2176260.34	-2176260.34	7603401.85	3815032.12	6365467.95	1650414.65	6767665.17
	4500	-119198.91	3784601.92	9476547.22	9476547.22	866970.244	9233373.12	15636966	310445.37	8776156.63
4E25	125	73734026.66	-445864.44	7541027.9	7541027.9	-6085497.69	4421697.28	-11714671.3	442993.92	8876110.8
	2250	-469781.39	1918114.89	-1463872.61	-150070.62	8103263.18	569448.08	9406836.58	1002611.89	5663567.61
	4674	23737448.5	-6523731.08	1070471.34	1070471.34	-41055007.6	-43941685.2	-21460261.1	-10074807.9	-11309196.8
4E26	0	-6060302.61	-529795.32	-503.85	638.86	2963216.8	699364.61	6632963.46	6462690.06	6044319.15
	1187.5	1212200.77	-170310.78	114816.24	-114838.14	1945613.71	1158674.19	917510.98	1112425.11	1000716.28
	4374	7305890.42	114521.15	295216.39	295216.39	-3368089.02	-1016182.12	6616628.91	2418010.38	-3090892.48
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	2187.4	1224489.7	-127488.64	115568.11	-115708.11	1603181.12	1142755.42	906846.026	1200101.37	1006112.891
	4374	-3063760.23	-66667.58	217316.34	-217316.34	-4103312.46	-3316693.45	3796395.19	-1332334.65	-3214413.68
4E28	127	-247199.13	1430136.36	7326599.31	7326599.31	-4346205.89	464683.86	1184968.4	4961571.82	1910086.84
	3270	4801362.77	2002647.46	-1631786.71	1631786.71	9108351.01	6450402.79	8867152.76	1044629.56	6806842.83
	4075	-22661805.5	6351446.14	-16992270.7	-16992270.7	-46781194.8	-43676872.2	20791103.7	-2976699.65	-11660609.3
4E29	126	-20220710.7	110827159.5	14110149.2	14110149.5	-52475306	-56816175.4	-26183844.2	3608778.12	11089496.1
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	4066	-917979.26	-604566.8	9366903.51	9366903.51	-1907400.38	8209810.15	11277987.1	7607611.54	-9265284.8
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	4500	-2293981.16	266360.06	216792.16	216792.16	-46666463.9	-9460147.26	-1942632.6	-974621.03	-10285268
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	1000	-6634135.21	290740.13	-10671.35	36375.35	10326107	8967929.61	8827448.26	17805169.6	-7736273.96
	5000	-627952.51	-181617.64	802147.46	802147.46	-6324131.82	-4683693.89	-699661.57	3712684.54	-5307829.96
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	1250	10293443	-465041.64	6173627.79	-6173627.79	23757149.6	26662601.4	1322771.6	4481292.7	5979247.7
	4500	-563666.76	-1170079.28	3009348.61	-3009348.61	-3993754.93	177146.696	-5625967.38	1100403.61	-4101006.03
4E33	0	-493770.8	161223.36	6084154.76	-6084168.76	3248662.06	4167600.34	3014003.10	7118597.5	-3232790.06
	2457.5	10145168	5162794.28	-201361.93	331201.93	24070566.6	18127761.3	14023625.9	11536097.6	12132490.1
	4875	-2198866.7	6366737.64	-5746764.06	6746184.06	-46770483.1	-13947129.3	21778931.9	26690914.3	14446600.5
4E34	0	-36991794	-86119.72	-324257.62	-324257.62	-46993041.1	-40027947.1	-39926406.1	34946246.5	-4262582.7
	3000	61941428.1	53760.05	-642039.68	942039.68	37515729.6	32442660.8	33180544.8	27764445.4	268801121.2
	7000	-68304048	58200.19	-369622.11	369622.11	-46908693	-46473876.2	-30618256.4	34814761.4	36177073.9
4E35	0	-12075019.6	600131.66	4117481.32	-4117481.32	-13529739.2	-7793512.36	15429661.1	7166162.45	-14668732.3
	707.1	-10424661.3	304015.89	1848818.11	1848818.11	-22822666.5	-18157367	-22049676.1	-15818269.9	-14140131.6
	1414.1	-10667304	6447.4	-414826.3	36828240	-10462559	39831369.3	24680416.1	36833735.9	36833735.9
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	707.1	-19449409.6	306169.02	1653249.46	-1653249.46	-22820981.9	16161268.1	3266132.1	16914038.7	19149681.8
	1414.1	-12404488	15488.81	-442735.1	-442735.1	-38616837.7	3447468.8	-35645004.7	-29968372	26765602.8
4E37	280	-24366347.9	-1060583.11	-941368.26	941368.26	-51004670.4	-3696693.1	-17276522.6	-29979193.4	12935132.8
	2825	10618070.9	142123.02	-1752641.46	1752641.46	16114659	12014601.6	1606466.6	30816979.6	17314691.1
	5000	-12421346.1	796043.04	6407694.04	-6407694.04	-15831696.6	-6812094.46	-179		

414	0	-17784430.4	567140.54	-931820.75	901920.35	-20071973	-19376211.4	-17119391.5	-16926629.7	751490.98
	500	5677724.23	201900.87	1051.29	1851.23	-16396006.9	-912399.54	-9129928.83	-7991266.6	-7986206.28
	1000	-9954619.38	182469.28	928521.18	-928521.13	-6233090.72	-4400701.24	-656675.73	-3633498.09	-6234826.22
423	0	-70992964.8	713283.82	246456.75	-246456.75	-361300739	-91519444.9	-12101126.1	-23279137.0	27925413.4
	500	70424940.1	567398.8	504061	-504061	246456.75	27674001.6	31685619.8	1926619.8	1702082.3
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436	0	-8403668.81	121075.56	841705.71	-841705.75	-5728941.28	3832758.45	-5998867.80	312365.87	-4897957.82
	500	-8493996.87	281008.25	-88674.53	88674.45	-9721101.65	-8633252.21	-8632037.69	-7870404.25	-7860780.84
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437	0	-12108348.7	-109093.31	230046.15	-230046.15	-14864517.3	-13486991.5	-13336665.5	-8818501.4	-13370372.7
	500	-8079616.54	-39188.17	1504841.97	-1504841.97	-7358941.04	-4840548.22	-8000714.38	-44117397.3	-8326312.76
	1000	-5014895.5	120656.37	699239.33	-699239.33	6209751.45	4407291.71	-6879081.46	5551541.31	61402151.59
438	0	-5461159.30	-126500.91	854651.52	-854651.52	-6723404.66	-6091795.02	-6559047.31	-4261919.66	-5512574.42
	500	-6731986.64	-617958.64	1629714.25	-1629714.25	-9473967.85	6889291.46	-8342961.89	-4017044.34	79892630.23
	1000	10113861.4	909218.75	2583737.21	-2583737.21	-17191267.4	-11918256.3	-17338475	-9495777.77	-14125024.6
439	0	-5499470.76	-129399.89	728051.92	-728051.92	-6868404.74	-6079372.68	-9664081.71	-4208678.95	-6112910.41
	500	-6449583.79	-514708.35	1665224.05	-1665224.05	-9552210.71	-5549956.26	-8999927.41	-4305565.35	-7287159.42
	1000	-12445655.9	-400917.79	2583996.65	-2583996.65	16324316.2	-11293139.3	31634172.1	-8873323.15	11628347.6
4F1	0	-1659897.95	53291.48	224709.92	-224709.92	-17967943.17	1361357.07	-1829347.08	-1201400.23	-1805568.08
	1920.7	954804.94	27530.65	32464.19	-32464.19	1227885.21	1094188.95	1029614.16	915668.217	857133.676
	3841.5	-565746.21	1777.83	-159701.02	159701.52	-2020851.24	-1936124.27	-1600555.05	-1660974.95	-137355.22
4F10	0	-842915.49	81188.86	147882.8	-147882.8	-814600.06	-673013.118	-883566.676	-620429.801	892618.281
	1547.4	784255.78	45821.89	-92297.15	92297.15	1014038.64	720911.583	923684.956	623041.731	788793.693
	3094.9	-972291.78	30818.78	-867055.96	867055.96	-1117811.27	-1340717.31	-643297.894	-1173904.67	-676201.308
4F11	0	-970285.52	30572.53	136048.65	-136048.65	-115746.53	-124245.84	-637249.861	-176698.87	-670816.064
	1547.4	736457.65	45888.03	-85880.58	85880.58	1016843.69	768394.592	869636.31	621687.533	794095.877
	3094.9	-841707.56	30297.52	-144255.41	144255.41	-912450.624	-674908.592	-977661.955	-627849.835	-887429.673
4F12	0	-1007976.54	34467.1	83669.02	-83669.02	-1154838.09	-1113897	-429126.800	-822378.804	-8219891.168
	1422.4	946750.5	32176.99	209115.47	-209115.47	529199.484	956064.292	484541.838	562600.597	771550.928
	2844.9	-558637.36	11968.88	-551283.67	551283.67	-614233.366	22583.0406	-1136320.03	-88309.141	-999019.107
4F13	0	-600890.99	12616.1	166255.29	-166255.29	-854018.848	-914834.209	-585489.2	-771494.582	-472055.13
	1548.9	552810.4	10494.68	-78324.87	78324.87	800014.978	613099.281	777521.508	517098.977	656031.743
	3094.9	-980236.24	36419.21	9705.53	-9705.53	-1062912.75	-962591.071	-982972.726	-844577.621	-872647.611
4F14	0	-938617.69	40571.3	24460.01	-24460.01	-1052056.50	910329.449	-984695.47	-818721.912	-869749.93
	1547.4	775882.36	51688.32	-65920.95	65920.95	1013113.77	902420.199	791098.179	788563.008	838976.273
	3094.9	-982725.45	62788.74	107181.32	-107181.32	-962806.656	-776894.558	-1001066.51	-715896.377	-909917.533
4F15	0	-929847.7	31553.11	27900.55	-27900.55	-1048108.28	-886702.343	-886900.448	-810831.468	-881068.404
	1547.4	776460.83	62500.86	88970.21	-88970.21	1019354.52	937644.161	793900.378	751540.654	637188.894
	3094.9	-982150.48	83449.79	110042.61	-110042.61	-931072.385	-771763.568	-1002853.07	-717005.165	-910981.593
4F16	0	-833749.23	36800.87	4438.88	-4438.88	-1085605.16	-981994.812	-971196.723	-834276.733	-863256.581
	1446	868623.03	10548.65	-92237.09	92237.09	804824.85	813094.029	785771.814	676647.607	664974.369
	3892	-688731.56	-15702.75	-168908.05	168908.05	-861601.672	-915360.164	-560653.259	-771875.199	-467840.709
4F2	0	-1561934.97	63091.15	226329.99	-226329.99	-1793548.92	-1362163.9	-1627466.85	-1201944.48	-1609348.46
	1020.7	996872.03	31800.46	-31648.72	31648.72	1223684.74	1095468.97	1029210.88	916297.48	859513.364
	3341.5	-1879923.7	2680.75	-180236.54	180236.54	-2011606.44	-1932777.38	-1689980.86	-1168944.12	-1366018.44
4F3	0	-224118.17	-37181.79	-152266.61	152266.61	-344450.268	-439800.166	-120042.375	-338746.402	-64657.304
	384.16	94247.71	11082.75	-267416.32	267416.32	100329.652	-171053.842	392320.45	156881.793	325487.827
	738.3	204909.59	26568.29	302667.02	-302667.02	255764.772	121041.747	661449.025	168761.687	527918.949
4F4	0	-194516.8	55229.82	-375456.98	375456.98	-430804.672	-125482.709	865076.949	162847.082	614775.602
	384.15	91992.01	10799.08	-96889.2	96889.2	127688.93	172176.993	395770.537	-158327.543	321913.197
	769.2	-220135.72	-45681.84	-154921.8	154921.8	-338821.458	-837805.436	-116270.076	-237851.688	-68602.708
4F5	0	-56692.93	78808.82	61714.24	-61714.24	-378911.389	23197.9199	-106401.984	4519.179	-106556.453
	384.16	36638.63	53970.52	88038.85	-88038.85	94803.348	142918.795	-41958.8001	111290.022	-47167.468
	768.3	-80653.81	2892.41	114369.65	-114369.65	-82876.715	43606.4586	-106549.806	30355.255	-175512.114
4F6	0	-76747.47	18858.44	81474.55	-81474.55	-90900.48	22499.8593	-106829.895	3984.072	-106889.818
	384.15	32911.55	13368	89089.11	-89089.11	60879.48	140731.562	-45365.6575	109800.595	-56559.795
	768.3	-85733.44	7873.58	116703.85	-116703.85	-90282.432	39956.2347	-205119.43	37972.189	-182193.351
4F7	0	-1663076.78	13950.45	-248252.38	248252.38	-1873371.34	-1993712.39	-1472392.4	-1720195.23	-1273341.94
	1920.7	904813.66	15936.1	-113611.39	113611.39	1177860.15	904558.468	113643.42	759276.543	958877.045
	3841.5	-1842190.11	28921.72	25020.61	-25020.61	-1928993.39	-1673428	-1725930.18	-1953444.46	-1600497.78
4F8	0	-182921.97	20401.34	22373.49	-22373.49	1914812.08	1372181.04	1730365.98	1548314.83	1496986.81
	1920.7	968513.44	20546.77	-113009.53	113009.53	1183089.76	906382.308	1144826.72	760685.319	964637.073
	3841.5	-1658867.17	14692.11	24968.55	-24968.55	1957135.23	-1089991.36	-1465060.81	-1717800.35	-1268352.56
4F9	0	-1009432.81	33516.12	-66969.84	66969.84	-1167979.3	1116541.65	-936904.936	939757.475	830218.783
	1432.4	642620.16	71843.21	-102212.84	102212.84	821246.516	948755.135	481111.174	737048.691	369366.579
	2844.9	-685682.68	38355.2	891235.5	-891235.5	-629683.499	12915.4298	-1144015.12	-128861252	1085172.18
5A1	250	-37117748	-5353623.5	144008470	-144008470	-57107090.4	107807968	-195856500	86739849.4	-103551790
	1625	6661701.84	4428941.12	64268624.3	-64268624.3	16077148.1	79990301.9	-59309800.1	63837943.8	61948230.1
	3000	27636371.1	9036068.19	-16889124.7	16889124.7	49341078.4	21179102.3	54923474.2	10580431.6	39515258.2
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	1625	8751078.78	8456913.2	87508481.4	-87508481.4	18232355.6	85313031.7	-86822600.3	68708193.2	62463671.4
	3000	26663178.9	8598326.74	-17497825.8	17497825.8	44432316.1	16594457.4	63039471.6	7263798	75356522.4
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	550	8793844.89	5810829.88	-7463480.92	7463480.92	16654541.9	5017121.58	20898431.3	1206327.67	14822583.2
	1100	-14210706.1	-5013168.09	-31830911	31830911	-31073911.5	-58488639	8671274.13	-46072455.4	11493194.4
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	1750	-28195091.1	-12917282.7	-121754044	121754044	-50469781.8	-186536669	59144651.4	-103011032	55147887.6
5A14	0	27991664.5	9342829.25	-17854652.9	17854652.9	47818072.2	19063150.8	56126882.9	8763742.42	40541055.5
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SA15	0	111640690	4196894.7	61664042	61666042	20995375	21102030	10251030	14609046	51205194.2
	2000	118060994	-9020201.3	-5017465.21	-5017465.21	2461746.21	186174784	186168449	113203821	176826882
	4000	32875471.7	30479015	-6480.1592	6480.1592	150308193	45076506.2	179114624	21629645.7	129620103
SA16	0	140441679	4756967.3	61645997.5	61645997.5	256464229	26706453.2	13404260.7	18105093	17907075.3
	2000	184363255	55196623.7	751155.1	-751155.1	316034912	-261780798	260102680	171002175	160729282
	4000	117803921	8142034.6	31941703	61341365	198956121	93266271.9	221085146	50666993.9	161820161
SA17	0	120075493	-42297510.4	50643735.9	-40641735.9	213056760	230811427	100318602	182647302	60486577.4
	2000	147030493	52674664.1	4703636.59	-4203699.59	261005408	203344640	203101376	163677795	129161130
	4000	08715488.7	75102049.9	-51908140	51908140	174754006	81267978.7	121434292	42101133.8	13068640
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	2000	148446111	51550589.5	-4419007.04	-4419007.04	263415223	211215673	201906866	133478216	130621685
	4000	99814091.7	36052117.3	-62479097	62479097	175663519	61921603.5	162001894	47011107.1	107064228
SA19	0	160716161	47662032.5	64246163.5	-64246163.5	254468714	177043012	136115653	165367375	79819094.2
	2000	191664054	58129329.9	684673.32	-684673.32	316264112	264269101	262620194	173113642	116866682
	4000	117894044	5729546.7	-51868324	61369103	169663129	90665076	214720665	50512240.4	165873301
SA20	0	143154991	-99214613	102981909	-102981909	-130649130	-57294402.3	-136556617	-9145719.71	-240612264
	2000	173077511	1679933.94	62201171.1	-62201171.1	2620640.44	68541443.2	36902118.6	42021443.4	42021443.4
	4000	112664250	47611709	51422072.2	-51422072.2	203879330	212472900	104435988	147507993	75027899
SA21	0	113499263	61298043.3	60970005.2	-60970005.2	203910139	114001801	130413871	149991326	140367342
	2000	139965057	49445735	-4149709.21	4149709.21	243476046	185136538	194600933	119537414	127806099
	4000	93820401.9	29834867.2	-61389466	61389466	148408421	61861111.7	130737600	20206823.3	130870980
SA22	0	54891013	10091912.8	-20401106.3	20401106.3	92140156.3	-4254051.3	9173491.1	2605777.2	79228771.6
	2000	56391010.5	12608653.8	11249411.7	-27349411.7	33681381.6	39042646.2	41498052	16276048.7	36227774.8
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SA23	0	54891029.3	104691481.3	33443234.5	-33443234.5	82387659.4	43065044	82034863.5	36234661.3	78420781.4
	2000	56240886.8	12512243.3	27677545.4	-27677545.4	87618763.6	49316570.7	41403729.6	16469280	26798707.3
	4000	21005992.1	6258488.29	78587365.2	-78587365.2	40211852.6	113353145	51721561.5	9963250.6	-51030072.8
SA24	0	18480716	2379336.04	148291133	-148291133	24847786.7	114064016	-17732462	118872728	160065983
	2000	21786518.4	-972875.44	-9327677.7	9327677.7	34800213.4	12556267.4	-70425149.6	102597377	64924442.9
	4000	47001618.3	11601945.1	35883230.1	-35883230.1	74064944.1	100044534	18182051.2	67094381.6	8044549.35
SA25	0	71046012	21794069.7	11209471.61	-11209471.61	121062070	107823009	84264018.8	74940036.5	54663156.3
	2000	31918637.1	7916386.74	84441490.4	-84441490.4	60027733.3	188941647	27235480.1	86724114.3	-9270586
	4000	-25766626.6	-6070091.8	117872510	-117872510	49032721.3	35996555.4	-16012618	92718016.3	-124980902
SA26	0	67306962.6	13779284.2	9940727.29	-9940727.29	112417098	84603150.2	76927672.3	69524837.3	71831028
	2000	28696104.4	6262026.38	95759006.5	-95759006.5	44364567.5	100096521	-32999471.7	98010490.8	-33357501.9
	4000	-27674182	-10250237.2	121579267	-121579267	48484195.1	88016003.9	160300402	38609804.8	134238247
SA27	0	144447147.0	-828764.2	164810848	-164810848	-18849031.5	146515430	-178605721	128132020	-15234001
	2000	24831274.6	6365690.45	67365259.6	-67365259.6	38154474.3	123987144	78579901.1	110057801	-6519566.4
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	2000	20273208.8	3796168.58	-69829996	69829996	30407010.1	-47498779.1	87261602.4	43700687.3	80291145.1
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	2000	145349539	18448122	-100210788	100210788	811020162	-160912089	41570406.2	-131457984	48985034.1
	4000	208102981	-15651336							

3A47	2000	-47176490	-14971009.0	-46530.18	-46510.18	80184218.9	-83447575.7	-60349562.3	-42500711.2	-42416360.8
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	2250	14377179.4	4281934.16	-29655336	29655336	34162269.3	18230234.6	19463389.8	12627862.4	10236259.5
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5E11	2262.5	18292025	2789303.71	88193.48	-88193.48	22773052	18760715.4	1857651.9	13840556.5	13841810.4
	4275	-2181850.5	-1783723.78	264181.72	-264181.72	-28004194.8	-24268785.1	248533607	19388313.9	-19874441.2
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	2260	18489183.1	3258287.73	167598.66	-167598.66	2900259.9	20216728.4	20560681.4	14889408.9	14891082.8
5E12	4275	-17384116	-3706307.24	-806013.94	806013.94	-25941324.8	-21926096.3	20846827.1	-16131331.2	-15100017.6
	225	-21421250.2	-4418438.58	-439909.19	439909.19	-82776004.8	-31277146.5	-21058337.2	-23230051.8	-15128215
5E13	2250	17049314.3	3234394.18	88352.12	-88352.12	25818847.8	21050957.3	20844418.3	16431939.8	16254966
	4275	-18876391.7	-2753097.13	4566913.21	-4566913.21	-27187025.4	-17536394.2	-27288281.3	12812620.6	-21118504.4
5E13	225	19970317.8	2787837.67	5641127.27	-5641127.27	78403746.5	-17776427.6	28412094.9	109043393	22089119.5
	1600	18650892	2843801.54	-109047.3	109047.3	27834512.8	22362588.5	23092597.7	17457340.2	17863625.4
5E14	4275	-26875887	-4492915.47	-675921.88	675921.88	34708369.8	25308717.8	-28214352.3	29191598.3	-18824999.2
	225	-1461386.1	2884190.83	5916377.68	-5916377.68	-30516942.2	-18192321.4	31556714.6	13951935.7	-24831418.5
5E15	2500	19712052.5	2718151.89	8086.24	-8086.24	23003508.7	23274778.9	23247938.2	17748106.8	17733537.6
	4275	-24761440.4	-4150887.26	-6000144.35	6000144.35	-36358758.1	-361137445.5	-13738331.1	-17871618.8	-17002075.6
5E16	125	2963102.75	-542972.83	12666858.2	-12666858.2	2814984.12	-10716888.1	15937279.4	-8756034.74	14014616.7
	1200	8270041.83	581832.7	-2409766.86	2409766.86	7414662.53	3647431.62	8707842.63	2674747.47	6911827.92
5E16	2275	-16564455.7	-4910083.29	7849162.85	-7849162.85	30121360.1	-15888916.3	-32383757.3	-8934753.67	-23762356.7
	225	17191241.9	1310824.56	10873723.8	-10873723.8	-18728808.8	-282866.31	-25262198.8	-1361280.64	-20682974.2
5E17	1200	7457534.75	2110643.92	-782768	782768	13328169.8	8992816.47	10867428.3	6388290.88	7425272.48
	2375	883474.5	-1312924.12	-12254255.9	12254255.9	1085895.19	13211837.2	12543121.3	-10260712.3	11814966.4
5E17	225	-18227914.4	-4260044.04	1898883.51	-1898883.51	-23844357.7	26949383.5	-22408386.9	18821120.2	-15778125.7
	2260	11488881.3	8242761.23	776717.64	-776717.64	35736436.2	28244478.9	27613371.8	23216138.8	18811967.8
5E18	4275	-35068762	-8731818.28	3250095.89	-3250095.89	-87853586.4	-42806281	-48431486.7	-28707797.7	-34486975.7
	225	-26436604.5	-7775044.67	988036.69	-988036.69	-42984396.7	-33018308.0	-55093186.4	-2202811	29781277.1
5E19	2250	22424805.3	8216522.64	108938.81	-108938.81	18866850.4	25684490.3	28277771.3	22552236.2	20058526.3
	4275	-28924647.1	-6270595.66	-714699.08	714699.08	-4234529.5	34947309.9	-33445874.8	24875854.8	33888710.2
5E19	225	-11397764.3	7769000.32	-2814978.77	2814978.77	-50023718.5	433177187.8	37267219.7	-9061836.1	-25626199.7
	2200	20882672.5	5490068.45	-59531.81	69931.81	34748204.4	27623683.5	27743238.7	18830727.3	18836563.2
5E20	4275	-20957129.3	-8720087.8	2708410.82	-2708410.82	39500768	28870034.7	-34048093.7	-19131044.5	-20991788.3
	160	-8793884.07	-2872095.37	1859122.98	-1859122.98	-12111807.8	-11032972.5	-7548814.27	7130438.36	-4144014.38
5E20	2250	14376313.8	4261841.88	313712.68	-313712.68	24970523.3	18793171.6	18451688.2	12066341.1	13221023.9
	4350	-2871591.07	-1376303.86	1031697.58	-1031697.58	-648798.18	-3137895.93	-5304650.85	-1655904.68	-3512880.33
5E20	250	-32824035	-10475910.5	-1855285.33	1855285.33	-55882188.4	-45384334	-48147234.7	30500585.4	28583144.6
	2262.6	21486150.3	6000000.88	204936.71	-204936.71	36353291.8	28032176.1	78445642.2	16153042.3	19521978.3
5E21	4275	-20311446.7	-6537351.55	655411.97	-655411.97	-30514391.3	-24286137.8	-26841495.7	17896470.4	19870171.9
	250	-22682358	-10646353.1	-1422770.68	1422770.68	-66132894.8	-46765189.8	-42778770.4	-36004015.8	-28043628.8
5E21	2262.5	21989771.2	8087808	-164212.82	164212.82	35814042.2	29240261.1	28864187.8	18291102.7	19586635.4
	4275	-20948180.7	-3425221.1	1114345.6	-1114345.6	20899770.8	-23433305.9	26772431.4	17310451.7	19319273.8
5E22	225	-8342831	-8033630.24	-3049234.83	3049234.83	-53448406.8	-48482135.2	-39468987.1	-33100250.2	-27071645.5
	2250	21208558.8	397685.17	57073.64	-57073.64	38129901.8	17880611.7	28079583.5	19124828.7	19227356.1
5E23	4275	-21187882.7	-9193528.41	3235877.67	-3235877.67	35311119.2	-24523341.1	-31476504.2	-16138670.5	-15868673.3
	225	-2848010.7	-3052441.17	630429.68	-630429.68	-47540836.7	-37240747	-38364048.3	-26155182.9	-26109306.3
5E24	2250	21945885.1	6110131.05	41340.53	-41340.53	36891271.8	28745860.6	28668646.9	18593502.9	19624090.3
	4275	-26837881.6	-5907792.85	447749.01	-447749.01	-29497646.5	-23426235.5	-31402262.6	-22938882.8	22109821.8
5E24	225	-25140653.2	-6898901.81	-3287768.38	3287768.38	-39237026.7	-35234735.8	-28931560.4	-26586091.6	-19668084.1

SE29	0	-19905519.9	-9464790.29	77499.31	-27499.31	-34332299.1	-27000048.6	270047799.1	-17999717.7	-17999717.7
	2600	31814999.1	16527179.7	5053017.77	-5053017.77	67021414.4	60204599.9	43770201.2	2913118.1	24285736.2
	5000	-199081267.2	-7693146.76	10078500.6	-10078500.6	-35206553.9	-16732500.9	-37387815.9	-8101458.61	-28743832.7
	150	11644208.2	1405519.3	24477799.4	-34477799.4	16221909.7	49756139.4	22949970.9	41609920.2	-22550159.1
SE30	1200	-2744678.62	-296466.77	-3529446.49	3638446.49	10078500.6	8044779.36	505468.16	-6204720.21	1146482.79
	2250	-24404177.5	-4456613.62	-4163489.9	41634659	-26415607.1	7344779.1	13775500.7	-59344957.2	16417430
	0	-3463317.74	-33008930.52	-21695142.6	21695142.6	-16811310.1	-34395999.1	10861901.1	27156114.2	11066145.4
	2381.5	14543474	60050067.27	12750321.91	-12750321.91	27368179.4	54469924.8	8038917.74	24567120.2	1011127.86
SE31	4775	-19929356	-4533808.86	47201006.4	-47201006.4	-31249201.4	24304478.6	74810214.9	24545295.4	-20417966.2
	250	-121417664	-47667211	6466339.19	9466339.19	221968104	-192478394	-182591724	-117747897	-100751699
	625	-8040708	74116409	-3619695.94	3619695.94	-156437976	-117075444	-113054062	-91206517.6	-74331261.9
	1000	-51255556	-20985308	1824996.39	-1824996.39	-90511199.3	-2610001.2	-78651943.6	-44410457.8	-48722546.2
SE32	0	118201191	-45970200.5	3092745.61	-3092745.61	212993751	195540471	181366710	100004641	101671903
	1750	-27301946.9	19012809.7	2699310.1	-2699310.1	875498.16.2	70781424.1	65114877.9	46371151.3	-4641377.2
	3500	-80970401	-24404674.5	1525876.06	-1525876.06	-112225570	-25510248.1	39670699.9	-51525272.9	-56205691
	1790	418189991	-45970448.6	2898448.12	-2898448.12	212920698	169514031	181346199	108079505	101062199
SE33	0	-27301946.9	19012809.7	2699310.1	-2699310.1	875498.16.2	70781424.1	65114877.9	46371151.3	-4641377.2
	3500	-80970401	-24404674.5	1525876.06	-1525876.06	-112225570	-25510248.1	39670699.9	-51525272.9	-56205691
	1790	418189991	-45970448.6	2898448.12	-2898448.12	212920698	169514031	181346199	108079505	101062199
	3500	-80970401	-24404674.5	1525876.06	-1525876.06	-112225570	-25510248.1	39670699.9	-51525272.9	-56205691
SE34	250	-120571926	-47667211	6466339.19	9466339.19	221968104	-192478394	-182591724	-117747897	-100751699
	625	-8040708	74116409	-3619695.94	3619695.94	-156437976	-117075444	-113054062	-91206517.6	-74331261.9
	1000	-51255556	-20967177.6	1628109.69	-1628109.69	106600020.2	72498220.2	-75704483.9	-45168033.1	-47066126.7
	250	-120571926	-47667211	6466339.19	9466339.19	221968104	-192478394	-182591724	-117747897	-100751699
SE35	1187.5	12171726.7	-4362684.08	24088117.7	-24088117.7	24619268.6	44137318.1	9291529.12	30424090	-11514951.9
	2125	-28677018.7	6710730.94	218028.65	-218028.65	44940773.5	36471420.5	26013077.1	24206630.6	23811096.4
	250	-1417077.2	-1652794.87	49693701.1	-49693701.1	-19572014.0	13304069.4	83656322.9	33027993.9	-57430614.4
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SE36	2125	-28677018.7	6710730.94	218028.65	-218028.65	44940773.5	36471420.5	26013077.1	24206630.6	23811096.4
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	2125	-28677018.7	6710730.94	218028.65	-218028.65	44940773.5	36471420.5	26013077.1	24206630.6	23811096.4
SE37	0	27428811.6	8455111.77	340588.09	-340588.09	48464312.2	57167479.9	36451614.5	26013077.1	24206630.6
	937.5	5446043.04	726363.16	-26591748.9	26591748.9	7697423.25	-20472893.4	33280398	-18136839.2	27699412.7
	1975	-28226995.2	-8755692	-5126364	5126364	-4804853.4	80868734.7	15139571.9	-75959171.3	20086773.9
	0	27428811.6	8455111.77	340588.09	-340588.09	48464312.2	57167479.9	36451614.5	26013077.1	24206630.6
SE38	937.5	5446043.04	726363.16	-26591748.9	26591748.9	7697423.25	-20472893.4	33280398	-18136839.2	27699412.7
	1975	-28226995.2	-8755692	-5126364	5126364	-4804853.4	80868734.7	15139571.9	-75959171.3	20086773.9
	0	27428811.6	8455111.77	340588.09	-340588.09	48464312.2	57167479.9	36451614.5	26013077.1	24206630.6
	937.5	5446043.04	726363.16	-26591748.9	26591748.9	7697423.25	-20472893.4	33280398	-18136839.2	27699412.7
SE39	1975	-28226995.2	-8755692	-5126364	5126364	-4804853.4	80868734.7	15139571.9	-75959171.3	20086773.9
	0	27428811.6	8455111.77	340588.09	-340588.09	48464312.2	57167479.9	36451614.5	26013077.1	24206630.6
	937.5	5446043.04	726363.16	-26591748.9	26591748.9	7697423.25	-20472893.4	33280398	-18136839.2	27699412.7
	1975	-28226995.2	-8755692	-5126364	5126364	-4804853.4	80868734.7	15139571.9	-75959171.3	20086773.9
SE40	2375	-47906197.3	7092501.04	280754.83	-280754.83	52825439	67300213.9	58782829.6	49352571.4	-42826999.7
	4500	-121895096	-2084171.9	1155268.74	-1155268.74	104264709	151572370	148146812	116686326	108455946
	150	-281780.25	1637394.42	26051323.7	-26051323.7	-2957907.36	34980777.8	39847002.1	31292589.1	-31799743.6
	1200	-4470795.92	-4571935.19	-5002562.81	5002562.81	12876991.4	-20147409.6	-8392039.81	13565012.9	-4481418.71
SE41	2250	-22658046.7	-7068376.94	-46256492	46256492	-39077466.3	79349626.3	17791300.4	-61321220.9	21303047.7
	250	-13682799.3	-20600119.4	-496416.4	496416.4	-187231711	-187733280	-16269896	-113391914	-16269896
	2375	-48711131.6	7041782.66	1271414.8	-1271414.8	70043210.2	63303948.4	67646387.8	54174681.3	-43646345.5
	4500	-121895096	-2084171.9	1155268.74	-1155268.74	104264709	151572370	148146812	116686326	108455946
SE42	150	-281780.25	1637394.42	26051323.7	-26051323.7	-2957907.36	34980777.8	39847002.1	31292589.1	-31799743.6
	1200	-4470795.92	-4571935.19	-5002562.81	5002562.81	12876991.4	-20147409.6	-8392039.81	13565012.9	-4481418.71
	2250	-22658046.7	-7068376.94	-46256492	46256492	-39077466.3	79349626.3	17791300.4	-61321220.9	21303047.7
	250	-13682799.3	-20600119.4	-496416.4	496416.4	-187231711	-187733280	-16269896	-113391914	-16269896
SE43	2375	-48711131.6	7041782.66	1271414.8	-1271414.8	70043210.2	63303948.4	67646387.8	54174681.3	-43646345.5
	4500	-121895096	-2084171.9	1155268.74	-1155268.74	104264709	151572370	148146812	116686326	108455946
	150	-281780.25	1637394.42	26051323.7	-26051323.7	-2957907.36	34980777.8	39847002.1	31292589.1	-31799743.6
	1200	-4470795.92	-4571935.19	-5002562.81	5002562.81	12876991.4	-20147409.6	-8392039.81	13565012.9	-4481418.71
SE44	2250	-22658046.7	-7068376.94	-46256492	46256492	-39077466.3	79349626.3	17791300.4	-61321220.9	21303047.7
	250	-13682799.3	-20600119.4	-496416.4	496416.4	-187231711	-187733280	-16269896	-113391914	-16269896
	2375	-48711131.6	7041782.66	1271414.8	-1271414.8	70043210.2	63303948.4	67646387.8	54174681.3	-43646345.5
	4500	-121895096	-2084171.9	1155268.74	-1155268.74	104264709	151572370	148146812	116686326	108455946
SE45	150	-281780.25	1637394.42	26051323.7	-26051323.7	-2957907.36	34980777.8	39847002.1	31292589.1	-31799743.6
	1200	-4470795.92	-4571935.19	-5002562.81	5002562.81	12876991.4	-20147409.6	-8392039.81	13565012.9	-4481418.71
	2250	-22658046.7	-7068376.94	-46256492	46256492	-39077466.3	79349626.3	17791300.4	-61321220.9	21303047.7
	250	-13682799.3	-20600119.4	-496416.4	496416.4	-187231711	-187733280	-16269896	-113391914	-16269896
SE46	2375	-48711131.6	7041782.66	1271414.8	-1271414.8	70043210.2	63303948.4	67646387.8	54174681.3	-43646345.5
	4500	-121895096	-2084171.9	1155268.74	-1155268.74	104264709	151572370	148146812	116686326	108455946
	150	-281780.25	1637394.42	26051323.7	-26051323.7	-2957907.36	34980777.8	39847002.1	31292589.1	-31799743.6
	1200	-4470795.92	-4571935.19	-5002562.81	5002562.81	12876991.4	-20147409.6	-8392039.81	13565012.9	-4481418.71
SE47	2250	-22658046.7	-7068376.94	-46256492	46256492	-39077466.3	79349626.3	17791300.1		

	27.0	1219074.02	-658503.49	-22941.18	7290713.57	4092744.98	2444448.82	4123332.51	1902430.15	4079121.34
	275	571553.42	572110.58	8294920.74	-6394931.74	-6201167.36	2135667.04	-14210460	1468614.58	-1270286.12
JFK1	160	-5367497.2	1114068.61	-26120842.9	29122042.9	9541407.21	-32633188.4	19377001.5	-27973179.1	17148028.1
	175	56442272.7	-314914.61	9971971.42	-9671971.42	3759844.38	3591781.15	4534444.35	6751241.43	1616227.15
JFK2	2800	613280.75	408108.08	27039200.4	-27039200.4	1512101.87	10402308.5	-2728744.4	2405453.4	1373127.6
	290	914611.11	1772851.2	1400124	-1400124	99935776.7	52010939.1	-2649620.4	-32910079.2	-56633910.5
JFK3	1500	-6508942.2	-436558.44	8511324.41	-8511324.41	17044490.1	-14748889.9	28132622.1	-3478347.13	-2077074.6
	2750	100411.35	409613.46	1261556.42	-1261556.42	2677480.7	404821.756	449502.189	390865.047	266503.25
JFK4	250	-9519450.3	-2693934	1744555.04	-1744555.04	-17068439	10710406	14084030	-8784005.7	-43200139.5
	1400	1541611	-14034420.3	1643078.51	-1643078.51	591970.15.1	-1291824.9	-5661074.8	11567914.2	-3014695.6
JFK5	2750	2275959.13	10-7581.21	243201.92	-243201.92	8203004.09	8447304.73	971400.31	1644603.89	1510680.55
	750	-51212175	-1.4-6406.5	10147876.5	-10147876.5	142811227	10406291.1	125.645.2	64922898	-4330439.4
JFK6	1500	11694007.1	-10987105.4	5115170.12	-5115170.12	55450148.5	01160714.1	-46900013.9	-20230997.5	11044217.7
	2750	160427.18	613494.8	16701.54	-16701.54	2441444.45	2291681.14	211104366	1456047.84	1901674.30
JFK7	150	1605559.1	-416955.0	-2561524.7	2561524.7	-2511148.2	-6.201.101.7	9677394.15	-461566.1	-1870562
	1325	2620304.02	-1093277.98	1284944.54	-1284944.54	-6501191.26	1431191.6	-4630701.36	1431326.33	7030169.12
JFK8	2600	5819467.05	-5730169.35	79573412.9	-79573412.9	-58152387.7	30014756.0	-5205410.21	10379454	-40812004.21
	150	1011881.28	1605023.73	491457.63	-491457.63	691627.87	691627.87	4158201.28	274317.66	1243491.91
JFK9	1375	1069528.63	696490.11	521267.5	-521267.5	3247320.13	3247320.13	2036178.4	2348157.42	1203865.92
	2600	-3290149.62	-1249402.06	1645721.54	-1645721.54	-455687.34	2016145.05	6021949.41	1602149.41	4481249.41
JFK10	0	-1607817.17	145664.31	364627.35	-364627.35	-1732115.71	-1198001.5	1554004.02	-1145660.5	-1802110.1
	1375	2001656.24	48406.36	-207601.42	207601.42	127629.66	2064970.32	3640415.55	181044.54	1113621.05
JFK11	2750	880248.89	907148.42	-899730.21	899730.21	267125.828	-1077324.35	3020991.15	-1601991.03	17529.324
	150	-269562.98	-1022253.77	582461.34	-582461.34	664939.61	4063782.3	4126088.32	2780813.30	-2711821.24
JFK12	1325	8048329.11	943734.18	526053.28	-526053.28	115521.129	1084732.85	1962112.30	2136444.51	1241344.51
	7500	-349379.24	-4276972.4	163065.26	-163065.26	616616.43	12617.3	-6513594.93	161291.78	-461360.89
JFK13	275	-5614079.42	-561207.67	1788001.7	-1788001.7	-16770967.5	-6420954.35	-10133893.2	-1451415.95	-8043827.61
	2250	7869188.38	2127757.73	130727.84	-130727.84	1407146.19	11940112.3	11118230.5	210421.8	685071.88
JFK14	4275	-1233829.8	-4761209.06	-150600.47	150600.47	-1245500.5	-1004864.7	-15399427.7	-1245549.5	-4754368.3
	2750	12112328.4	703210.75	210576.34	-210576.34	310676.14	27691942.3	21256127	20812918.7	12550972.6
JFK15	4500	-35602078	-1547304.6	-921923.23	921923.23	-87367724.8	56381769.7	-47412228.9	-30796601.1	-28017139.3
	0	-27201258.0	1270607.13	787493.42	-787493.42	63101434.8	19849899.7	41501635.3	-12930339.3	-24270877.4
JFK16	2500	14611189.8	5668374.28	77321.64	-77321.64	20060523.5	21640680.0	21406150.1	10228108.2	10097806.7
	6000	-20604688.8	-966328.59	601645.15	-601645.15	801645.15	1123067.2	29001080	10012716.5	17865147.5
JFK17	0	-11601869.3	6403123.64	-4602277.5	4602277.5	-22662420.5	20375097.5	-12494740.5	-1404762.1	-6035677.62
	2250	11807862.8	6272714.96	232433.4	-232433.4	242125.27	19648312.1	1817540.1	1091867.8	1048847.5
JFK18	4500	-37000952	-18872988.7	6027094.38	-6027094.38	-71368559	-6036352	-60923729.2	-29504460.9	-36563242.7
	0	10412100.1	-11300011.1	621508.44	-621508.44	36300098	-1770050.7	28100117.6	-1005877.7	-16782027.9
JFK19	7150	6104637.9	7113021.40	-17857.18	17857.18	125573.16	30865600.6	2740347.7	23481067.4	1429454.2
	4500	-2406141.3	1017808.78	-1080731.05	1080731.05	1690731.87	-43428741.2	-34002741.2	-27703204.8	-22649261.2
JFK20	0	-24255404.9	-9179947.65	394749.17	-394749.17	-43806402.1	-14568212.7	-13739239	-21141330.7	-21483500.7
	2250	15483929.7	334611.62	-191737.93	191737.93	39931756.9	2788010.7	23183580.1	1301311.7	14187539.5
JFK21	4500	-1797731.5	-1440209.7	11270.07	-11270.07	-11270.07	-10865134.7	-29579441.1	-29701715.4	-36126211.2
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JFK22	2250	14105186.4	7130040.72	-63269.81	63269.81	53251.61	2845725.2	21540516.5	21652349.1	12646738.6
	4500	-14950127.1	-6129142.58	-2774930.39	2774930.39	2774930.39	2774930.39	17264140.5	13613490.7	10179366
JFK23	0	-31091212.4	-14450321.9	3087301.91	-3087301.91	2687380.91	-60780940.7	-43216000.4	-49417596.5	-27851447.4
	2150	13428189.7	7130142.69	-49304.87	49304.87	28159028	21308034.6	21438804.3	1140817.4	12577922.8
JFK24	4500	-13562069.1	604851.18	-1786994	1786994	-26433142	-30231197.2	-17472899.9	-1666678.8	10071183.5
	0	-24674.66.4	-2212838.47	-465607.20	465607.20	-44162941.6	-26066042.6	-34017864.6	-22522108.9	-21042251.8
JFK25	2750	16599502	7103414.81	182642.08	-182642.08	162642.08	30894086.3	32900220	20364188.4	10874864
	4500	-1703267.2	-11378040.3	39960.08	-39960.08	-39960.08	-39960.08	26903491.2	-1566347.7	-1563504.3
JFK26	0	-17049586.5	-11210874.9	714820.18	-714820.18	-33556091.2	-27840256.1	-29341290	-14701268.3	-16887802.4
	2250	16940084	7132292.18	-27548.92	27548.92	36020704.2	23356407	23314919.3	14698423.8	14595131.7
JFK27	4500	-34775120.5	-2142250.87	1798728.94	-1798728.94	-42767749.4	-35468367.1	-32799748.2	-22907888.3	-20707559.7
	0	-12381693.7	-6588988.04	-491758.00	491758.00	-27801827.3	-27447902.9	-13116514.1	-16570409.3	-6716648.4
JFK28	2750	11847961.6	626220.36	-145403.1	145403.1	24179521.3	18079810.9	18171473.4	10794128.4	10920302.9
	4500	-37128794	-15775184.2	5203687.65	-5203687.65	7130197.6	-32297397	60300613.2	-6477508.2	-3810452.1
JFK29	125	-6415018.22	-2627716.2	-2254533.64	2254533.64	-1134988.3	8701410.38	11430366.5	-274450.31	7802601.38
	2000	3003123.80	8155947.83	111298.71	-111298.71	14501986.6	11407100.4	-1131575.3	7221897.1	7003721.02
JFK30	4275	-11494010.3	-4916218.54	-3012128.00	3012128.00	-21462765.6	-10701272.8	-14475808.2	-12128825.4	-888988.56
	0	-27115396.6	-1270197.9	946642.48	-946642.48	57939300.9	-38988180.2	-41841679.8	20628273.7	-25149435.6
JFK31	2600	15180400.9	8735904.91	316810.57	-316810.57	26994924.5	2087658.8	11972256.4	13947490.1	1373721.3
	6000	-10482162.9	-9207654.12	-317001.04	317001.04	-38150012.5	-19518666.9	27652954.1	-1781938.8	1724000.4
JFK32	0	-9995004.22	-1033464.17	-4451206.51	4451206.51	-2445781.2	-6521974.7	-39770172.3	-4992191.14	-12694426.6
	2250	18088448.1	7015118.74	217871.801	-217871.801	27540521	21114619.2	20877622.0	12403185.3	17041146
JFK33	4500	-36277332	-16434011.8	-4016494.53	4016494.53	85007085.9	-6878264.9	-4824864.7	26033245.1	-28829654.5
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JFK34	2250	18188077.1	7180403.62	300592.07	-300592.07	300592.07	24185304.1	28174400.8	14833671.2	14297106.6
	4500	-24120869.7	6178118.13	809867.54	-809867.54	-639557.54	-42631608.6	-32329339.9	-14673061.7	-21121918.9
JFK35	0	-24602186.7	-6011825.91	11072.05	-11072.05	-44301546.5	-34638597.2	-34515546.7	-22061901.8	-22647003.2
	2150	16580402.3	7114779.13	-23249.5	23249.5	30110470.4	20065606.8	23123419.7	14070901.5	14657738.7

		-4500	-14253220.8	-5173200.19	-573444.94	-571444.93	-43741594.7	-7332353.9	94757067.2	-21311898.3	-23544098.2		
5D1	115	10402642.3	3708811.28	-5555868.36	656588.36	-1919355.7	21800024.7	-5133500.7	15799575.1	-5539312.74	44142047.51	7753200.6	
	1320	994995.47	-1140480.92	3304120.84	1304120.84	802815.059	3637495.14	33011295.45	-2087119.93	3860112.89	-2860490.9	-6742500.2	
	2375	9361316.04	-2221007.18	-20894.48	21399.48	-124146.17.5	8958207.13	37961380.27	8900104.07	8900003.1			
5D10	0	-194361.74	101705.05	5518108.65	-6018338.65	-491950.184	6483734.37	3201130.19	6681609.22	-6041471.35			
	2187.5	2912210.94	1529369.79	-1720416.31	1720416.31	6447048.39	2892695.44	8020271.74	1060927.41	4181157.58			
	4375	10456469.4	-11320572.11	-6361171.37	9482071.27	-55171759.2	51664824.1	-32015575	36795747.7	-15793018.1			
5D11	0	-6376.984.32	-2106132.52	4100197.02	-4106197.02	-11283872.2	-4524141.9	-13134555.6	2050080.57	9430723.21			
	1250	12162734.21	4857026.05	2393124.82	-2395119.82	21381602.7	26861102.6	14277490.2	13820277.6	8483845.25			
	4500	7638758.48	-3586433.25	1836051.92	-1836052.92	-14904801.9	-9428508.51	-13950244	-7177426	-5672339.26			
5D12	0	-6941867.24	-4144945.31	2201021.58	-2203221.58	-15148411.1	11677151.7	-16012006.6	-6651561.1	-10816759.5			
	1250	13314790.1	4999887.21	2201429.85	-2201429.85	24777528.8	21541310.7	16519907.4	14014800.2	10451001.4			
	4500	-1520048.14	1093544.67	2200150.17	-2200150.17	-3670779.45	-318805.371	4040015.53	611441.627	3348527.58			
5D13	0	2699266.75	314163.86	4424071.45	-4424071.45	4051790.47	8048264.75	-1241155.25	8046044.4	-316224.21			
	2457.5	11019310	4809223.61	-480333.19	480333.19	32107197.2	16540664.4	17679488.1	90721004.6	11250564.2			
	4875	-25527422.1	6237026.17	-6411137.68	6411137.68	-45412148.0	-41214477.2	-29851268.6	37944764	-1304865.6			
5D14	0	-3462120.3	1522229.1	20309.63	-20309.63	-84611647	-35202620	5835660.3	-31411713.3	-3144031.5			
	1500	34743651.6	1631381	35640.37	-35640.37	44142047.5	37953106.3	36615133	31191030.1	3104654.7			
	7000	-34700990	1534552.37	-181479.43	181479.43	-39185907	-35187153.3	34794826.8	-31408346.3	-31056382.2			
5D15	0	-8704865.92	2071706.96	22466629.7	-22466629.7	-5336531.63	17363358.1	29827020.4	12396238	-26654192.7			
	707.11	16903063.6	2002834.07	10555118.3	-10555118.3	-18671141.8	-4412519.28	28684562.8	-5404400.7	-2440203.7			
	1414.2	16903740.3	90391.08	1156602.4	-1156602.4	3452560.6	37130266.6	-29304001.9	36035200.4	-25877274.1			
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	1414.2	16911286.1	942487.53	-1514539.93	1514539.93	-34387426.7	-31108159.1	-26927553.8	29284694.2	-2568461.1			
5D17	250	-2886734.1	-764345.23	-32237744	32237744	-40267433.1	-67428093.2	274566.153	-6484910.3	3187809.91			
	2625	13892550.5	298758.96	-1136370.92	1136370.92	17149074.9	10677268.7	16061644.7	11461453.5	1065129.2			
	5000	7574101.92	4242863.2	29967001.8	-29967001.8	-2300141.16	27512050.5	3540663.4	20152009.8	-33786692.2			
5D18	250	-26594992.7	3594520.28	-32074103	32074103	-26916411.7	-67196768.8	799589.619	-64849161.8	3580212.77			
	2625	13879569.4	294108.35	-1144413.35	1144413.35	17127862.7	13660444.8	16063712.9	11561657.5	10521511.6			
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5D2	0	2901674.48	3242657.73	4604189.05	-4604189.05	5471384.9	9056215.62	81268138.4	6755167.18	-6532353.13			
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	2375	27899779.5	3254315.48	-11418422.3	11418422.3	66374636.6	-47915837.4	20942048.5	32575579.4	13026018.3			
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	1250	16316894.4	6836842.78	2728562.05	-2728562.05	27753297.7	24483339.2	18703058.5	16240019.2	11328692.7			
	4500	-4704322.16	-1523714.33	1676660.56	-1676660.56	-6095129.34	-4732512.33	-8043289.81	2838585.42	-6656394.47			
5D4	0	-5901225.99	-1982684.4	4293108.53	-4293108.53	-9173766.23	-2817162.18	-11632685.9	607367.514	-8064899.27			
	1250	149050513.7	5503843.96	3542212.11	-3542212.11	26755208.7	24985573.9	17141896.2	1699471.2	10231455.4			
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	2187.5	32161118.61	1648806.55	-1600811.18	1600811.18	8497830.57	3264588.01	8605291.44	1361874.91	4326534.99			
	4375	-21305207.1	-1124208.4	-8713807.26	8713807.26	-55564258.8	6384133.6	-33266139.4	-38917112.6	-3443258.9			
5D6	175	-2240262.1	-1388729.99	5661542.69	-5661542.69	-624002.04	392421.97	-921317.47	3937134.25	-7038042.4			
	1250	4639668.68	1949818.89	-908558.27	908558.27	3687312.8	5756929.75	766632.12	3057729.84	4990574.23			
	4375	23794138.1	-3400517.85	-7399258.83	7399258.83	-4728794.7	-40460666.6	-24922112	-27876057.8	-14557391.9			
5D7	0	5645498.99	526556.14	-12042.96	12042.96	-7516293.61	-9437542.1	-6412251.89	5991787.75	-6070110.43			
	2187.5	1211902.08	224545.98	91157	-91157	1013449.5	1109451.69	917021.887	1172483.6	1009401			
	4375	-3205122.16	-23035.91	104386.97	-104386.97	-3883003.92	-3133072.32	-3691221.96	1709488.7	-3069531.24			
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	4375	-3332193.33	-77278.62	153636.09	-153636.09	-4076077.63	-3351136.8	-2736771.59	-2833701.52	-1616240.48			
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	2250	4904047.16	2007129.12	-899790.76	899790.76	8204293.18	6195706.24	8996266.83	3824830.78	5304454.19			
	4375	-22075362.1	-8229273.37	7190408.44	-7190408.44	-46071259.8	-38530159.8	-23711409.3	-28617282.7	-13658351.1			
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	2125	-26089911.5	-8353894.68	117287.83	-117287.83	-4783127.7	-3775387.4	3002239.19	-23175363.1	-26384981.2			
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	2250	13682636.2	6997676.31	-44204.91	44204.91	26907166.8	1949134.2	1989384.4	12373073.2	12191495.6			
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	4500	-29179511.7	-12097282.1	322139.36	-322139.36	64371065.4	-41732171.5	-65409565.3	28971034.5	-26651485.6			
5F4	0	-6661022.76	-9149475.18	-3014257.46	3014257.46	-25512867.9	-21824393.2	-14995247.8	16637782.2	-6442086.18			
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6A1	0	17122404.5	783209.41	17511332.6	-17511332.6	21800020.4	37166566.9	331758.408	31170387.7	-350056.272	315742640	279356811	
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	1625	12585804.3	983022.25	-24974121.5	24974121.5	12514112.6	-33946146.5	33499506.6	-1749485.5	33601003.2
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6B11	4275	-31670897.5	3462369.8	867577	867577	-43431828.5	-36516515.9	-37338427.5	-27898238.5	-29199847.1
	250	-13263261.5	1030136.82	13224.56	-13224.56	17552192.8	-14875612.4	-14803384.1	11916033.1	-11603837.4
	2262.5	20952140.5	6407380.8	28650.1	-28650.1	32349487.9	2560532.4	25942667.4	18123272.4	18651860.1
	4275	-26867773.5	-1484675.39	666789.32	666789.32	-37336745.5	-01016046.7	-01203205.3	23781740.3	-24739162
6B12	225	-38734059.7	-4403881.83	679.56	-679.56	-41403842.3	34035917.2	-34337134.5	-126664492	-25861445.4
	2250	17931599.9	312257.47	-463218.47	463218.47	25793667.3	2083185	21634709.8	15172334.2	16008327.4
	4275	-19732557.1	-2976267.9	827015.57	827015.57	-10441108.4	-24606149.9	-22568409.1	33523618.3	16824986.5
	6B14	275	-23791683.4	-4424920.24	-4801530.38	-4802539.38	-36629962.1	-34206499.2	-24126156.36	-26734800.5
6B13	1862.5	17664789.2	2891424.68	-299443.63	299443.63	26710426.6	60961914.1	21464745.8	16882811	18113609.5
	3500	4399233.61	926137.75	4321662.36	-4321662.36	8769099.70	10034287.1	964317.197	2950667.36	68020.104
	225	20319072.7	2115408.72	4476237.84	-4476237.84	-27384002.3	-159892734	-28080735	-14260201.3	-22315889.9
	612.5	-6110621.56	-330718.56	4442337.42	4442337.42	-7851155.57	-205438.98	11183748.0	1493411	9484618.36
6B14	1000	5548336.31	1284050.04	4409436.5	-4409436.5	6712482.44	11650098.1	2408270.62	8961994.48	1025508.57
	0	-5928699.54	-1459232.42	2420474.73	-2420474.73	-10529211.3	-6007610.63	-10909687.3	-3967602.26	-8324256.89
	1387.5	1610295.3	2388479.83	-172788.53	172788.53	24802725.6	20125730.4	20495694.5	13610777.7	14924761
	3775	-13303117.3	-749455.71	2766011.36	-2766011.36	-87148593.8	-17573554.1	-11760738.9	-1482238.2	-6403394.72
6B17	125	-32516671	-5279942.86	1733293.19	-1733293.19	-44700119.8	-37314187.5	-39954113.6	27106775.5	-30926772.3
	612.5	-18267495.8	-2141810.28	2078603.17	-2078603.17	-76547601	-19967091.7	-24332693.8	-16699778.4	-19311714.1
	1000	-6006430.57	-1232616.59	2424408.0	-2424408.0	-0181478.61	4226957.02	-10018214.5	-3223870.4	7587011.88
	6B18	125	-30680358	-5462114.02	1818507.47	-1818507.47	-49198912	-39609200.8	-4242366.5	-28877486.5
6B19	612.5	19170014.4	3277587.86	2162247.84	-2162247.84	-18255229.5	-20877204.2	-25491914.9	-15711394.5	-18186431.5
	1000	-8681847.42	-1322027.57	2497979.55	-2497979.55	-10128734.8	-5842979.55	-66888000	-390040.59	8224937.87
	0	-7600920.42	-1607742.61	2432817.49	-2432817.49	-11633482.5	-6946824.76	1205471.41	-4851292.64	-2038784.12
	1887.5	16751996	3353280.17	-210660.93	210660.93	25475501	10541868.0	20984248.3	14887111.5	16206201.2
6B2	3775	-11847704.2	-388412.82	-2654109.53	2654109.53	-14838704.2	-16903987.3	-8819282.89	-12231566.4	-8094209.2
	150	10897567.8	2862000.87	806666.72	-806666.72	-17849750	-13229131.4	-15048880.6	1029125.06	-10597188.6
	3250	10724780.2	4486963.55	1022147.33	-1022147.33	20047917.9	16573897.5	14427078.1	10572234.8	8733369.57
	4350	-5540285.03	-847355.21	1178709.42	-1178709.42	8004110.37	-5580406.06	-7955664.86	-3826418.05	-6047095.01
6B20	125	4360103.76	-1058405.87	10703149.5	10703149.5	3551868.74	-7639887.83	14526746.1	5680041.15	13574928</

	1012.5	16133420.3	2929968.61	1589546.02	-1489348.08	24127588.4	21018255.1	17201525.2	16867461.3	15187775.7
	1025	-29337962.7	-6366115.1	2954036.95	-2954534.86	-48335259.7	-33714931.2	-34919818.4	-23744994.2	-29263330.7
65B3	225	-46368782	-6701884.05	-3169226.19	-3359225.19	-61574014.1	-50713102.1	-49273737.1	-38876701.3	-33885701.1
	1237.5	13528211.5	20440242.26	-1585082.56	1585013.05	16913150.8	11345725.3	19056899.5	3065018.04	10897542.6
	2250	36460728.9	6441018.95	22061.07	72081.07	54856584.9	44391775.7	44746437.5	32832716.9	32762001
65B6	250	-35123793	-11942319.5	790480.12	780498.12	-64936259.7	-52145486.2	-50485459.3	-35022850.3	-33999971.7
	2262.5	33332974.7	6668756.26	-211435.61	231425.61	33293579	26356550.3	26843544	15091354.2	18607960.3
	4275	-25974613.8	-3140138.02	32783693	32763643	38146913.7	28862121.9	30543146.1	23037840.2	-21627295.7
65B7	250	-35182725	-1202511.5	-1046543.51	1046443.5	-68268338.8	-52662990.4	-51405209	-38218624.7	-34322553.4
	2262.5	31982184	5595123.11	-724340.9	724340.9	-5228737.8	26130367.5	28608449.8	19591066.1	19994875.1
	4275	-21547556.6	-3811812.04	597866.73	597866.73	-30673964.8	-34843250.4	-29033647.4	-18854712.6	-19630672.9
65B8	225	-58346410	-8147463.73	3046710.25	3049710.25	-55551843	-49390204.3	-42306592.7	-35705409.2	-29897029.9
	2250	23650847	5115122.61	-51903.77	51903.77	37444556.5	29913792	30049148	36697992.4	20800153.2
	4175	-23467162.2	-5102772.21	3221742.57	3221742.57	-37925931.3	-37034265.5	-30396919.3	-18239977.8	-24628114.4
65B9	225	-51970649	-6043811.19	569900.06	-569900.06	62346731.1	-41504799.8	-43662370.8	-29325601.4	-29240544
	2750	33375296.4	6438083.38	66503.55	-58503.55	39551292.3	31737360.6	31818723.1	21984619.9	2186913.5
	4275	-25195570.8	-4962903.26	396793.29	396793.29	37690900.2	-21170571.9	-30346287	-23931227.7	-22317099.8
65B3	150	717741.49	12540433.02	12097133.9	-12097133.9	3037758.6	14735189.9	10688754.4	1153037.8	-10241463.2
	1200	-7537382.51	235671.27	664271.07	-664271.07	3849760.98	-6899265.07	-6394256.9	8230731.46	7420471.07
	2250	-24143234.5	-3266586.99	-10786589	-10786589	-34182883.6	-39735154	-1121117.7	-31410541.7	-12007191
65B30	225	-24475575.1	-8249170	3224871.77	3224871.77	-38447752.1	-35047739.9	-29254806	-24636402.2	-19116833
	2250	18878397.2	5481239.46	242945.37	-242945.37	31543951.8	25081981.8	24852006.1	17296037.4	16361915.6
	4275	-27704275.2	-6219337.29	3720463.52	-3720463.52	47988659.9	-39848644.5	-41708245.2	-21593341.4	-26226263.9
65B31	225	-25595656.3	-6843875.25	1848312.90	-1848312.90	-41818212.5	31491259.5	36372818.3	2138853.4	-2469018.1
	2600	25893534	3184740.44	218631.99	-218631.99	44111835.1	15083892.3	34536630	63445944	20060366.8
	4775	-37844710	10903670.5	-1410848.8	1410848.8	02519521	51312411.2	-48349417.1	33150093.6	-32610.84.4
65B4	160	7211286.94	-585728.21	11638710.1	-11638710.1	-9480704.88	4095284.81	70348007.2	393450.85	-1984487.3
	1200	-13106773.3	-2262875.07	-3048120	3096120	-16341528.1	-19146154.9	-12643302.8	-14577204	-6094167.9
	2250	-32805494.1	-3940089.64	-17830950.1	17330950.1	-33767802.3	-48476640	-8031644.78	-38644939.8	-4549839.8
65B5	150	-4788415.25	-78956.86	12882873.4	-12882873.4	5844253.71	8447587.51	-1860497.07	7944055.13	-15993603.9
	1200	-18430121.8	-3741745.47	6690477.55	-6690477.55	-28182932.9	-29859328.3	-16089825.9	-2360839.4	-10668879.8
	2250	-35990064	-750593.92	28282987.4	-28282987.4	-65180707.1	-71468301.0	-17306027.7	-56927746.3	-8754368.94
65B6	150	1047005.39	1659153.16	12621118.1	-12621118.1	3751892.12	-5815664.8	10679683	12301941.5	-10418071
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65B7	225	-18234552.5	-1914674.93	4102748.34	-4102748.34	24143932.9	-16174947.9	-24790419.3	-12718621.7	-29103670.3
	512.5	-4784007	250423.41	2999261.07	-2999261.07	-634038.66	-637427.28	8885875.17	798561.05	798561.05
	1000	8090296.3	1634944.47	3995774.09	-3995774.09	10013615.5	12085828.4	3904706.82	8594474.35	1502280.99
65B8	225	-28997072.9	-6970952.77	-4743694.13	4743694.13	-42470037.8	-39925070.2	-29964101.9	-30276694.6	-2173036.1
	1862.5	16425403.1	2804635.18	-451314.59	451314.59	22955594.4	18370533.5	19318441.4	13474708.6	14287708.7
	3500	6012008.8	1940655.63	38406703	-38406703	8171462.32	10537101.1	2507555.1	3975870.74	1083744.74
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	1512.5	19742596.0	1731225.99	-378439.86	378439.86	18409020.7	14969238.7	15759750.8	11426975.8	1210559.8
	2025	-24824780.2	-3014048.94	-312310.78	312310.78	-34612210.7	-29242219.5	-28686368.8	-22626381.9	-22081222.5
65B1	150	-4837065.02	665614.52	-685401.4	685401.4	-4633094.75	-6001048.52	-3811510.53	-4595800.78	-3035416.26
	575	-1717735.04	330713.58	-365215.14	365215.14	-1532141.33	-1664074.06	-1118122.56	-1885655.21	-1228267.09
	1000	733256.5	-388109.29	-144938.94	144938.94	642816.778	6020155.084	987028.033	547494.394	808384.896
65B10	0	738282	1600.09	27022.05	-27022.05	288722.344	885186.336	748440.073	587301.646	640061.956
	387.5	-3779492.17	-189572.19	381728.94	-381728.94	-4854818.11	-3777280.61	-4536030.38	-3076880.81	-3727093
	775	-2821758.12	-401344.48	896435.78	-896435.78	-11235140.9	-8618959.99	10378465.1	-73181.01	-8671774.62
65B11	0	-7738478.73	-550075.75	88824.35	-88824.35	-10742015	-7774028.05	-9540439.18	-6212654.9	-7310382.22
	600	-4215860.94	-304387.81	351093.63	-351093.63	-6747873.82	-4464911.18	-6202207.78	-3478290.58	-4110259.11
	1000	-1626463.53	-302099.87	186437.05	-186437.05	2814132.09	2083169.04	-1691651.23	1540872.67	-1205286.86
65B12	0	-8205107.85	-900336.94	416865.79	-416865.79	-11282428.6	-8001874.57	-9807292.73	-7908417.85	-7769776.28
	500	-4641789.43	-843258.58	59538.74	-59538.74	-84781176.0	5714084.55	-5439116.7	-4673999.5	-4141165.84
	1000	-1781908.04	-893920.81	267792.3	-267792.3	-2725004.02	-2623979.47	-1988815.54	-1863731.12	-1817704.98
65B13	260	-6582179.3	-346020.58	18585754	-18585754	-7262748.09	13641764	-26018319.4	11972217.2	-21021140
	1425	8522928.72	805900.81	1897752.12	-1897752.12	11675823	-11287210.4	7812309.38	9398200.62	5082640.08
	2600	-32151802.65	-1431185.44	-10900229.8	10900229.8	-6700445.46	-20312490.8	-11375991.8	-1646742.2	1067701.3
65B14	150	-4911340.43	873150.78	1154834.2	-1154834.2	8870812.64	-17626640.4	6814378.21	-4444732.5	6342360.45
	1375	18716476.3	-311063.02	936398.21	-936398.21	12364592.8	11839431.5	10078694.6	1840037.3	988970
	2600	4311802.85	207396.73	13221139.6	-13221139.6	5525997.92	16811879.3	-9185110.95	15785948	-8020903.31
65B15	250	-48867489	17369209.8	5946448.26	-5946448.26	29639719.7	-83125344	-75613886.9	-39528924.8	-50237542.6
	1800	-14694844	-5062962.15	2595126.11	-2595126.11	-257734312.2	-12489993	-22938767.0	-10889566.1	16560793.1
	2750	1945388.59	480707.11	-758195.74	758195.74	3103497.44	1702920.5	329031.55	1070273.39	2431425.73
65B16	350	-8571401.7	-35290552	1214666.45	-1214666.45	174821744	-135514607	-13694716	-87588620.4	-89754534.94
	1600	-30509592	-13440790.3	817950.92	-817950.92	-67716774.9	-52172766.8	-64100470	-32824274.0	-3384791.3
	2750	2952014.53	1016423.75	621826.41	-621826.41	5180895.44	4723534.50	3417736.87	3225440.68	2106186.61
65B17	250	84611348	-32311829	4902503.34	-4902503.34	-153112544	114228650	-124314507	-71377680.2	-80387338.2
	1600	-32527795	-12198703.2	2036602.7	-2036602.7	-68211281.2	-43018470.8	-47925254.2	-26092110.9	31197525.5
	2750	1322941.88	821846.11	-129675.57	129675.57	2422484.8	1746975.01	2018394.32	1673941.18	1307367.75
65B18	150	-13883290.3	-3107608.09	-15824931.1	15824931.1	-21622246	-34120430.7	888078.589	-26779464.7	1747381.32
	1325	10318044.9	-3778989.37	116232.76	-116232.76	-18427380.4	-14239017.6	-14523168.3	9178812.30	90886031.39
	2500	-23549308.1	-11213923.9	16057396.1	-16057396.1	-46211844	-18469332.6	-52189384.5	-6742718.99	-35646032
65B19	150	-3668778.62	-1036833.87	-407071.38	407071.38	-8368266.14	-6255553.41	-4400503.51	-1886565.2	-2932934.7
	1325	1977735.29	478230.32	-144129.87	144129.87	2983280.58	2154829.12	2457501.86	1461344.97	172026.73
	2600	3832640.15	-1336429.64	118611.53	-118611.53	-6803655.68	-6013396.39	-5268930.51	-3167846.37	-3301708.3
65B20	150	-8465570.87	272760.52	1022361.48	-1022361.48	-7414688.21	-7654420.26	-6638461.19	-6808439.1	-4868188.47
	575	2685740.28	107133.17	-683729.24	683729.24	-3055655.65	-3493546.45	-2004016.08	-3035222.67	-1804609.94
	1000	526781.28	-58492.17	-346097.05	346097.05	538542.18	136481375	880185.58	183497.873	784672.589
65B20	0	-2089254.75	25974.57	193087.04	-193087.04	-3488945.92	-1954248.07	-2371493.07	-1936110.41	-2063749.16
	1375	1288254.44	236344.18	52142.01	-52142.01	2019658.02	1687566.52	1578068.9	1297295.81	1113401.19
	2750	-2019704.26	664715.51	-94403.61	94403.61	-1520103.6	-1888159.02	-1487911.39		

62P133	1500	-185811.5	-1428175.61	76211.75	-76171.76	-6842113.09	-5081451.86	-7521148.75	-1224819.06	-7781808.13
	150	-142484.66	-1106345.54	-15117736	10117736	-22728359.7	34911526.2	1067260.5	-2712955.9	1681709.8
	1525	-4311552.1	-74184.79	185725.44	-154725.44	-12515597.6	-4073899.75	-9431925.17	-4726795.88	-677104.46
	1600	-1334740.9	-1070482.1	7643149.0	-7643149.0	-4448189.1	-1050995.9	-1075094.61	-4181030.3	2711313.52
62P137	200	-79400113	-21144163	-6047882.81	-6047882.81	-168746320	-109890005	113687742	6712437.0	-7404304.1
	1500	-28971617.1	-12197701.5	20271229.96	-20271229.96	-55342191.2	-40461846.1	-48331853.1	-14791555.6	-26875054.3
	2750	-1154010.12	355184.1	-201007.05	211051.89	1854794.95	1307127.6	1159486.05	857738.737	-1215811.78
	290	-107923037	-37567476	-4784657.1	-4784657.1	-108022206	-140213175	144213443	56514497.1	-93477612.5
62P134	250	-43634589	-14754401.3	548555.05	-548555.05	-15006148.4	-50303640.1	-8014816.6	-33637430.5	10874629.7
	2750	-2127099.27	844095.45	817464.47	-817464.47	817484.43	2788773.59	100461.14	2298757.73	-250107.49
	280	-83579188	-31867589	2294401.72	-2294401.72	-123444.71	-151321642	-115036112	-12008496	-73476245.2
	1500	-12117012	-11691059.7	114326.40	-114326.40	-1041026.42	86006107.5	-4767733.1	44027407.7	-21157176.1
62P135	7750	2812151.46	1031159.21	-112815.51	112815.51	513115.51	5243946.56	1049811.21	431115.52	1471582.73
	250	-2117724.95	2781193.45	20215459.6	-20215459.6	-114452.485	471452.485	3258775.7	1596492.0	21143812.1
	1025	-5420978.41	3764.48	216217.41	-216217.41	4238114.1	52446721.91	1440742.76	6206360.44	1215887.1
	2600	-7077521.87	-1089402.87	-1592194.02	1592194.02	11235010.3	-25167322.1	3265455.13	-10740718.4	7451177.22
62K3	160	-5010409.80	458844.25	641894.75	-641894.75	541014.75	-1030098.0	-474216.27	1637594.4	-6094771.53
	675	-2010192.51	190374.48	472848.24	-472848.24	-2471123.85	-2745346.17	-1750287.83	-150355.33	-1566210.4
	1005	846820.37	-48190.27	-704687.92	704687.92	384051.52	681995.211	311290.34	941423.476	-107564365
	160	-5070544.5	621341.48	-712512.03	712512.03	-5095027.5	-5480258.61	-3694913.34	6010240.27	-38257263.7
62K4	575	-892980.11	282604.15	409479.74	-409479.74	-1607451.33	2171517.1	-144629.84	2090212.87	-1209180.01
	1000	671247.95	-68122.96	-166447.42	166447.42	715705.722	-472008.68	83949.183	464024.988	763320.342
	150	-4286227.3	-92133.84	611041.44	-611041.44	621049.79	340668.12	621475.02	3013697.88	-468611.97
	675	-1804782.53	-120212.26	344301.84	-344301.84	-245245.11	-163908.73	-1383117.44	120019.59	-104321.26
62K5	1000	39118.28	-154560.88	-212499.44	212499.44	109871.92	177471.542	118275.282	16088.144	226402.848
	0	31230.63	-120238.03	-100282.63	100282.63	268702.55	140115.903	-143115143	568719.681	812937.283
	-425	-3697600.78	-601947.31	975742.17	-975742.17	-5024017.01	-3084844.3	-5413701.36	235555.47	-4451921.4
	050	-8286707.3	1062567.84	2231746.09	-2231746.09	118749881	-7879707.75	1206607.1	544359.417	-3487108.77
62K7	0	376164.31	-126861.41	-265084.18	265084.18	239058.316	-11708.446	546246.235	54036.317	571123.841
	425	-3769837.55	681605.37	684488.75	-684488.75	6471254.81	3441724.65	-643072.511	3473508.34	-4272500.75
	850	-6510179.69	-104472.22	276063.65	-276063.65	-11267382.9	-7542304.79	-1234238.61	-5612904.45	10841419.03
	150	-9848209.56	-5261.9	1054047.72	-1054047.72	-482638.61	-1003515.43	-8316575.64	3842177.75	-4547043.64
62K9	675	-1633492.53	70043.01	-43548.08	43548.08	-2072280.27	-1326711.88	-2237183.74	-1038419.55	1280307.58
	1000	92041.45	-125434.12	-187550	187550	188115.372	-272671.951	166001.243	-85957.395	262532.665
	0	685847.87	2700.36	7497.09	-7497.09	162482.59	731408.873	715462.784	820700.294	811865.622
	757.5	-3861740.88	170085.13	218651.67	-218651.67	6054225.24	-40089.1128	-4636206.47	1268004.23	-3884284.26
62K10	775	-890068.134	-44881.81	491730.61	-491730.61	-1167415.76	-342812.76	-1036048	704002.65	-6417170.82
601	225	-6100229.37	-3160810.17	-1260000.80	1260000.80	-11077261.5	-8808816.55	8808816.55	3078705.18	5553700.18
	2250	7336933.88	3234630.88	365358.88	-365358.88	-15561170.9	11110305.8	13368025.8	5430742.16	6793211.87
	4175	-13992187.12	-406041.11	-554200.03	554200.03	-13380030.4	-16081073.8	-17625134.6	-10054128.8	1256600.04
	0	-2028887.7	-939265.83	-197059.79	197059.79	29375.23	-10386766.4	-12997294.7	18286337.1	-12083508.2
6010	2250	14122690.2	7413092.75	-444000.99	444000.99	28234860.7	21083075.8	22021107.5	1331071.3	13118865.1
	4000	-24670786.8	11181854.4	691542.67	-691542.67	-47511590.7	37206568.9	-35754316.4	-228280081	-21681219.8
	0	7980023.18	1217148.12	-2461179.67	2461179.67	55408176.1	-4556805.4	-43407508.1	-29482317.3	-24779191.8
	2250	17788168.4	6531850.4	-113.84	113.84	113.84	36040068.7	26794487.5	26794727	16007467.1
6012	4500	-863757.24	540139.58	246061.92	-246061.92	-1735223	-10826432.9	16772432	-4682524.79	-9094755.24
	375	-1046401	910050.26	639189.97	-639189.97	601301.87	-83427758.1	-48500028.5	-332611256	3030601.2
	2250	11404473.2	1000000.57	620026.1	-620026.1	15848384.4	13881808.7	12784587	33786048.5	9350003.29
	4800	-473435.98	1008576.48	401869.28	-401869.28	100869.28	800158.794	692013475	187110.84	730475.00
6013	0	-489395.87	549392.16	154992.48	-154992.48	1748991.48	108874.012	1668600.7	-1814651.41	1821674.82
	3137.8	11635320.8	1553264.46	784584.79	-784584.79	18372514.7	19314475.8	12465691.7	11174201.5	8286555.00
	4275	361479.90	-8086104.76	16138.23	-16138.23	-60014825.2	-48831269.3	-4862548.5	-14324328.3	-34842177.6
	0	-2960982.8	-1254301.9	542536.29	-542536.29	68052920.2	-42741434.6	-42880760.9	-2389431.8	-27779994.3
6014	2500	16449410.1	3883994.21	80227.06	-80227.06	28358739.1	21188398.6	21682721.9	70078470.5	1283454.8
	5000	-1925937.3	9001543.85	37882.27	-37882.27	70050235.3	-28107364.8	-27513791.8	-18601114.1	-16128071.1
	0	-7081226.06	6767036.08	2467493.67	-2467493.67	19471209	16891414.6	-11492263	-9461544.0	-478922.89
	2250	9026004.45	4265788.39	392049.41	-392049.41	18647221.8	14778766.3	13963812	9186956.47	8482938.84
6016	4800	-13664846	712105173	3548852.36	-3548852.36	-51453857.8	44273060.4	-1190189.4	20284594.5	-33812133.7
	0	2810010.7	10068170.7	279010.19	-279010.19	149288936	2536575.8	20371508.7	-2503970.5	26881788.8
	2250	17683695.7	7573387.1	-56776.87	56776.87	50275.07	16514642.2	21451423.1	12563882.4	12042306.9
	4500	-1771374.7	3801756.94	973591.01	-973591.01	36508198.3	-10881031.3	-27230302.6	18942057.9	-15603254.6
6017	0	42709949.7	7047401.39	190648.73	-190648.73	62520856.6	51200044.5	51201008.9	58266825.4	36804461.2
	1125	9538911.79	1802353.23	83805.31	-83805.31	12810347.4	10575581.5	10881780.4	7799448.38	7500415.81
	2250	-40922387	-16775534.6	378469.38	-378469.38	-68227719.6	-5264004.1	-50443788.8	36399584.9	-3708078.17
	0	-38471046	-8920880.7	-864101	864101	364191	38035814.7	-47672214.3	-4851740.5	-10601715.1
6018	7125	10683649	2825412.62	-491857.54	491857.54	18373206.4	13356428.6	14773804.7	8148715.73	12102240.3
	2250	42883112.5	7934860.68	-193724.08	193724.08	81491495.1	51238741.2	51659161.2	382215040.8	32891052.9
	0	-30191236.6	-1472787.73	1578579.19	-1578579.19	-60702068	49354070.4	-4715808.7	-16751484.4	28682926.0
	2250	13099130.2	7072435.15	84803.22	-84803.22	254827.71	27514912.5	20830780	26511987.8	1111427.3
602	4500	18816714.8	-6342552.81	-175166.6	175166.6	-28744140.9	24654636.8	-20478641	-16711454.4	-10650562.2
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	2250	7823544.1	3569367.62	360841.1	-360841.1	14406391	1148442.1	10888925.8	7104758.86	6440852.7
	4275	-12987329.5	-3898384.94	-50388.48	50388.48	568056.48	21882210.1	-17846595.1	-16890342.0	-12147019.0
6020	0	-28828301.5	-14710481	1616234.9	-1616234.9	50141887.2	-49480782.8	-46374992.1	-24491732.8	-2740180.8
	2250	15740210.7	7745698.28	-70615.40	70615.40	78615.49	83644795.7	20394406.8	25554489.4	14008135.7
	4500	-1099860	-611001.72	177365.87	-177365.87	24124876.4	-26605897.2	-18785402.9	-13197770	1006445.6
	0	-1878154.5	-3163046.58	868894.68	-868894.68	36432124.6	-30344947.7	-28550946.2	16573485.4	-17933240.4
6022	2250	19804088.7	7261238.72	-24236.87	24236.87	24239.87	29179224.4	21959329	2246228.5	12915878.7
	4500	-24236165.8	-11061285.2	370017.92	-370017.92	-78081.83	-46764461.4	-15602921.3	-26779965.5	-21475633.8
	0	-13861128.8	8902323.52	902016.78	-902016.78	-43702289.6	-32859917.3	-34751040	-20142104.2	-217

6000	0	29152220.8	-1251486.9	197386.92	-767506.93	-6506569.1	-41201334	-43744746.5	-15545960.5	16828697	
7000	14600884.9	709123.41	267362.13	-399082.11	22234449.9	22512265	32078004.5	13066112.9	13177960.5		
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9000	-15494949.8	-2693384.29	-2451967.52	2031497.52	-23115004.5	-21705764.9	-19749122.5	-15511361.3	-12290420.4		
0000	10170161.05	-6600000.84	470161.33	-470161.33	336832.942	1687279.35	99940.5997	1786213.4	534991.124		
1000	19377716.05	1461563.29	2302260.11	-9776792.54	-11365220.2	4421303.47	8660004.59	2805830.38	2805830.38		
2000	0	110085818.5	4008705.27	5487167.05	-5487167.05	30190150.9	21769454.9	10748122.4	15170299	6293055.21	
3000	19499977.32	-73498.29	710022.79	-101032.79	2216016.97	2299299.54	1698748.99	2334675.17	1476927.03		
4000	-19366772.8	-4261117.9	-4967261.98	-4967261.98	30028812	-29409112.8	-18272238.5	-10367895.9	-10375605.9		
5000	0	-22630128.2	-1012406.8	-543551.4	543551.4	-50572257.5	-40211694.2	-39072317.9	-26262616.2	-24296916.4	
6000	2264	1343670.71	7978469.41	1211559.92	-1211559.92	30042071.5	226890378.7	21424171.3	13155589.4	13758145.1	
7000	-1677142.1	-9731567.17	969372.73	338973.26	-23779737.3	-25043951.5	-13309363	15057873.9			
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9000	1125	87493660.1	1684460.59	-246950.15	246950.15	13107858.3	10511569.2	13002359.5	7647234.8	8041756.1	
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4000	0	-31050012.5	14832343.4	850184.42	-850184.42	-51029754.4	-45765219.1	-4746907.3	13710017.1	92798206.2	
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7000	0	29650064.5	14267150.11	926340.85	-926340.85	-49470993.3	-46623445.5	-26736799.4	-27466317.4		
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9000	-11933319.5	-5465938.74	-819094.13	819094.13	23127090.7	-19067775.9	-1696700.1	-1512159.9	-10047008.3		
0000	0	-7545258.9	-25541.64	-413907.58	413907.58	-2454925.94	-5595560.4	7730448.36	-2163246.19	8418216.3	
1000	6891215.28	-862094.54	-484682.01	484682.01	7897833.03	6510901.14	7538762.39	5301879.93	6874937.54	4700241.5	-66013750.9
2000	-7453308.95	-286077.97	-555468.82	555468.82	-4372892.35	8663535.2	-7480070.5	-7207887.4	6308085.14		
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4000	12275187.2	251477.74	-4526942.57	-4526542.57	7510789.1	17378733.2	8770498.82	8712135.5	6977581.16		
5000	19716264.7	1219954.87	17723922.1	-17723922.1	-13855680.3	1737242.35	-35482994.1	508191.589	3139486.1		
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7000	12284445.4	253941.54	-4555162.98	-4555162.98	16122041.2	17899918.7	8933776.49	15137647.6	6939054.1		
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9000	-3812615.95	1085991.61	15907758.1	15907758.1	17304841.5	-1816167.1	3882380.17	15137647.6	14669005.5		
0000	2647311.41	100984.01	1258960.05	1258960.05	4074983.28	2328110.59	4074984.69	7418638.22	6418202.31		
1000	1612672	-1432942.55	-18471129.1	18471129.1	36397614.49	-26801621.9	10295379.2	-21335821	11533011.4		
2000	-18516824.9	-485972.21	680004.88	680004.88	-23000305.41	-19189469.3	20618739.8	-16064385	-17279468.6		
3000	35658213	-636741.28	1399180.57	1399180.57	43308241.5	33801568.7	3658340.6	-33543632	-30843047.2		
4000	-5130912	-789410.3	-548925.95	548925.95	-8511750.5	-68151542.6	-52897798.1	-60930544.2	-4704787.4		
5000	-21467119.3	-496191.41	538834.61	-538834.61	-2840660.4	-22403895.7	-13537447.7	-15855546.5	-18806448.3		
6000	28275575.1	-444028.86	567527.52	-567527.52	30216843.9	2953813.3	36872005.5	29052482.7	24937993.7		
7000	-11685371.6	-426877.91	596220.72	-596220.72	-22451466.2	-23703952.1	-18900335.6	-18988430.1	-18988430.1		
8000	-52999788	-517401.19	-5561615.36	5561615.36	-64907611.5	-50161925	-52682502.7	-53906248	-44404337.4		
9000	-34639493	-681480.87	1481642.48	1481642.48	43706913.7	-38476348.4	-36406992.2	13301384.9	-30670128.5		
0000	-14010668.7	603040.76	603040.76	-603030.39	-23301837.1	-9138643.5	-20479197.3	1648194	17144099.7		
1000	-1000545.37	830170.05	12747272.2	-12747272.2	232411.164	12803556.9	-13966714.7	10302654	-12643035.8		
2000	-3680504.3	206411.7	6011839.7	6011839.7	-3835947.04	5751789.85	9890971.82	1099920.1	-8772109.16		
3000	-1236328.9	723696.32	723696.32	-603030.39	-6576977.74	-7057727.57	7165851.33	-5892831.75	-5892831.75		
4000	-694317.91	-601554.82	7774442.81	7774442.81	-2155650.2	-1682865.9	307671.29	18246284.5	747112.41		
5000	-406895.12	-211938.07	4091206.89	4091206.89	1487323.85	-5463711.6	3106767.87	-4528794.5	2935471.39		
6000	4700179.37	77762.57	-467974.46	-467974.46	5775442.52	4680779.21	6448625.87	2977004.5	-405492.49		
7000	-4890493.67	803859.58	-355445.06	355445.06	6722508.15	-4597186.1	5343620.72	9374945.75	4514749.56		
8000	-567011.34	-218717.04	-4196079.54	4196079.54	-1499980.87	-6565088.68	6130379.56	-663973.99	2991153.28		
9000	-6826734.47	-510293.88	-791689.91	791689.91	-9148951.57	-16079379.8	545681.595	-1356989.75	989185.467		
0000	-1205419.39	865231.93	1282450.22	-1282450.22	-106593.78	13086374.1	-14103355.5	16467146.5	-12607001.1		
1000	-464726.18	307956.87	6040029.42	-6040029.42	-8832140.42	-2805036.8	-9879022.3	21548722	-8771179.32		
2000	-7164030.4	-239378.09	-844526.52	844526.52	-8378946.98	-8635201.05	-6861695.36	-7207704.65	6887560.91		
3000	1111152.1	807260.71	-8179275.58	8179275.58	361758.952	-796393.1	9181039.07	8261021.56	82611305.81		
4000	-170369.23	-122022.72	-1128393.4	1128393.4	11830.724	-1750754.35	1389981.78	1389981.78	1709714.87		
5000	-1124341.67	388614.26	-4720490.09	-4720490.09	-768037.188	-4124386.32	-6790627.82	8236930.68	5290348.68		
6000	225	-26398703.3	-254314.33	-326045.5	-326045.5	-23101357.5	-17526172.7	26871079.3	2348909.11	-24052274.9	
7000	-17894760.4	-216775.89	237491.87	-237491.87	20311359	18144502.1	17645791.2	15770300.9	15744441.8		
8000	-26239547.7	276130.85	149818.96	149818.96	149818.96	27855476	-2788201.4	-23481837.8	23749893.1		
9000	-1161040.07	-382495.02	-4555408.63	-4555408.63	-781516.038	-4260727.09	-686626.25	3036986	-5424072.63		
0000	151175.15	1319137.74	-176887.57	-176887.57	-12869126.7	-1749635.93	-1877777.57	-14018368	-1671662.33		
1000	1089534.29	-625370.3	-8282167.77	8282167.77	5292181.77	201268.924	-81216959	-629235.76	-6451021.75	-8452805.44	
2000	-5587349.55	-1360371.96	-8812225.9	8812225.9	-912026.9	-8890412.04	-16171154.1	11831129.2	-2114317.77	11302068.7	
3000	-6373767.44	-175187.63	-1211369.92	1211369.92	-4182921.7	2410885.68	482942.49	2219167.19	889835.92		
4000	-379426.55	102308.28	1555748.5	-1555748.5	1192582.79	170573.10	-16907411.7	18786254.4	-14453221.3		
5000	0	307990.17	780783.74	-307832.39	302892.89	1556702.19	724742.378	1700191.46	4680.552	64069.754	28629782.7
6000	-73705.35	494447.46	-42256.55	-42256.55	1155818.34	979294.236	862095.58	471632.71	355670.92	-11156156.7	-56746335.3
7000	-22230.45	228131.17	387346.56	-387346.56	387346.56	698956.111	-2114470.305	328694.821	-268617.905		
8000	0	58492.32	273975.78	247357.29	-247357.29	506181.88	682949.079	-9601.2503	365464.559	-261778.593	
9000	-949044.25	269684.63	735804.42	735804.42	-1095677.69	-200501.146	-1741490.67	-193715.947	-1514663.8		
0000	-2443530.59	-220006.46	1192651.47	-1192651.47	-3404307.04	1792401.39	-954932.77	-1280996.21	-2297448.95		
1000	0	-2178456.46	936568.05	2029231.11	-2029231.11	-2677224.96	-684938.88	-4934908.71	314803.494	-8236914.2	
2000	-4356570.96	-421631.74	1724071.93	-1724071.93	-8133655.24	-3172330.47	6792881.31	-2377818.7	5488947.96		
3000	-1022460.53	1179299.63	919911.66	-919911.66	-14165754.5	-10384353.2	-12626167.6	8089158.08	-10030005		
4000	-8907984.61	-714909.8	-4181508.6	4181508.6	8813275.14	-18114450	-1333295.74	8090549.23	-66389.038		
5000	4798977.82	-1219147.68	-1294968.27	1239689.27	-759429.49	-7470003.74	-4078740.38	-5422919.3	-3182560.42		
6000	-8446020.08	143884.84	170330.12	-12692993.2	-9708618.8	1228651.8	-2098420.95	-1414415.16			

	0	-2017731.57	439881.13	7697407.79	-269746.76	-173561.23	112940.87	-4604742.63	812128.11	4240106.8
	1250	-444170.32	289882.3	1026624.07	-1876024.87	-4021179.34	-3034248.2	-6941575.75	-2244034.08	-565017.41
	2500	-1046644.6	-179746.68	978130.48	-978180.48	-1454044.6	-11151742	-13215721	-9610227.73	-16374027.6
6D11	0	-2324729.04	-869516.82	1361781.39	-2351701.38	-3626548.52	-811594.284	-4638177.23	-1047487.56	-4137950.11
	1250	-5560199.09	-863757.48	343172.87	-7642173.87	-6704386.04	-646662.862	-3095060.44	-16124.616	-6392485.55
	2500	-7241860.21	-781969.47	4702076.14	-4722076.15	-9909763.4	-3754303.41	-13293039.2	-1267086.85	-10777562.7
6D16	0	-2481127.59	-811071.53	2854147.88	-2068047.88	-4261097.84	-1179681.76	-2512411.85	-363661.748	-4676517.9
	1250	-544157.44	-663757.48	343172.87	-7642173.87	-6704386.04	-646662.862	-3095060.44	-16124.616	-6392485.55
	2500	-8981246.93	-555147.09	6172697.23	-6172697.23	-9326131.66	-2425401.15	-1288966.4	-1620314.71	-10949703.8
6D19	0	-1021183.84	-300140.8	5283895.85	-5283895.85	-1803848.85	-4101603.85	-593512.53	-3033766.89	-5677244.15
	1250	-3003901.21	-142241.13	1835617.89	-1485427.89	-2185555.54	-47445.6405	-364689.46	-111144.195	-8804877.98
	2500	-1307794.67	8706.251	1513030.41	-1513030.41	-2966388.4	-1471971.46	-4648040.11	-714042.15	-7493287.35
6D18	0	-580777.47	217264.14	-6502746.19	-6502746.19	-120755.54	-4853229.75	-6790491.68	-4447910.71	-6818715.12
	1250	-1703068	-378216.89	-2191844.85	-2191844.85	-1470318.9	-873220.943	-3765659.1	-415214.618	-2530013.52
	2500	-2481000.21	-542697.55	129966	-1202550	-4411117.08	-2897267.56	-4767201.55	-134236.74	-6270565.94
6D19	0	-10590949.9	3617384.06	-2548618	-2548618	-1846483.4	-17307604.1	-1162436.4	-11916003.1	-1230737.71
	1250	-2306884.18	-1259251.66	-1441893.7	-1441893.7	-755889.56	-282161.968	-274573.11	-773266.729	-326331.73
	2500	-770356.72	-2423076.08	-136548.59	-136548.59	-1257329	-1837742.7	-1612049.8	-701421.38	-559428.42
6D21	0	-1669259.88	-218430.29	-235630.95	-235630.95	-3833611.74	-276892.11	-3193919.61	-404307.23	-3060393.52
	1250	-4872541.32	973317.73	264866.11	-204069.11	7351519.11	671267.15	6794102.42	4631179.3	-3060393.52
	2500	-151495.83	1727604.82	643744.15	-843744.15	4043960.43	3698336.52	3238973.84	1764214.25	665487.82
6D23	0	3648267.9	121881.62	1875286.42	-1875286.42	6477128.87	7041057.4	309708.25	497209.49	5631153.73
	1250	-6501419.37	-2099309.02	-1740361.88	-1740361.88	-11165168.7	-18634492.5	-6475754.93	-7417504.86	-434981.12
	2500	-2800180.2	-62766.68	-558984.75	-558984.75	-4678898.6	-42238915.6	-31875048.4	-63769638.6	-19121466
6D21	0	-2007759.35	-1336679.45	-1336679.45	-1336679.45	-5997507.54	-2021730.78	-6870076.82	-887341.304	-4926586.84
	1250	-15781941.4	-9182382.93	-1309548.9	-1309548.9	-1388648.2	-1388792.6	-2078704.6	-21009101.1	-15391164.5
	2500	-3071678.54	-1535771.54	-404570.23	-404570.23	-7225209.71	-6114027.87	-6101628.31	-1388807.48	-4010993.89
6D22	0	-6058777.21	-1469448.88	209846.86	-209846.86	1217866.8	-7171161.51	-11560412.8	-358257.57	-742221.56
	1250	-14801214.7	-5403257.62	-1808731.95	-1808731.95	-20410269.8	-22662192.3	-1876366.4	-14948951.9	-11592134.5
	2500	-3047508.22	-1229787.25	-1578717.18	-1578717.18	-585734.42	-2664711.61	-6841728.19	-137788.23	-432880.17
6D23	0	-814716.66	-110094.72	-306555.82	-306555.82	-651840.16	-3149384.65	-3288273.25	-3331245.05	-1925755.95
	1250	-2327504.49	-1489238.54	-967529.91	-967529.91	667529.91	6343668.25	3886462.03	6888264.94	2123975.02
	2500	-3115550.54	-10514398.4	-600816.28	-600816.28	-64840420.1	-47890747.3	-37380455.2	-32540103.2	-25538995.7
6D24	0	-8699154.07	-2789659.23	-3921262.05	-3921262.05	-11270679.7	-4595324.83	-12613974.9	-1880982.82	-2688564.11
	1250	-3648272	-1513653.64	-220624.61	-220624.61	7378176.82	6009785.7	6773097.18	-282185.44	-3479308.95
	2500	-22103863.9	-7468609.66	-4362511.00	-4362511.00	-30634498.1	-14772097.8	-2602024.6	-38729728.4	-18857209.6
6D25	0	-4370598.83	-187218.05	-26029.73	-26029.73	-56042.748	-4836574.73	-4782374.84	-3959301.43	-3818717.51
	1250	-2107877.64	-47389.48	59184.7	-59184.7	2452133.84	223068.35	2105778.49	134938.11	1843103.55
	2500	-2685772.2	-100018.9	-143993.18	-143993.18	-3668096.4	-2571630.11	-2970595.79	-2679731.1	-2646518.83
6D26	0	-4325946.23	-186542.67	-32218.2	-32218.2	-5435601.66	-4738809.5	-4892155.49	-2911548.18	-3871557.82
	1250	-219444.16	-45680.34	68792.65	-68792.65	-2458543.44	-723634.43	-710839.28	-1867303.44	-1844884.18
	2500	-2730992.72	-92133.2	-141792.12	-141792.12	-194782.12	-1812699.38	-2631559.09	-2929301.54	-330290.47
6D27	0	-8618687.48	-2739920.84	-3711687.63	-3711687.63	-11087474	-4534690.38	-12329261.4	-1827798.87	-2308102.8
	1250	-2625862.2	-1850132.23	-256262.3	-256262.3	7191270.21	5181381.35	5719721.18	3942578.91	2404011.05
	2500	-22672325.8	-7426991.17	-6724282.18	-6724282.18	-38877928.6	-36933240.6	-79212700	-24971838.27	-18488267.2
6D28	0	-2159683.72	-1879304.89	2992935.59	-2992935.59	384732.84	4166907.15	-2170367.58	-487737.20	-749928.883
	1250	-2883651.39	-1337631.12	-1102472.2	-1102472.2	6094700.86	3130628.18	6446718.75	-100408.18	-3687411.14
	2500	-33277739	-10487527.8	-5187880.14	-5187880.14	-56746335.3	-50329012.8	-39417464.5	-34628043.2	-25271864
6D29	0	-4511162.64	-3644733.77	1866537.35	-1866537.35	-11101080.4	-6146662.5	-10046389.8	-2399182.81	-6739948.02
	1250	-1350123.0	-4567625.24	1626265.88	-1626265.88	23775156.2	19963416.7	16780860.4	-13378830.6	-10642372.1
	2500	-7621181.88	-2488178.81	-1193964.52	-1193964.52	-13118401.2	-9005367.95	-1151276.5	-6703462.82	-7842656.78
6D3	0	-1468448.16	-2262611.31	224680.48	-224680.48	-2091675.83	-6983662.58	-3865965.9	-1397600.7	-1505705.87
	1250	-773042.83	-141675.84	-78126.8	-78126.8	708384.067	-76141.306	-604275.036	-709862.807	-832624.427
	2500	-688687.38	-604107.59	-37682.11	-37682.11	-31792.972	-662839.914	130465.617	-367294.541	-269642.743
6D30	0	-4614466.49	-3421718.80	1429233.22	-1429233.22	-18892146	-11723600.8	-14724440.6	-7276738.94	-8849589.74
	1250	-14188393.3	-684672.73	-1221998.81	-1221998.81	-25621600.3	-21260985.2	-18694788.1	-13818018.7	-11678719.2
	2500	-831408.48	-1087162.98	-1014783.89	-1014783.89	-2737134.31	-804836.282	-2866404.84	-165019.649	-1881555.22
6D31	0	-3975852.89	-616657.58	-2227488.18	-2227488.18	-5697495.28	-7001618.24	-2323836.11	-6582808.71	-1773566.02
	1250	-11558674	-4730478.05	-439492.83	-439492.83	-2140370.5	-16139430.1	-17051365	-10097286	-10798330.1
	2500	-27483082.3	-9561610.8	-306463.97	-306463.97	-483492.57	-11132878.2	-1460025.8	-2743681.81	-21970974.4
6D4	0	-1512286.08	-224000.93	-179276.43	-179276.43	-2489644.6	-163418.26	-1996809.66	-1706306.97	-1528708.94
	1250	-802890.37	-201186.36	-45946.27	-45946.27	-88948.27	-99379.084	-99179.123	-489175.139	-321566.99
	2500	-276510.8	63474.67	-37368.98	-37368.98	585988.592	219386.515	402899.067	-326637.582	-189311.348
6D5	0	-1918965.69	-361844.11	-13378.93	-13378.93	-3273177.74	-3038212.07	-3010117.22	-2889267.37	-2685175.2
	1250	-4901684.06	-1003777.4	-280167.21	-280167.21	-7609135.71	-6481804.49	-5993451.88	-4718476.77	-4214174.64
	2500	-1144820.74	-1715600.69	675714.77	-675714.77	-4178783.83	-347631.14	-2873410.19	-6981687.05	-598005.773
6D6	0	-230036.48	-736892.51	-688704.89	-688704.89	-1479036.29	-564450.247	-120069.57	-120687.892	-544854.233
	1250	-409122.86	-488101.77	-16712.21	-16712.21	-1271569.62	-607366.618	-872803.977	-212351.683	-362369.566
	2500	-8413.71	-241710.26	-403109.33	-403109.33	-378638.848	-642388.987	-203735.509	-386271.058	-370415.736
6D7	0	-60313.26	-280040.9	-241110.15	-241110.15	-498041.10	-672803.128	-43428.189	-361281.06	-252717.21
	1250	-688281.48	-275.51	-9881109.61	-9881109.61	-1186542.09	-117414.82	-1758434	-271648.853	-1507006.92
	2500	-2625816.04	-266601.79	-1031288.88	-1031288.88	-3677526.12	-1826182.65	-4091889.63	-1435074.35	-

	1500	3622254.41	126980.77	-487687.16	437987.16	4384455.90	7091940.7	4407954.73	3001009.40	3878834.41		
	2000	-7948498.93	605214.59	-216328.06	316025.06	-8570875.37	-8109718.89	-5143365.20	-3408990.01	-8888899.96		
70Y1	0	11651841.3	79525.39	-310511.5	-310511.5	17925436.5	11299092.4	17002586.8	9621209.51	11060667.4	44543207.1	78511078.0
	1000	21684707.27	65942.63	-268816.74	-268816.74	3692054.9	2875101.39	3409024.45	2481080.58	2854541.71	32726316.3	18526866.4
	3275	-11688830.5	60303.01	588900.08	588900.08	-14720130.4	11982901.4	13816809.4	-10242672.7	-11057236.8		
70Y10	150	1041701.3	145661.02	-15671411.5	-15671411.5	1463125.19	-15225514.3	17566449.4	-10106712	15041829.3		
	1075	1772974.68	129885.08	-142954.46	-142954.46	1920552.37	1064624.12	1895078.68	6466027.3	1705132.11		
	4000	-6124733.02	383422.54	15335700.9	15335700.9	-8095571.69	9247788.51	-13062166.3	8246215.22	-19449375.7		
70Y11	0	1298256.15	-9018.42	-852987.06	-852987.06	-1572334.46	2267327.81	-479041.387	1636101.4	-909743.27		
	2125	4153864.4	-31042.87	-1362622.19	-1362622.19	4634968.99	1901468.81	5762975.41	2512117.99	-984837.93		
	4050	1032324.25	-51370.02	-1872358.45	-1872358.45	-1214301.61	-1100466.2	891273.368	2914371.84	756403.996		
70Y12	150	692240.14	9347.58	-16235305	-16235305	644894.095	-16313048.9	17761360	-13899292.9	15125142.1		
	2075	1239006.32	-122947.76	-161015.75	-161015.75	1942771.77	1697299.96	1914435.1	1405701.94	1740030.34		
	4000	-656686.63	-364143.09	15933875.9	15933875.9	-7434822.0	10340574.6	-23130466.6	9063291.2	-19611687.1		
70Y13	0	24864640.0	6047345.05	-524424.78	-524424.78	42473200.9	32951963.7	24052154.7	21726104.2	22676088.9		
	2375	5623292.98	-827010.62	486827.94	486827.94	6813338.68	10933684.1	716604.681	644569.74	681338.676		
	4750	-28707264.2	-8213006.35	10256879.8	10256879.8	-46199555.2	-26014273.2	-46457317.8	-14905345.9	-3526729.8		
70Y14	0	24444166.2	7912838.15	790211.02	790211.02	92002154.1	37392365.6	50916398.1	2394256.6	22656936.5		
	2375	8154706.81	93183.05	5051300.52	5051300.52	7533242.05	11051518.1	1245700.94	10065490.3	993142.991		
	4750	25423881.9	-7734472.83	16832918.2	16832918.2	-42833814.8	-22622966.7	-46978812	-13131967.3	-32831836.1		
70Y15	250	-16948801.6	60078.29	-376429.22	-376429.22	-20255442.1	-10144173.6	-17363672.1	-16592710	-14915140.2		
	2375	4242668.43	40368.05	-133617.61	-133617.61	5168820.8	4362773.18	4833351.95	3899235.80	3835887.36		
	4500	14795303.8	30380.82	109594.21	109594.21	17803515.4	16679972.9	15442245	1241435.2	13217345.6		
70Y16	250	-17012679.4	-32145.78	-428230.81	-428230.81	20436018.5	-37300816.5	-17461358.8	16730116.7	-14933303.7		
	2375	4211370.49	-427.07	-161538.23	-161538.23	5052051.28	4251951.79	4681119.07	2044878.03	3336590.35		
	4500	14803610.4	31291.82	106214.37	106214.37	17814399	15682805.5	15462986.4	12417942.2	13226576.4		
70Y17	225	-14792241.9	7204397.70	877886.97	877886.97	-14127655.8	-16470214.7	-14313781.6	-1252313.6	-14103117.3		
	1362.5	11611580	551707.59	289298.8	289298.8	14896604.5	12891265.6	12125738.2	16802773	10118005.1		
	2500	24629772.1	-1168052.11	-206291.38	-206291.38	356291.38	28510155.1	24005874.5	25015388.5	23771402.8		
70Y18	0	26460862.2	720405.61	-476243.63	-476243.63	493243.63	39088363.6	26542566.3	26542677.7	22497156.8		
	1137.5	1940945.69	-2306386.73	-418510.53	-418510.53	-1379881.34	-681306.097	293606.016	1366201.84	2124410.6		
	2275	34654681	-389066.83	-362777.66	-362777.66	48051018.6	40655168.2	-39893306.3	-31635804.7	-31942608.1		
70Y19	0	3106707.34	2644880.38	670188.79	670188.79	-576188.79	13632282.2	11665017.8	10367621.1	7811008.58		
	2137.5	2947302.1	2541927.55	784186.49	784186.49	7481726.76	6194078.6	4695299.07	3252248.93	1674714.35		
	4275	-166666.16	-1862635.8	968182.27	968182.27	80149024.2	-48831220.9	-48843403.7	-51814660.4	-30338418.4		
70Y2	0	11692961.3	78340.36	-809350.76	-809350.76	600360.76	13923911.3	11382236.8	13051967.4	9624346.5		
	1637.5	2634613.03	73943.43	-281035.46	-281035.46	3787380.31	2350807.38	3568044.52	2473224.32	3084089.94		
	3275	-11751110	79548	247277.83	247277.83	-1974062.4	-12063857.2	-12523140.7	10353454.4	-10798554.4		
70Y20	0	8034461.29	2918575.64	620009.86	620009.86	13871076.9	11581750.9	10269728.4	7399021.93	8873008		
	2137.5	3254737.67	2610291.86	813024.62	813024.62	6031613.85	6137418.03	5030061.35	7602593.03	2197145.77		
	4275	-35197182	10613017.4	1006109.22	1006109.22	-58997926.2	-47241284.3	-47863987.2	6077700.3	-32582699.1		
70Y21	0	26292224.2	-788793.1	-452156.69	-452156.69	29088800	25336662.4	26266189.4	22356081.6	23169941.6		
	1137.5	1762375.38	-2344765.83	292889.26	292889.26	1638774.65	-672948.094	67670.8493	1322447.61	1848825.16		
	2275	30610304	9400738.24	-132922.83	-132922.83	-43304988	-40921428.8	-401261400.9	-13868148.1	-31427317.1		
70Y22	225	-10913800	2388034.49	734607.9	734607.9	-12928704.8	-11809809.1	13162486.7	11381271.9	-13183067.1		
	1362.5	11938702.6	561893.12	215099.72	215099.72	16030136.1	13176763	12725073.6	10839422.1	10452242.6		
	2500	24366614.4	-1234685.26	-304408.46	-304408.46	27187268	24013504.7	24652782.5	21683035.3	22131020.6		
70Y23	0	23691562	-737542.31	-434402.84	-434402.84	27285805.8	23751489.1	24644735.1	20911443.3	21713363.4		
	1125	6050098.15	246887.64	3780372.67	3780372.67	6284837.63	12168591.1	4249806.84	10647423.8	3542763.21		
	2360	-30807422.3	232667.81	7995148.11	7995148.11	-24355190.8	-13022105.5	29811977.5	-11351046.8	-26742315.4		
70Y24	0	22791888.7	20196.74	196672.45	196672.45	27463378.6	26219148.2	22796667	27394625	18468794.8		
	1250	18676633	173268.79	1927508.79	1927508.79	22692689.8	21801271.3	17755318	18546508.8	16079832.8		
	2500	-5218007.49	3182117.07	2668721.19	2668721.19	5281447.88	2381291.98	7974605.48	3939284.67	7086082.81		
70Y25	0	60821359.4	10208652.5	-1362320.37	-1362320.37	77479475.3	61148667.8	66059540.3	44651325.1	47416311.7		
	1125	18628193.8	3687364.22	8585397.40	8585397.40	292511215.3	29935667	16148465.4	22672378.1	10854710.7		
	2250	-513873205.1	-6660161.18	14692965.1	14692965.1	-46716105.3	-22568574	-54043863.7	-14761190	-17338981.2		
70Y26	0	14745194.91	7164147.93	-4494894.94	-4494894.94	28188876.6	17551534.5	26091114.1	9225269.96	17316030.9		
	1250	24862945	9192330.95	-1544260.85	-1544260.85	44543287.1	33111374.3	36414922	30888819.4	23764697.9		
	2500	25579285.4	7413383.2	1466373.04	1466373.04	43346755.6	35301538.6	32855255	24738992.6	21747521.1		
70Y27	0	137800013	6918437.13	-4934584.78	-4934584.78	27805647	13878197.3	20136326.3	6008876.4	16788129		
	1250	24674868.2	9072706.65	-172686.31	-172686.31	192889.31	44006189.0	32567473.4	36432670.8	20581541.4		
	2500	25569514.8	7971677.25	1426965.10	1426965.10	40906101.4	3628042.1	35252469	24647834.7	22679292		
70Y28	0	60882152	9632810.34	-1412118.72	-1412118.72	79311078.9	62542790.7	85508240	45603029.9	48140843		
	1125	20760985.7	4304281.2	7220841.13	7220841.13	31800044.8	32448474.4	18284708	25133682.1	12186105.1		
	1250	-28374398.5	-4000404.87	15853001.5	15853001.5	-40450550.4	-16927081.8	-50220065.1	-11268534.5	-39805377.4		
70Y29	0	11078980.7	13271.84	1013528.99	1013528.99	26318715.4	20388988.9	21061307.4	84889246.9	16358929.4		
	1250	17581641	277524.41	1756396.3	1756396.3	21618968.3	20544254.1	19054713.2	17386651.6	14223182.2		
	2500	-5741120.47	641678.69	2505101.58	2505101.58	-6022661.56	-2865935.18	-8146648.5	-2912417	-7421699.65		
70Y3	225	-6342697.46	140847.18	12338623.9	12338623.9	-7380109.46	6428620.3	-19482480.3	5388182.75	-18813060.2		
	2612.5	3284482.76	73388.48	2732061.8	2732061.8	4178775.87	6481202.68	784873.321	5495871.82	566161.035		
	5000	-317753.48	5020.79	6894600.66	6894600.66	771918.612	-7687263.2	6811188.19	-6491028.73	6919072.46		
70Y30	0	25384102.3	-777414.63	76408.08	76408.08	28183059.3	26677908.5	26817392.2	22898484.5	27758809.6		
	1125	3030965.8	57679.1	4150246.01	4150246.01	-1163605.5	14104233.2	5388716.93	12043106.6	4672665.81		
	2250	-19818186.6	891572.93	8224065.94	8224065.94	-22478307.4	-11496300.9	-23708318.4	-10524717.6	-26324018.3		
70Y31	0	10712118.9	-2063803.46	-1567859.3	-1567859.3	9552454.79	7651176.25	10943660.8	8229831.88	11051978.6		
	1250	12393232.5	-938890.36	-597810.24	-597810.24	13374464.5	11500777.1	12756178.6	10516890.1	11691938.6		
	2600	6700661.55	192921.71	373228.77	373228.77	6532646.84	5413372.08	8146072.48	4766571.69	6468001.36		
70Y32	0	-25898082.3	-6398785.08	2354984.24	2354984.24	-39712854.9	-20620214.9	-34765681.8	-21168789.3	-25427759.9		
	1250	1868245.41										

	4000	2848811.5	-4774607.29	2462584.6	-2471584.6	-47763568	-394021306.8	-40654187.5	-23751928.1	-28184579.4
	0	-29448765.2	-5219143.38	1748644.64	-1748644.64	-42849133.6	-33093594.8	-26131872.6	-24091717.5	-27176041.8
70V35	1250	3853061.30	-3936425.98	1011026.82	1011026.82	-1032307.98	1399999.79	-727356.114	4336478.10	2666031.29
	2500	1639839.3	1466730.94	239206.36	-279259.50	15593919.6	16939768	14613482.0	15011175.2	14609604.7
70V36	0	17516540.7	-20467001.77	2815680.87	-2815680.87	17407154.4	165558489.8	150470212	15658591.4	15322491.8
	1250	14871221.3	-906611.6	94404.94	-94404.94	10486382	143336209.6	14735559.2	13569880.6	13389134.1
	2500	-1151087.26	172607.02	-104751	104751	-8303609.5	-7454819.30	7234842.78	-653051.45	-6341711.56
70V37	2500	-20992189.9	-695135.61	-7283159.19	7283159.19	-24422413.6	-29138166.1	-5983449.0	-25335313.1	-12259625.1
	1375	7761976.4	-129432.61	-3976651.09	3976651.09	8496178.3	3066676.51	11627844.8	2931941.2	30071584.6
	2500	22360384.3	-663999.17	-800326.64	800326.64	585830.54	25793702.6	22244042.7	23488378.8	19604847.3
70V38	150	-17276166.6	148881.45	-6249723.41	6249723.41	-20903810.1	-24798177.3	-11655963.2	-21126500.0	-6878768.79
	1325	12515053.9	-226839.36	1767730.89	-1767730.89	14651351.7	10012393.4	16320764.1	6772562.65	11754511.1
	2500	34768008.8	-309892.28	712555.05	-712555.05	38916888.6	2810421.7	24665465.1	23625076.5	2136478.7
70V39	0	4670445.3	9365678.44	-1147443.84	1147443.84	70945044.6	56615096.7	89046327.8	-9106782.3	-93671181.2
	1125	8094960.06	-681297.92	-6961402.96	6961402.96	3248027.24	276695.674	14154562.1	-706684.019	11687602.1
	2250	-52053749	-10947218.2	-12679374	12679374	-36106046.6	-78405120.3	-52018440.9	-5940913.7	-35796437.6
70V4	0	-31039137.1	19687.36	-940477.63	940477.63	-349477.63	-349477.63	-1194970.79	576027.973	-1040171.1
	2500	5455877.04	27528.81	389088.65	-389088.65	6696775.02	6696775.02	4622002.09	5705663.35	4111010.39
	5000	-3487496.46	34985.85	7616630.27	-7616630.27	4441501.92	922293.351	-6037271.31	793198.591	-606142.45
70V40	250	-59817293	-20416798.8	-11694851.1	11694851.1	-104447612	-94381725.5	-59822020.2	-64561010.7	-43719095.7
	1375	16561408.1	-4600529.22	-8128493.65	8128493.65	27462596.6	-30472447.3	-13490510	-22382611.3	-7749723.74
	2500	19514479.1	8401769.74	-4564037.89	4564037.89	-27311607	27368389.6	-32362769.6	12673997.8	26786894.4
70V41	250	-61376008	-21016888.5	-12882584.3	12882584.3	-107268664	-97380753.9	-71319501.4	-68364088.3	-44112193.1
	1375	17987136.2	-6043616.41	-8643006.46	8643006.46	29654622.9	-32725315.6	14680072.3	-3294969.4	-8412146.77
	2500	17691777.4	5496616.7	-4018112.23	4018112.23	34761063.6	21064840.1	31412875.9	11433293.8	26289906.7
70V42	0	49164068.8	-3962106.25	-366021.84	366021.84	73489269.6	59632814.1	50602111.2	-4302563.1	44685360.6
	1125	3218010.15	-765606.43	-7456657.94	7456657.94	2636641.89	5174289.26	10485113.4	3814863.01	9607381.28
	2250	-60662289.4	-1321955.7	14647383.9	-14647383.9	-93946022.9	-61462631.4	-60913125.2	-82683701.1	-41503410.1
70V43	0	-6941561.37	-438723.09	-2726090.37	2726090.37	-12815831.1	-10706327.4	-7372238.15	-1142586.6	-6491220.8
	1250	14969229.6	-477196.64	-1449829.65	1449829.65	1736220.3	13714391.2	16757012.9	72166874.3	14717212.5
	2500	19963804.4	-4454975.4	-168189.2	168189.2	27543772.1	20364423.6	30717678.8	17818071.6	18118778.2
70V44	250	-24104660	-146737.95	-8260245.49	8260245.49	-29480046.7	-34310769.8	-16964254.3	-29128324.9	-14259893.1
	1375	7173544.78	-511482.03	-4007196.16	4007196.16	7789909.66	2841332.84	11268492.5	-2849114.65	10062665.9
	2500	26436692.5	876189.1	245644.92	-245644.92	39440889.7	26226675	26810279.7	23113302.7	22670763.9
70V45	125	2221417.15	528326.0	-4099793.66	4099793.66	3511022.66	-17880026.93	7461639.7	-1966538.36	5944089.73
	1200	2707160.77	-407837.00	-684150.51	684150.51	2504100.6	1020669.37	3006591.24	1866848.03	2971133.35
	2275	-8800024.21	-1003641.61	3071476.72	-3071476.72	13002535.7	-7257920.33	14126021.1	-5082962.75	-10881830.3
70V46	200	-4704708.01	310391.52	-4235684.28	4235684.28	-4376625.49	-245143.654	8842269.63	-651073.085	-8071464.79
	1300	3826312.18	309080.9	-153615.53	153615.53	5084924.38	4149374.17	4469960.09	3004528.04	3581035.84
	2375	307226.1	701302.71	-6448817.22	6448817.22	40745.284	-4640658.18	4865667.84	-3814732.11	4568738.98
70V47	225	-331882.92	-1236212.69	-638740.49	638740.49	-5952510.35	-6225649.3	-3964677.09	-356477.26	-2414830
	2250	890183.27	2916044.64	193168.14	-193168.14	12992901.3	10262826.2	9808894.07	7083107.27	6107422.82
	4275	-4348808.7	-4949942.46	945064.01	-945064.01	20381676.4	-17697426.7	-16882062.8	-11240789.6	-10941896.2
70V48	225	-6503629.38	-2071094.86	-1523170.83	1523170.83	-9918486.7	-9335744.72	-6136876.87	-8344983.23	-3562992.85
	2250	6613707.72	2488111.9	85988.31	-85988.31	12714647.4	966910.07	7697295.62	6029810.43	6876055.47
	4275	-11403723.4	3873326.16	1695007.57	-1695007.57	20481789.9	-14379444.8	-17938900.7	3167944.25	-1238867.9
70V49	225	-22022342.01	1268946.92	134375.21	-134375.21	-24299552.5	21773005.3	-23128489.1	-19645172.2	16895044
	1382.5	8420946.92	565123.27	-488782.79	488782.79	11043337.1	9916671.3	8871206.5	3007769.9	7129041.44
	2500	26589749.3	-386332.37	803212.33	-803212.33	36525925.3	27596430.4	26811684.6	20735665.4	7239963.2
70V50	225	-6201254.11	111860.06	12611073.2	-12611073.2	-7102624.04	6930520.67	-18552730.1	6748837.11	-16931984.6
	2612.5	9411776.34	84055.77	761558.04	-761558.04	4238632.32	6581435.88	782161.708	5656001.75	536185.49
	5000	-404758.14	-41749.5	-7087865.15	7087865.15	-565210.168	7908660.28	6976012.60	-6749442.38	6014879.41
70V51	0	26567898.7	-150845.79	841110.58	-841110.58	30633002.7	27462892.3	28118650.1	23666926.6	22614927.5
	1137.5	5412016.65	-856740.01	-219685.97	219685.97	6157235.98	-4862168.75	5123516.59	-4973094.31	5068635.96
	2275	-28126166.1	-1611534.78	-1060483.67	1060483.67	-36172722.2	-32097760.3	-34923734.3	-26287780.2	-2434960.9
70V52	250	-34846044.8	164074.85	-2692282.52	2692282.52	-28553733.3	-28160192.8	-23106399.6	-34784984.4	-19630385.9
	625	17977382.7	171264.87	-1099638.22	1099638.22	-20938827.4	-13564016.1	17244774.9	-15893300.8	-14915992
	1000	-10309992.7	178434.95	493006.2	-493006.2	12722499.3	-10695714.8	-11701627.6	-6512267.95	-10193699
70V53	0	20221891.9	130428.87	1031044.38	-1031044.38	24473958.2	22439783.7	20272698.6	19128453.1	17270952.4
	1750	7455596.30	149267.68	648393.14	-648393.14	9285901.76	8742006.36	3966000.77	7974960.77	6207482.92
	3600	-12146949.2	169206.49	264641.43	-264641.43	-14656448.7	-12631793.6	-13087559.5	-10673399.7	-11342711.6
70V54	0	20215980.3	139116.38	1034838.86	-1034838.86	24473958.2	22439783.7	20272698.6	19128453.1	17270952.4
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	3500	-12209926.4	124890.13	221173.82	-221173.82	14467419.3	-12470267.4	-12934832.6	-10769895.3	-11107698.4
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	825	-17550796.4	170726.15	-1171395.11	1171395.11	-20070985.0	-19649011.4	-17060079.6	-16349992.3	-14741379.3
	3600	-10711644.3	139477.65	-482967.64	482967.64	-18333662.1	-16928542.1	-11866736.2	-8233478.88	-10039740.77
8B1	250	-3676881.51	-149213.37	7752293.46	-7752293.46	-4650999.2	4188175.9	-12141640.3	3867870.76	-10266267.6
	300	1698161	63940.22	7726234.36	-7726234.36	7129197.65	9946589.64	-8278653.62	9473966.62	-5433566.02
8B10	5	7049214.62	376193.86	7700175.27	-7700175.27	8601087.72	14747967.6	-423400.485	13274540.9	-886774.585
	625	13571022.1	1749824.68	12187426.4	-12187426.4	18084946.9	29899855.2	3106369.71	20182603.7	1245236.13
	1250	-12999066.7	-808146.34	18192330.3	-18192330.3	-16768712.6	4755619.47	-30337274.7	4754937.27	-27873267.3
	1250	-41263394	-2665083.91	24177235.4	-24177235.4	-56430807.1	-21476376.8	72424656.2	-15487942.7	-6800866.5
8B11	160	7630422.18	-628431.94	4376400.33	-4376400.33	8321655.51	121116101	2927780.28	10813340.2	2937819.67
	500	11651058.9	-338867.15	2486994.95	-2486994.95	13799135.3	14639767.0	6017099.18	12994266.5	8517060.58
	850	16973860.9	-222282.44	590568.02	-590568.02	18410621.2	10838930.1	15681923.9	14613417.6	13635962.2
8B12	160	7898311.84	-462660.97	4640614.61	-4640614.61	8496308.42	12395126.4	2669979.78	11016367.6	2642251.33
	500	12147906.6	-314842.52	2616210.36	-2616210.36	14073737.1	16095764.7	8818802.92	13196804.4	8669426.76
	850	16973860.9	-222282.44	590568.02	-590568.02	18410621.2	10838930.1	15681923.9	14613417.6	13635962.2
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	1375	4540102.0	162566.15	-607676.19	607676.19	7088494.4	5008483.08	6374603.06	2509191.65	4633001.99
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8818	0	-12701178.7	-12611732.86	-11622999.4	-1055889.4	10866207.5	28114618.1	-1704491.36	-21729741.2	0.6555027
8819	3600	34313688.1	4466490.01	-12724.56	14776.16	485229520.2	40781158.6	40808586.4	31316814.4	0.130617067
8820	7000	10460352.7	398027.69	14686416.7	-1586439.7	14146624	24064169	2177022384	36450761.2	1004817.39
8821	140	130229634.4	-1307237.6	-3795177.06	275517.36	21646227.4	28617516.7	8741647.16	-3014466.5	-435367.46
8822	6700	28106660.0	3455842.33	5620.25	5620.25	38422783	32733572	12732464.5	2829047	26100410.6
8823	8450	2978689.29	224039.79	8744137.6	8744137.6	5122556.05	13859791	-4792396.04	114487942	4190705.56
8824	140	14828179.7	-774686.15	-9217579.62	9217579.62	-23663374	28562111.4	-6454195.14	-21656103	-2031540.71
8825	3600	28021672.4	2395310.94	-77027.79	77027.79	16843747.4	32541211.4	32762395.7	27468995.6	29248009.7
8826	6900	508702.46	648481.95	-4033536.04	-9083536.04	6889974.08	18316060.8	-3788802.68	12683014.8	2987260.23
8827	0	-14674206.7	-3791142.63	-12491959.1	1798668.1	1391467.8	12306538.6	-6096624.7	-2461573.12	-2150994.84
8828	2600	34161208.4	411109.5	-168032.26	168032.26	168032.26	4834831.7	48073261.3	4050749.1	1374982.6
8829	7000	129000.83	1654970.71	12144294.9	-1144294.9	16499170.2	28911784.6	1114143.1	11510900.7	-486502.46
8830	160	1250900.62	3599238.86	-1862944.6	16927944.6	4618155.46	-2122486.2	-6614206.1	16887444	1408260.6
8831	2110	8740409	399132.91	1194715.77	-3194715.77	11911199.5	12765391.6	676498.51	16555112.1	5057519.91
8832	4100	2442067.35	6604642.61	2144701.7	2144717.7	11666766.1	25216146.5	-1452039.2	26791.49	2132007.7
8833	360	-563871.85	-62147.9	8231026.65	-6231026.65	-4410419.1	4862679.84	-1040227.1	4127584.39	-1050293.1
8834	300	1858660.93	167168.77	1811692.9	1811692.9	2454655.17	16677591.1	-6525394.87	9824441.81	6729401.2
8835	360	7199185.96	365125.44	0152298.72	-0152298.72	9223518.88	10464170.6	-64666.367	1061613.2	-857619.464
8836	160	-237224.92	1686346.78	11301344.4	11301344.4	6711627.59	-17630326.8	10311197.6	-12979302	11100021.6
8837	2100	7711695.65	1267603.54	6703269.74	-573269.74	11291500.4	16216616.6	3210460.05	12100169.3	1792284.32
8838	4100	4767689.24	5484856.58	1884863.2	-1884863.2	117389.66	20867205.6	-18233546	24645046.3	20001683.1
8839	160	6016637.11	-4079567.62	-24230352.1	-24230352.1	-14929056.8	-3668112.8	14766749.9	-2762699.1	16863044.4
8840	600	2041242.83	-2080052.08	-10091141.3	10091141.3	-2118591.37	-21445842.6	23539154.1	-15094809.5	20095146.7
8841	860	10623892.8	-2153946.46	-15751927.1	-15751927.1	8138981.1	36191643.6	26550703.6	-1700697.81	25625771
8842	160	-5374973.56	-1771756.1	-6369723.84	-6369723.84	-9561473.02	-15619601	1313627.48	-1374231.8	2948729.96
8843	600	730297.18	-366716.06	-5726939.47	-5726939.47	668624109	-6519192.6	7564179.26	4434305.06	5914195.97
8844	860	6977053.77	-136878.87	2914160.49	2914160.49	7995234.37	4043260.59	10161960	3896011.95	89012062.43
8845	0	-11084174.3	1868005.97	-11675584.3	11675584.3	-17575819.9	-26427473.2	-190336.9	-20490981.6	630469.1
8846	625	-50150973	7608438.19	17376913.7	17376913.7	-72465564.2	-78177489.2	-41689970.6	-63775095	29496452.4
8847	1290	-61120009	12067686.6	-20675241.6	20675241.6	-100233604	-132274219	-60918217.1	-302816626	-8193939.6
8848	0	-532554.65	-797094.71	-1884639.78	1804639.78	-8348662.13	-6473632.36	-6416011.42	-7338609.5	3066848.79
8849	675	8790800.67	604566.51	-4931825.87	-4931825.87	7161465.67	1306093.72	11787512.6	-160105.96	18588020.2
8850	1360	16757164.3	-967300.94	-4078717.72	6070717.72	16676792.2	9207968.07	26112932.3	7610546.99	12062167.1
8851	260	-781656.36	3648237.8	-10314027	10314027	-103251467	-90026922.1	-74369365.4	-77922591.4	-50267242.8
8852	800	30236529.5	2014609.42	8467026.46	3457025.46	3457025.46	4786698	-24792236.6	-38912366.6	-10816864
8853	1160	13427300.9	-1007109.05	-6680020.88	6680020.88	16377735.5	6127078.9	22155129.1	6052549.31	16996592.3
8854	240	-50237285	650265.15	7068949.39	7068949.39	-69215522.4	-69217423.6	44982684	-61801212.9	38694800.1
8855	600	-1129490.1	1703048.79	-5480487.6	6480487.6	932031.26	-15962076.5	-3650115.67	-15689273.9	-523430.15
8856	1600	26607144.2	4228239.8	3862074.81	3662074.81	37503760	20867506.0	34927892.6	18960092.4	26432287.1
8857	250	-60048774	680788.92	-7265613.9	7265613.9	-62864363.7	-62726804.2	-47467616	-54275749.1	-41197644.1
8858	800	-13620036.1	2667120.19	-6838444.77	5638444.77	-12265713.9	-17893016.3	-6052271.61	14733494.5	-7384236.99
8859	1060	23261744.5	-3357682.47	-4011266.24	-4011266.24	34836614.9	24309805.1	32735609.2	173265412.4	24046717.9
8860	250	-76402921	-5659522.48	-10684742.8	10684742.8	-103138752	-90890302.4	-7646194.5	80178397.4	-50945360.4
8861	800	-32665246	2080167.29	-8754794.17	8754794.17	-42418142.5	-46367957.9	-26661890.1	37197034.3	21453484.7
8862	1390	11136217.1	1073032.47	8804484.92	8804484.92	15088766.0	9624020.41	18888796.3	3811093.8	16182104.6
8863	0	6648544.36	819267.78	-2612379.21	1018379.21	-9449081.58	-9962677.7	-5736684.26	-7794931.12	-4172648.66
8864	875	5818560.71	-3860042.88	-6380267.65	5390267.65	5400026.2	-483146.042	10918334.8	389706.384	10087762.9
8865	1360	16189562.2	-1613929.23	-8768129.1	8768129.1	1564336.2	5219277.13	23621346.2	5384951.69	21687592.3
8866	0	11669517.4	1184302.28	11839226.4	-1163225.4	16258306.1	25904148	1470112.78	21244283.3	900581.26
8867	625	16203236	1637877.06	17082392.8	17092392.8	-29880546.7	708727399	-36794297.5	1634242.34	69354065
8868	1290	-44462225	-4702275.06	2012661.6	-3212661.6	-50867830.1	28603344.8	76405423.6	-191903.871	-68623607.9
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8870	845	-63825261	-9008884.2	-18667381.2	16667381.2	-79084071.9	-84877667.4	-46478169.9	-65243065	-31642109.8
8871	1290	-98131664	-14781821.1	-24770656.1	24770656.1	-134088997	-140916244	-68897866.7	106212077	-64224898.1
8872	260	-27347422.6	5470916.64	-34002441	34002441	-41670217.7	-63697380.9	1817846.16	-55214877.4	5869516.38
8873	1100	-21159561.6	6200142.46	-30421965	30421965	-36713165.8	-62231163.6	7954942.03	-49122492.9	11007036.2
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8876	300	167040647	-2606461.43	-12758872	12758872	29256215.9	-4789969.6	169068.666	38916643	274326.57
8877	360	-13642730.6	2188104.44	-2278759.6	2278759.6	-21592146.8	-4467227.4	598525.75	-2132222.2	777308.1
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8879	2120	13040288.7	5647386.8	26141.28	26141.28	14384167.2	14281420.9	1818463.2	11212669	11659614.7
8880	4250	-47831766	917831.78	-37286.81	37286.82	-72007609.8	-65648398.6	-59810340.7	-43062146.7	-43015011.3
8881	0	40888306.5	7777829.88	222066.30	222066.30	81510169.4	60515761.9	60940406	36989040.6	38509614.7
8882	2120	16911793.9	2885540.44	68416.79	-66416.79	20161017.4	16479967	18040481.7	11860399.6	11830829.4
8883	4250	-47478170	8062637.62	-89208.38	89208.38	71467961.6	-53500466.3	-6913072.1	-42816612.5	-42649997.1
8884	140	-2092472	-681468.18	-4524395.87	-4524395.87	3451347.98	787778.68	1888014.68	-3304782.67	1627726.67
8885	1720	1691266.39	1172261.62	3967103.91	-3967036.91	1795036.56	6943960.15	-1366617.37	5005417.9	213846.84
8886	2600	-1660524.93	140636.46	12469469.3	-12469469.3	-2012011.52	12676707.4	-16607079.2	8011160.42	-14428096.2
8887	240	-36569185	-3092312.21	9249914.51	-9249914.51	66819322.3	-38911392.0	-69746212.1	-24677444.3	-41227292.5
8888	1600	-10571246.9	2181811.46	4073515.01	4073515.01	-16144394.6	-8959230.31	-17426211.8	-5842668.7	18168836.7
8889	2700	607865.77	210761.76	-1080864.24	1080864.24	1082400.02	208398.087	1902687.65	-40489.713	162696.1
8890	0	316686.66	666992.01	-577181.85	-577181.85	4775669.86	4436261.61	3274243.64	314013.48	2275140.51
8891	1290	-14699847	7373096.12	-901666.91	901666.91	-62844776.2	-40656059.4	-41762771.6	-29824463	-29824463
8892	2500	-85942896	-18960821.8	-2368783.47	2368783.47	-133512762	-11070682	-105701486	-79536780.5	-75251270.3
8893	0	2602931.24	7204048.16	206374.6	-206374.6	4159754.54	3527573.54	3094287.09	2438375.17	2086901.37
8894	1360	-18028149.71	-2461614.01	3917922.61	-3917922.61	-24672399.6	-17173744	-26393981.8	-12728201.7	-10724462.4
8895	2500	-52981244	0194614.74	7692473.43	-7692473.43	-76753552.4	65776661.6	73872146.8	-41216000.7	-54843047.8
8896	160	-8613721.72	-1661576.93	6667306.41	6667306.41	-128749607.8	-10344794.2	8674304.22	12093961.4	-2680747.88
8897	1020	5102180.83	4052324.3	5349536.66	5349536.66	12679142.7	14865693.3	3830560.66	6460400.63	168767.838
8898	2600	5460016.28	6514989.01	12156414.1	-16256414.1	18893866.8				

2500	-17199939.1	-405990.07	-96205.58	-96205.58	-12517.996	-22843.907	-21871.481	-13295.440	-16030.880	
8E41	0	1481581.91	41227.00	66302.94	-65493.94	3400772.87	7684316.14	1047009.97	136889.16	1249198.09
	1500	687566.83	1172115.69	-114550.04	114550.04	9006457.63	7117809.36	7378355.09	5006707.64	5212670.35
8E42	0	-7664693.01	-1627425.87	294494.61	294494.61	-12121514.5	10034650.3	9406955.84	-7163258.27	-6931152.96
	1500	-554932.62	631037.47	-1665709.75	1665709.75	345264.805	-3204406.43	-1237563.06	1268479.15	2156759.31
8E43	0	-1422503.62	251962.10	802252.87	-802252.87	-1349175.85	-596664.68	-2002416.71	-576115.69	-9904785.81
	1500	-1569993.3	-3419488.78	444038.83	-444038.83	-24311025	-11506459	-24368057.9	10142715.7	-18117149.8
8E44	0	8711638.63	-1726771.19	-5994933.6	5994933.6	13211777.1	-16774630.3	-4814161.67	2234433.9	-2731468.47
	1500	1325110.74	4101110.04	5637109.4	-5637109.4	10614236	15144145.7	1619140	9016305.03	1936635.89
8E45	0	2115105.1	8611969.84	10767002.4	-10767002.4	13212811.7	20133371.9	-6082169.13	16815987.7	-10189797.7
	1500	0	1318179.59	506347.01	111140.04	-111140.04	2963010.72	2865386.04	2271151.95	1736927.57
8E46	0	1090172.7	-2436727.85	4028921.38	-4028921.38	76576432.2	-17918048.2	-28778155.3	13263796.6	20637116.2
	1500	-6462997	-905111.01	7949703.52	-7949703.52	71597010.6	-5771313.5	71001386.6	-4184646.2	5113810.7
8E47	0	1333567.97	338137.48	505800.56	-505800.56	6243031.98	3346515.45	1338700.94	2413513.47	2507552.32
	1500	-18880810	-9234677.71	-1765493.48	1765493.48	61401698.6	51404796.6	-47697112.3	-7648103.6	-3303361.4
8E48	0	-94606125	-22354120.8	-4063740.46	4063740.46	-14965365	-125049935	-11650843	-83078377.9	-61759245.1
	1500	-822017627	12741217.5	5999121.35	-5999121.35	-100686190	73471067.4	-83408979.8	-60862232.7	-61111002.9
8E49	0	22116346.4	-679988.06	1370611.55	-1370611.55	17237123.9	-26468269.7	-32601643.6	17275311.4	-2253711.7
	1500	5190374.46	1133406.89	143631.57	-143631.57	5785643.07	4670243.21	4314611.26	1471711.97	2719396.04
8E50	0	4828279.99	-927566.99	-4405111.73	4405111.73	727193.67	10611393.6	1628549.10	-4010097.59	-789935.109
	1500	1465165.71	704486.67	4718441.09	-4718441.09	2814112.92	6675961.71	-2392764.56	5161247.01	2621949.36
8E51	0	1494870.71	7111609.25	10041993.6	-10041993.6	-606251.556	11706948.3	14691239.1	-10302907.3	-15001360.6
	1500	-9572727.58	1826152.4	10111561.1	-10111561.1	-8407681.22	3050015.39	-2042432.9	184455.15	-1905559.9
8E52	0	87461741	-494600.15	1037759.3	-1037759.3	68333451.0	16811071.6	-64021363	-7111575.1	-5168659.3
	1500	25363855.4	4320798.01	11140074.5	-11140074.5	37765899.6	4242122.7	19027611.2	3390538.9	12361402.8
8E53	0	-9111517.18	2952305.19	12710291	-12710291	-6404532.29	7049377.51	-19601116.7	-130859.23	-1877595.03
	1500	-10724046	-36716.49	14280441.4	-14280441.4	-6736370.4	-20870785.7	-60859787.7	-76384198.1	-76384198.1
8E54	0	12656524.8	4373931.55	11285037.4	-11285037.4	36376940.8	40316650.7	17117096.4	-14440066	1129929.7
	1500	6780565.72	2456158.26	12691429.3	-12691429.3	-3863031.87	5532460.59	-21515015.3	7788079.1	-76414492.3
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	1500	26793987.2	4056573.5	10161041	-10161041	10151347	56910402.2	-4104201.1	19778194.9	3190525.4
8E56	0	-10660033.3	3462489.09	11839441.5	-11839441.5	9354093.82	3420510.61	-21757309.5	1138475.38	20384618.3
	1500	-48756114	219640.18	13927542	-13927542	-6892941.9	-36922969.5	-86920789.1	-31427788.8	-66226362.4
8E57	0	36705979.5	2068996.67	8349328.99	-8349328.99	47491570	42969760.7	31426359.9	-3849667.7	24821075.6
	1500	825	10060498.8	808689.14	-808689.14	21775260.1	25889155.9	14656431.3	20889960.1	11519040.4
8E58	0	2785999.33	-212855.89	2062892.55	-2062892.55	-3867639.76	8565177.65	6291690.77	680368.88	-4383680.22
8E59	0	38377660.9	-73258.95	-396371.72	396371.72	45935623.2	7936014.2	40673869.8	3424261.12	34637302.3
	1500	-2263701.76	76493.91	-300210.41	300210.41	-1388781.57	-2796076.43	-2190223.56	2389919.95	-1738752.22
8E60	0	-48206082	-79378.15	-254299.06	254299.06	-37914303.5	-51342412.3	-50340384.4	-14766343	-43064804.8
	1500	112114843.2	1936798.81	6164345.96	-6164345.96	18656869.5	-29399949.6	-8902295.96	1539270.2	-4347447.52
8E61	0	2669023.13	1636539.38	-891084.73	891084.73	666070.348	372644.796	2321912.04	1600744.52	3189697.13
	1500	-8899116.72	-1244591.34	4622175.69	-4622175.69	11286421.8	6707500	-16414014	-6748425.04	-13069344.1
8E62	0	8620604.7	-211333.44	-362369.89	362369.89	-3829614.24	-11155896.8	-3328278.66	4217354.10	245868.44
	1500	6964819.13	169455.2	31422.68	-31422.68	3624111.24	7503554.1	7407966.61	3236617.66	6246056.67
8E63	0	6990887.69	645810.95	398464.06	-398464.06	5320411.07	1399651.95	-5561205.46	-1854985.87	-889091.98
	1500	-3277687.11	-463069.64	-3504270.97	3504270.97	7337879.8	9722361.26	2191232.21	945644.27	-1523564.63
8E64	0	727273.75	120145.13	61695.42	-61695.42	9810171.52	7872177.14	7742193.38	6801480.39	6460141.42
	1500	-6615760.93	800551.07	3704070.05	-3704070.05	-6558023.68	3296500.11	-10064647.1	-2616621.82	-5292147.91
8E65	0	10400688.3	1973891.4	-6524624.93	6524624.93	16400292.2	18637828.9	-6684118.23	-16292783.8	-689409.03
	1500	3761374.4	-1640710.18	-862377.62	862377.62	1814286.06	1472378.06	3025182.84	-3556507.1	419680.82
8E66	0	697189.19	-120569.9	476069.54	-476069.54	10269041.9	6179026.54	-1617672.8	3482407.39	-1203052.9
	1500	-12081218.3	-21618471.6	-3578565.4	3578565.4	-18354410	-20929954.1	-9214976.75	1816385.31	-6123887.61
8E67	0	4962778.95	-1273589.95	-375195.57	375195.57	3804687.89	3603917.67	4300625.27	3118922.82	4706174.94
	1500	4170434.79	-355331.42	4626174.4	-4626174.4	5552687.62	372082.729	-9786480.51	602265.549	-6067448.17
8E68	0	17784417.6	371610.68	-546730.42	546730.42	20777994	1700248.4	18018982.3	16424818.4	16687112.2
	1500	20029507.5	-227921.04	3122.64	-3122.64	23670734.6	20818900.8	20812215.3	18029467.1	18023660.4
8E69	0	18981966	-194132.41	662176.83	-662176.83	862176.08	22401574.1	20412337.5	19042768.6	17680712.6
	1500	-27045214.7	-546464.49	-1806947.25	1806947.25	32038600.8	-30810129	17011659.9	-1636545.8	-22715340.7
8E70	0	3270170.84	347441.07	123921.82	-123921.82	4637442.64	-515251.12	-2571229.3	4834702.61	1842194.04
	1500	17770009.7	-348122.37	-650616.38	650616.38	650616.38	2676532.4	1764910.4	1991226.2	1991226.2
8E71	0	-37090304.7	673220.05	-1608490.11	1608490.11	-30455915.2	30385770.7	37087653.2	-20068868.5	-22751678.9
	1500	-3291617.25	-462416.61	-1237954.27	1237954.27	-4689806.62	5181619.25	-2604742.29	-4265011.37	-1930378.88
8E72	0	17784417.6	347441.07	123921.82	-123921.82	4637442.64	-515251.12	-2571229.3	4834702.61	1842194.04
	1500	17770009.7	-348122.37	-650616.38	650616.38	650616.38	2676532.4	1764910.4	1991226.2	1991226.2
8E73	0	-37090304.7	673220.05	-1608490.11	1608490.11	-30455915.2	30385770.7	37087653.2	-20068868.5	-22751678.9
	1500	-3291617.25	-462416.61	-1237954.27	1237954.27	-4689806.62	5181619.25	-2604742.29	-4265011.37	-1930378.88
8E74	0	17784417.6	347441.07	123921.82	-123921.82	4637442.64	-515251.12	-2571229.3	4834702.61	1842194.04
	1500	17770009.7	-348122.37	-650616.38	650616.38	650616.38	2676532.4	1764910.4	1991226.2	1991226.2
8E75	0	-37090304.7	673220.05	-1608490.11	1608490.11	-30455915.2	30385770.7	37087653.2	-20068868.5	-22751678.9
	1500	-3291617.25	-462416.61	-1237954.27	1237954.27	-4689806.62	5181619.25	-2604742.29	-4265011.37	-1930378.88
8E76	0	17784417.6	347441.07	123921.82	-123921.82	4637442.64	-515251.12	-2571229.3	4834702.61	1842194.04
	1500	17770009.7	-348122.37	-650616.38	650616.38	650616.38	2676532.4	1764910.4	1991226.2	1991226.2
8E7										

8074	150	8883722.16	828817.26	-741957.12	-741957.12	-11986170.4	-10890016.1	-9031806.18	-8663111.43	-7237588.89
	500	-2646740.37	360193.14	983577.9	-461577.9	-2618179.42	-1438468.04	-3462001.67	-1618646.22	-3351088.44
	350	2267622.18	1629013.58	2693112.93	-1569112.93	894650.34	7710000.7	2104883.04	6370070.6	565667.325
	150	2451210.3	1512799.35	2573398.28	-2875946.28	5955593.81	7330622.77	1722160.35	5059716.82	252692.610
8075	600	3888246.46	336342.82	920378.42	-920378.42	-2927748.69	-1748416.46	-5891211.34	1771040.38	3477761.62
	850	9016310.3	838024.14	-829539.47	829939.47	-13180411	-11130446.1	-9027822.15	-8881624.79	-7367733.76
	0	16661131.9	-127355.28	839056.18	-829056.18	23367589.5	26291945.7	18349829.3	17466168.4	1634668.1
	1075	-1221441.56	-28334.65	1216723.59	-1216723.59	-1631065.32	-136732.675	2691646.82	84248.9	2284345.96
8076	2150	-24168868.2	76865.57	1794395.65	-1794395.65	28888902.8	-20424090.0	-27143007.1	-20135052.2	-2336848.9
	0	18091955	-104732.41	651175.68	-652175.68	22491674.1	33412307.5	19042768.6	17560717.6	1640680.1
	1075	-1219889.29	6571.43	1233529.53	-1233529.53	-1442627.26	80004.1983	-2660407.81	30394.216	-119968.94
	2150	-14026346.8	117377.57	1814983.31	-1814983.31	-18543312.3	-13211.14.6	-27022359.9	-19990317	-23187166.9
8078	0	17770009.7	-348423.87	-660616.38	660616.38	26780830.2	17546191.4	14012395.8	35407454	16578663.6
	1200	18801050.0	237689.58	-6780.62	6780.62	25597645	26756109.5	20762248.3	17973499.3	17988900.8
	2400	18801131.9	127355.26	639555.16	-639555.16	23367589.5	20201846.7	18949829.3	17495163.4	7634888.1
	150	30669353.9	2041529.64	-5317207.78	5317207.78	-11927471.9	-21215110.2	-10049573.9	-16531265.5	-6960301.33
8079	3500	3444149.29	1244761.21	363232.42	-363232.42	27419601.09	3584882.3	35460271.48	3223181.84	3878275.84
	6050	-6531252.22	-447094.58	-4541580.83	-4541580.83	-7314054.47	-178321.12	-11028599.6	-818541.251	-9083351.75
811	135	-16938183.5	-4021267.17	-4399173.86	-4399173.86	-26638549.5	-26164324.8	-16918659.4	-18303623.2	-10384110.3
	1250	8209867.26	-1819836.02	-7229278	2228828	9551618.36	-38497564.1	-3417446.28	-758626.65	-3531326.56
	2375	3396320.06	-1512346.53	-58682.16	58682.16	-7668126.84	-6724883.8	6473016.32	7652662.33	3488014.11
	0	8999169.46	3062061.99	-4281281.57	-4281281.57	15683742.3	16829522.5	7833831.24	11952405.9	4146099.1
8110	2157.5	4096001.92	1357439.39	-457624.58	-457624.58	8676105.23	4800878.27	6761686.1	2274639.82	4098263.84
	4375	-30380421	-7963045.19	5196631.01	5196631.01	-4917877.5	-448569877.3	33947182.2	-32001256.8	-22647501
	0	-7118189.95	2561820.87	-1030328.12	1030328.12	-12614821.3	-10943322.6	-8805639.79	-7377463.55	-5400878.35
	2250	12985191.9	2688197.84	1168119.53	-1168119.53	26560146.2	17870333.8	15242482.9	12727183.3	10546165.1
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	0	4110513.32	1618944.42	3025790.92	-3025790.92	7523086.9	9023118.38	2868660.4	8521873.82	876250.16
	2250	72674407	2834636.47	1059949.08	-1059949.08	20147591.5	17404352.3	11178458.3	12540977.9	16633014.6
	4500	-9427579.61	3062047.57	-805888.81	805888.81	-18913811.6	-13744637.8	-11842258.3	-850930.58	-769812.73
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	2437.5	12946679.5	6768739.26	587818.59	-587818.59	28164733.8	30536024.3	19343202.8	12132140.3	11140073.8
	4875	-20389632.7	7480168.74	-2721060.67	2721060.67	-38408829.2	-21313659.6	-25604758.1	-20799573	-15681768.8
	0	8492533.5	1913667.95	3488274.98	-3488274.98	10780994.1	1222684.1	4899906.66	8987727.72	2648032.76
812	1187.5	-5411811.7	432983.86	-98634.68	98634.68	5386190.24	-682001.46	3553867.12	-862706.24	-395378.92
	2375	-22812399.2	6211483.04	-5460874.08	5460874.08	-37345251.9	-35575793.5	-24107747.7	-25446036	-15616282.5
	0	1784666.14	-1387389.5	2047368.97	-2047368.97	2336749.61	187720.461	4132154.38	254216.547	-3431047.6
	2250	13390594.7	3373246.77	1219886.29	-1219886.29	21473106.8	18638972.2	15974311	11153932.8	10898937.6
814	4500	-2507795.28	-430004.7	390403.51	-390403.51	38897346.07	-2629602.44	-3449449.82	-1806642.58	-2688369.88
	0	-1483444.34	-519341.4	-140189.28	140189.28	-6016879.51	-4172041.81	3773645.68	-1937363.39	-1465030.52
	2250	16184705.8	4860202.78	1643020.62	-1643020.62	25890927.5	32543912.4	19092569.1	16659953.6	13999515.7
	4500	4285974.13	1676535.02	3476228.45	-3476228.45	7825624.99	9734639.35	2434657.51	6886883.22	728770.212
815	0	10755129	3873518.33	-4288897.7	-4288897.7	16240782.7	18922751.7	9823966.5	13498523.1	5770707.20
	2187.5	4668983.42	1215813.46	-370525.01	370525.01	7416294.3	56491368.27	8324881.78	3788811.82	4486567.84
	4375	-31140415.3	-7927840.99	-6030947.42	6030947.42	-5005043.8	-45471740.5	-34906750.9	21554236.4	-23498521.1
	125	-19931119.7	5011863.74	-4199049.12	4199049.12	31936309.5	-30072679	-21264876.9	-21717151.2	-14158863.6
816	2250	-8680064.4	1368891.09	-1201936.77	1201936.77	-13665875	12238447.1	8712379.89	3845592.06	-6730606.87
	4375	-25621768.4	5534940.39	1795176.73	-1795176.73	38878014.7	30260138.5	-33969999.5	-21383924.4	-24686240.7
	0	33009892.1	6937133.95	526916.2	-526916.2	50327368.3	41541116.9	40437321.9	30181949.4	28235840.2
	2187.5	10993035.3	3109732.55	661752.34	-661752.34	21787214.5	18326224.5	16936164.4	13189338.8	11986164.7
818	4375	-34672088	-7462680.24	797868.37	-797868.37	-65402772.5	-42550072.2	-44196807.3	-20401258.3	-31887468.9
	0	30302476.2	6696183.42	511114.67	-511114.67	50338480.9	41636079.2	40482732.4	-30178431.8	29258426.4
	2187.5	14803369	3129888.7	661237.66	-661237.66	21811852.7	18365571.3	18666972.2	131981327	12007909.2
	4375	-34672088	-7462680.24	797868.37	-797868.37	-65402772.5	-42550072.2	-44196807.3	-20401258.3	-31887468.9
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	2250	-864326.19	-17979725.87	-1241350.31	1241350.31	-13414181.6	-12142020.2	8683924.57	8880297.96	-6670787.39
	4375	-25740982.8	-5601651.41	1800483.23	-1800483.23	-39851021.6	-30431086.1	-34212099.8	-21546449.5	-24787319.5
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	1875	-1469891.94	83771.99	-26366.73	26366.73	1661835.84	1466486.31	1589759.65	1300978.89	1245734.6
	3750	-1223037.31	-119094.871	-20938.39	20938.39	-1668196.56	-1371598.52	-1421569.14	-1079189.03	-1122278.13
	225	-6817809.46	-901810.13	83680.12	-83680.12	9524027.55	-7422836.37	-3098664.62	-6808536.4	-8211180.81
8F10	1237.5	1678637.65	462012.11	425.87	-425.87	2617584.66	2085168.24	2084273.71	1421167.25	1420790.51
	2250	6137208.47	912154.37	-82628.17	82628.17	8984065.16	7271556.25	7445505.45	5493942.27	5643032.88
	0	8994070.94	920582.46	-8152.02	8152.02	9665820.66	8205168.18	8222288	6257326.46	6002005.63
	1000	1214688.72	288295.58	-116873.75	116873.75	3139859.58	3406062.87	2731692.07	789549.158	2899490.25
8F11	2000	-9671229.52	-2115007.02	-226199.21	226199.21	-13786236.7	113368041.8	-13665123.5	-8069785.88	-7801427.28
	0	1233037.31	119094.87	-23398.09	23398.09	1658198.98	1371688.52	1421688.14	1079189.03	1122278.13
	625	-2452988.59	51824.82	7502.68	-7502.68	-2860685.32	-2534540.62	-2518784.99	-2214442.14	-2200937.02
	1250	-742078.32	-297865.52	5903.00	-5903.00	8381838.82	-8064025.47	-8082784.88	6870780.78	-8686820.22
8F13	0	1190518.04	116860.04	-27136.59	27136.59	1616325.77	1331823.71	1088608.45	1047044.25	1095888.31
	825	-2452148.71	49161.9	-11178.06	11178.06	2889935.41	-2571544.56	-2548070.64	-2243994.08	-2223873.89
	1250	-7446678.86	-308085.13	4779.46	-4779.46	8417387.78	-8048258.14	-8138295.04	-6987708.6	-6708312.6
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8F14	1000	2325967.08	315576.63	-90323.31	90323.31	3296071.1	2642465.37	2838484.32	2009370.99	3177362.35
	2000	-8564479.33	-2077880.83	-174218.26	174218.26	-13348884.6	-10818540.8	1652682.51	-7875827.83	-7362254.98
	225	-7337661.14	-83261.2	31871.87	-31871.87	-10294382.3	-6549056.62	-2613206.64	-5588921.34	-6812862.71
	1237.5	1282381.78	434415.63	-24881.06	24882.06	2233939.34	1738804.77	1783269.18	1131687.68	1176637.35
8F16	2250	6137208.47	912154.37	-82628.17	82628.17	8984065.16	7271556.25	7445505.45	5493942.27	5643032.88
	225	-1399663.02	-1166663.82	-31268.3	31268.3	10481109.7	8848841.66	3843982.42	-4463927.36	-6397548.05

SF19	225	-14186060	-1825251.03	-1075217.06	-1075217.06	-19812446.7	-177350793.0	-15487107.5	-13720127.5	-11794706.7
	612.5	768227.66	-187397.36	401329.46	-401329.46	-1075217.06	-177350793.0	-15487107.5	-13720127.5	-11794706.7
	1000	1218977.9	1161201.21	-177375.35	-177375.35	-187375.35	15468407.4	15067029.6	11914200.1	10648962.4
SF19	0	-1098218.53	-704771.01	2257693.8	-2257693.8	-11013588.3	-1337432.62	-11474005.8	-10092005.55	-10126792.4
	425	1712172.11	177096.21	241215.6	241215.6	2377980.37	1711860.36	2218412.91	1323983.95	1768048.95
	950	11627721.6	923817.17	-2740084.65	-2740084.65	15232265.8	10263066.2	15317267.1	7960274.26	12827427.8
SF2	0	-1190518.09	-118690.04	27105.65	-27105.65	-1615325.57	-1331823.71	-1388808.48	-1047044.25	-1049860.31
	1875	1482333.41	-60558.92	-20787.07	-20787.07	663304.12	1487347.04	1531494.75	1244436.77	1381760.39
	3750	-794501.74	4439.34	-68009.62	-68009.62	-680489.992	-310461.221	768773.019	-270800.224	-853382.808
SF20	150	2969870.76	-1441016.39	1514062.2	-1514062.2	-11388511	-3117839.37	11340650	-5760367.7	-5567069.66
	1750	3470731.78	603753.61	-151571.14	-151571.14	5110099.25	4055680.86	4073830.26	2987244.58	3200072.63
	3160	5478676.14	430955.24	-1027804.40	-1027804.40	1927004.46	7211549.16	4228371.08	3637446.61	3274967.12
SF31	150	7432196.14	-1272163.15	170971.35	-170971.35	-16954003.8	-6826472.61	-9155513.1	-6576164.09	-6542852.57
	2250	3219757.7	748274.02	154930.35	154930.35	5053741.67	4223279.37	3938970.35	3012817.07	2770972.39
	4350	-1374970.27	-1110898.5	96969.76	-96969.76	-6832301.56	-4492513.1	-4700193.39	-7844407.4	-3176479.06
SF32	150	-5691742.72	-1144508.29	-1216125.65	-1216125.65	-9949912.63	-6567181.43	-6033717.35	-5433291.71	-4244058.18
	2250	3480623.31	759238.43	26218.61	-26218.61	6439570.46	9425544.32	4371325.26	3155597.64	3188424.32
	4350	-1500497.12	-1159234.92	1269752.05	-1269752.05	-6655324.42	-3437705.9	-4104208.05	-2307034.77	-1283198.35
SF33	150	5957983.00	-1121110.89	1241977.1	-1241977.1	-9304613.9	-6886643.15	-6057883.21	-604270.16	-4271514.25
	3250	3465139.25	789169.32	24554.16	-24554.16	6407106.16	4099495.39	4346901.89	3111721.34	3087523.26
	4350	-1485180.51	1183140.83	1091085.39	-1091085.39	-6064851.64	-3491913.60	-4030422.95	-1893895.61	-492768.61
SF34	150	-1457896.28	-1276275.51	175000.08	-175000.08	-10991927	-6553241.65	-8113569.04	-6546562.07	-686661.28
	3250	32167041.87	749571.34	138956.45	-138956.45	5120124.38	4284833.15	3833464.81	2065398.49	3515816.66
	4350	-2242353.93	1106581.32	103251.23	-103251.23	6651511.83	-4242636.82	-4557556.52	-2325657.63	-3999911.64
SF35	150	37343109.34	-1386410.92	1643130.46	-1643130.46	-1161312.0	-1117001.08	11167826.6	5493063.04	-8447637.37
	1750	2419226.61	621068.95	-157418.09	-157418.09	5064929.35	1092030.07	4323808.06	264717.60	2319079.14
	3250	6147031.9	372982.43	-1047986.49	-1047986.49	6774290.17	3701932.06	7813661.71	2470988.93	6395308.55
	0	-8759130.95	-7019416.6	2307208.85	-2307208.85	-11476933.2	7341973.46	-12187076.7	-5798839.8	-5951610.35
SF35	425	1667862.51	177774.79	-274224.44	-274224.44	2321822.66	1662596.65	2138487.37	1281056.28	1774636.26
	850	-11501807.7	241008.83	-2055654.78	-2055654.78	14747626.2	9698662.26	15565427.3	7501357.63	12741506.3
SF37	0	-14024419.7	-1540227.16	-1933467.79	-1933467.79	1933457.79	1933457.79	-18211281.7	-14151020.4	-14366098.3
	425	1852112.29	952707.42	532201.45	-532201.45	2930912.90	2656040.91	1836417.87	2235262.37	1277919.76
	850	17084007.1	2060790.96	2997360.76	-2997360.76	23733094.1	23024799.7	16728291.1	1307440.11	12678261.7
SF38	150	-12333440.1	-2422618.74	-1675894.24	-1675894.24	-18670016.1	-17095434.5	-13360559.1	-12598808.4	-8509289.77
	1750	3594536.78	662628.36	110977.01	-110977.01	6405489.62	4043863.64	4204647.32	3341867.52	3126278.3
	3250	10928658.7	1570076.49	7014410.34	-2064931.34	14813511.2	14131972	9271853.95	10884314.9	7276170.93
SF39	150	-8156995.77	-813826.17	-278483.95	-278483.95	-11000100.2	9014079.38	9043413.3	7598131.66	-7092460.73
	2250	5201147	723030.03	-144306.82	-144306.82	7407886.26	4986621.8	6301570.32	4551154.35	4810910.24
	4350	-8534854.72	1611108.76	-11130.76	-11130.76	-101179599.7	-10611832.5	-12786354.6	-7982289.83	-7946449.86
SF39	0	-7090888.23	-35540.93	-86720.92	-86720.92	-816040.65	7501759.39	-7021745.72	-6489947.7	-6304661.12
	875	-3246375.93	9875.38	-62710.34	-62710.34	-3318734.95	-2494208.65	-3337610.93	-1977178.45	-2684098.84
	1750	-482152.81	-15994.32	-39700.35	-39700.35	-604174.841	-600000.24	-479689.605	-496667.564	-598207.004
SF39	150	-10389186.4	-1545044.86	1203668.67	-1203668.67	-14040597.5	-11074223.8	-13684807.11	-8299076.76	-10480562.4
	2250	5727216.36	779541.31	-27996.34	-27996.34	8094465.92	6660624.91	6787161.42	6111335.77	5161152.78
	4350	-6990524.92	-719471.25	-128465.36	-128465.36	-7055624.64	-7099435.5	-6253879.25	-5391932.25	-3871901.6
SF31	150	-8694168.88	-1055145.66	1228400.93	-1228400.93	-13817236.7	-10179118.8	-12769780.71	-7619190.98	-9830312.65
	3250	5791124.88	826601.08	-24903.67	-24903.67	8270151.58	6834735.79	6885623.5	6180629.09	5239326.7
	4350	-6117728.16	-365452.19	-1278000.20	-1278000.20	-6727694.3	-8484316.48	-5900501.11	-6656153.36	-4365746.11
SF39	150	-8141608.93	729762.06	-256952.24	-256952.24	-11019134.1	-9556295.96	-9016700.27	-7567076.1	-7006191.07
	2250	6240963.97	723185.95	-142873.93	-142873.93	7454211.38	6041154.31	6041084.56	-4586817.04	4345400.11
	4350	-6770827.94	1645314.13	-26895.64	-26895.64	13157576.1	13764000.6	-10734059.8	-7919391.22	-6877739.97
SF39	150	-132264796.3	-3432140.87	-1843429.37	-1843429.37	-18203178.9	-17112009.1	-17040607.4	-17067402.2	-9378229.34
	3250	10500287.22	899327.19	121707.72	-121707.72	3399288.17	4636508.88	4282922.67	3331795.45	3112731.55
	0	-989114.86	1593196.26	208644.87	-208644.87	14538930.2	14187647.2	9806473	16870523.7	7114202.96
SF39	425	-14834965.6	-1311374.67	-2177969.06	-2177969.06	-20700183.2	-13675299.4	-16001689.3	-15011614.21	-11391377.8
	850	17495544.7	2218319.97	3122334.99	-3122334.99	24505565.5	23721988	17144082.5	19536291.7	12990568.7
SF39	225	-1211086.64	-3512771.66	-131072.84	-131072.84	-13766738.5	-11039336.4	-10764083.8	-7426943.26	-7191012.51
	2600	5907736.18	1666618.61	-45947.07	-45947.07	9755672.19	7729833.15	7826323	6275810.2	6368314.92
	4775	-8136018.09	-2056423.55	-39178.61	-39178.61	-13094893	-10472404.7	-10664676.8	-7127153.33	-7057575.12
SF36	225	-5636986.29	-1192616.66	-220008.63	-220008.63	-6412670.04	-7487587.21	-7014349.8	-6451294.24	-6065798.98
	2250	4464957.64	832107.76	61741.44	-61741.44	7595321.53	6068775.97	6063216.94	4074029.17	3981894.68
	4275	-8303332.04	-2180859.07	243491.41	-243491.41	-11659356.6	-6949492.93	-6570317.89	-5818356.67	-6436641.11
SF39	0	9128916.19	1014028.32	-1603263.89	-1603263.89	12677022.6	9865065.82	12121939.8	6862696.16	9588971.15
	387.5	-2200040.73	-425315.45	104066.65	-104066.65	-3331517.3	-2602321.14	-2622750.86	-1886580.46	-2074609.25
	775	-14276872.7	-2070623.99	1713195.92	-1713195.92	-20445036.1	-15146504.5	-10746216	-11307309.2	-14391082.7
SF39	225	-10908974.5	-2985294.74	940920.07	-940920.07	-17012046.7	-10400058.5	-14539499.5	-6229442.67	-10303110.91
SF39	1862.6	7172395.95	1713164.21	-178310.95	-178310.95	11347937.9	6964921.03	9326093.92	6095469.3	8813643.41
	3000	4026917.77	-323875.01	-683864.56	-683864.56	5012001.31	3808608.99	5483094.36	3361817.89	4970234.1
SF39	225	-10340341	-3151840.10	-548065.82	-548065.82	-17464598.3	-14414153.8	-13263716	-9801995.96	-8214477.84
	2250	6420614.82	2072247.35	-15870.63	-15870.63	16870.63	11020327.1	8630261.37	8716579.65	5744259.77
	4275	-8232752.14	-1494403.7	518324.34	-518324.34	-13869276.5	-10468661	-11642972.2	-8944426.02	-7873508.83
SF39	0	-402152.81	16894.32	39700.36	-39700.36	604174.044	663060.24	479689.605	498687.944	398207.034
SF39	875	-1475285.04	-9827.36	-62170.34	-62170.34	-2688059.26	-2542486.42	-2674178.13	-2171317.33	-2284186.84
	1750	-6515069.93	-35840.83	56720.32	-56720.32	-7876037.24	-6764434.87	-6964447.35	-5786360.65	

8F14	0	344483.27	-418631.48	978381.22	978381.22	-4893404.58	3439510.86	5483969.24	3275126.51	5033678.21
	0	344483.27	769646.11	-1744545.56	1744545.56	11365227.7	7762613.43	-11425158.1	6030264.46	6170436.44
8F45	0	2492856.77	-520469.88	11174.7	-11174.7	-3836632.39	-3105133.26	3138920.12	-2233490.46	-2253604.92
	775	-14378484.8	-2311229.54	1766994.93	-1766994.93	20744114.0	-14951555.1	-10562134.5	-11170400.2	-14396619.1
8F46	225	-6434036.53	-1401249.58	-604889.08	604889.08	10982963.8	-8714974.6	-7555693.57	-8034880.11	-6456478.9
	2250	-4475147.08	-1405639.87	81118.59	-81118.59	7515840.82	6208494.42	5981075.39	4082839.36	3872525.89
8F46	4275	-5000362.3	-1949362.6	620908.27	-620908.27	-10427936.9	-7579261.54	-6655784.71	-4917861.40	-6046982.71
	305	-7997922.2	-2537188.5	111164.83	-111164.83	12056800.7	-10912033.3	-10678685.4	-7294038.33	-7097991.63
8F47	3600	6238722.88	1720849.46	25374.37	-25374.37	-10243828.7	8258004.98	8202718.76	5852997.12	5537013.75
	4375	7497306.82	-1952564.28	161812.58	-161812.58	-12120919.9	-9547365.04	-2887383.66	8601683.92	-8893298.36
8F48	150	964808.7	248917.71	-909741.21	909741.21	1439364.78	143218.1	2231774.64	-76349.156	1705184.92
	1750	388163.62	-51557.56	8034.33	-8034.33	383391.229	453859.947	263972.946	430647.309	268019.225
8F48	3350	-3747416.80	-348032.9	1170427.95	-1170427.95	-5655352.96	-3836674.51	-6440573.21	3319290.05	-4426066.39
	150	268349.57	12796.31	37736.02	-37736.02	328093.53	328082.362	241616.74	264677.031	196722.195
8F49	2250	128406.1	-8231.04	147255.32	-147255.32	1527480.14	1495041.33	1188805.19	128212.14	1023152.50
	4350	-2922141.26	-28468.38	258774.62	-258774.62	4767703.61	3876473.68	-4415700.36	-3289305.42	-3781024.73
8F49	150	1059389.14	80679.03	1177853.34	-1177853.34	1480353.42	2425346.26	-48145.7267	2011518.33	-106817.79
	2250	-445370.98	-15105.18	20818.11	-20818.11	610278.888	475725.199	401205.068	419571.001	362696.603
8F5	4350	6403622.40	-112829.09	-1136735.55	1136735.55	7866579.81	-8029593.95	-5834513.22	-6739786.84	-4739786.84
	0	-64932272.93	-36196.02	04982.84	-84082.84	-7845640.01	-6762499.1	-8939892.84	5767100.46	-5919368.2
8F50	875	-2467250.03	-10002	67042.89	-67042.89	-2864703.24	-2524428.27	-2554708.62	-215587.15	-2254362.91
	1750	-495484.64	15192.63	26701.54	-26701.54	620483.916	677046.957	493707.723	481667.593	401204.76
8F50	150	1144991.19	76374.77	1203060.25	-1203060.25	1500389.08	2541850.3	15389.5146	2116870.84	-48693.594
	2250	448036.23	-16934.47	18295.15	-18295.15	610488.724	473697.836	425177.798	419599.251	386766.992
8F51	4350	-4468993.86	-110349.72	-1160500.46	1160500.46	-7950823.53	-6140339.88	-689067.85	-683264.03	-4783264.03
	150	326151.12	21989.36	41413.94	-41413.94	426652.3	405704.356	319735.094	220904.554	258283.462
8F52	2250	1266119.26	-7668.37	150178.53	-150178.53	1530849.72	1499720.02	1184845.14	1281788.31	1021446.08
	4350	-3468887.64	-37086.1	258943.11	-258943.11	-4847202.93	-3952538.12	-4496318.65	-3557850.08	-3823947.6
8F53	150	657010.28	204633.11	1076988.3	-1076988.3	1115655.26	-248762.188	2010082.24	379790.287	1562398.88
	1750	-111046.95	-50281.18	83078.91	-83078.91	412658.744	481944.590	395387.182	465713.193	269714.758
8F53	3350	-345727.9	-305035.46	1265142.12	-1265142.12	-4622530.22	-2588273.56	-6243072.83	-1888727.2	-4246983.02
	150	345532.57	635405.68	1116729.97	-1116729.97	5493043.17	5630124.03	7244991.1	5114856.29	2184742.34
8F54	1750	166089.78	-111284.21	-94624.03	94624.03	21333	-24972.3305	188538.152	64488.134	204552.42
	3350	-6741568.41	-1057874.09	-1305778.01	1305778.01	-9782960.64	-8448824.76	-6707690.94	-7242971.78	-4692571.26
8F54	150	2498918.95	-510113.9	-59843.59	59843.59	3814884.95	-3168543.28	-3043296.74	2392706.27	2185347.81
	2250	1188885.67	-18178.67	-181023.93	181023.93	1823756.17	1052857.82	1201806.18	925595.376	1215799.89
8F55	4350	-1355324.35	-482780.58	-262402.47	262402.47	-800372.924	-1269809.96	-718754.77	-1465984.43	-853835.142
	150	2381090.5	355577.67	-125377.2	125377.2	3418712.87	1496253.26	4163545.48	835141.97	3263820.93
8F55	2250	524170.27	11418.73	-30514.4	30514.4	853274.293	634479.363	598469.603	443769.233	503716.203
	4350	-7536724.93	-343040.2	1204343.48	-1204343.48	-7562334.3	-8973188.31	-9602300.12	6899735.26	-7890986.11
8F56	150	-7281383.5	-349187.62	-1165669.24	1165669.24	-9268004.23	-8720258.54	-9131583.42	-5477384.2	-7620860.1
	2250	622441.29	3535.57	-28015.8	28015.8	632586.49	632487.879	581321.058	444862.941	495411.361
8F57	4350	2092771.15	558238.65	-1261901.51	1261901.51	3081307.21	1219556.68	3848551.82	756782.678	5019205.39
	150	-1356688.13	-486459.33	-243526.54	243526.54	-848086.052	-1223649.85	-712244.161	-1460875.12	-1012627.45
8F57	2250	1196036.73	12372.8	169311.61	-169311.61	1398817.68	1085717.74	1393873.91	832484.743	1218571.48
	4350	-2475233.64	-643005.44	-74338.46	74338.46	-3339085.95	3190188.64	-3034082.07	-2294613	-2180807.37
8F58	150	-6608477.44	-1089820.81	-1380395.95	1380395.95	-8639341.8	9387794.88	-6498863.8	-7189585.88	-4705273.43
	1750	183382.1	-113307.5	-94010.72	94010.72	48342.52	-7061.6385	190380.874	34915.242	264136.598
8F6	3350	3386386.14	843615.82	1182074.4	-1182074.4	5389448.38	6682916.33	3079829.09	-4102834.49	1956810.57
	0	-495484.64	-15192.63	-39701.54	39701.54	620488.815	577246.957	-483873.728	-481667.661	-410204.79
8F7	875	-3263411.54	18002	-62042.09	62042.09	3400690.86	3482274.42	-3051986.03	-2982908.27	-2881231.51
	1750	7113628.13	25198.02	-84382.64	84382.64	-8476437.72	-7523703.87	-7346666.43	-6478217.89	-6326018.14
8F7	225	-14204999.4	-1774170.8	974843.63	-974843.63	-15884672.2	17815531.4	-15588140.8	-13661948.7	-11807050.2
	812.5	-918045.09	-299672.8	410625.12	-410625.12	-1578730.59	792891.755	-1697194.52	-436677.973	-1212003.19
8F8	1000	11918733.9	1982669.09	1836193.8	-1836193.8	10034690	10465700.8	11609663.8	72379434	9074285.16
	0	7291707.33	218369.31	1449213.93	-1449213.93	9097209.29	9302968.37	8348519.11	7858726.13	6288344.08
8F9	1837.5	4848360.29	779205.27	77542.52	-77542.52	7064760.78	5908647.04	8745707.93	4433312.62	4293735.9
	3275	-7416401.92	-957889.88	-1285128.62	1285128.62	-10432306.1	-10041813	-7340042.9	-7851377.46	-6618146.97
8F9	225	-7343514.67	-1173614.17	4188.06	-4188.06	-10860000.2	-8815358.23	-8924163.15	-6656263.86	-6612532.37
	1250	4988698.99	747650.31	1788173	-1788173	7155887.27	5947428.84	6604877.1	4487013.59	4455726.43
8F9	4275	-7526784.23	-983766.48	31575.5	-31575.5	10574167.4	-8780738.48	-8847037.04	-6746887.68	6802533.76

1. Balok yang ditinjau
2. Balok yang ditinjau
3. MD = Momen balok akibat beban mati
4. ML = Momen akibat beban hidup
5. Max = Momen balok akibat beban gempa sejar + gempa K
6. Max = Momen balok akibat beban gempa sejar + gempa K
7. Comb 1 = 1,2x MD
8. Comb 2 = 1,2x MD + 1,6x ML
9. Comb 3 = 1,05 (MD + 0,9x ML + Max)
10. Comb 4 = 1,05 (MD + 0,9x ML + Max)
11. Comb 5 = 0,9 (MD + Max)
12. Comb 5 = 0,9 (MD + Max)
13. Momen Maksimum Lapangan
14. Momen Maksimum Tumpuan

Lapuan Gaya Gerak Balok

FRAME	Ln mm	LOC mm	VD N	VL N	VE N	M Nak+ Nmm	M Nak- Nmm	V ren N	V maks N	V Tpk N
1	2	3	4	5	6	7	8	9	10	11
1B1	6500	225	-11574	0	0	149,2973	127,1396	-9190,54377	-12152,5425	9192,54377
		3500	0	0	0	149,2973	127,1396	3658,996733	0	0
		6775	11573,9	0	0	149,2973	127,1396	15112,54123	12152,5425	12152,5425
1B10	3275	225	-8040	0	0	149,2973	127,1396	-2532,03401	-3442,0315	-2532,03403
		1842,5	-2253,1	0	0	149,2973	127,1396	5919,997485	-2365,755	-2365,755
		3500	5533,82	0	0	149,2973	127,1396	9850,303465	3710,311	3710,311
1B11	750	0	10829,5	0	0	149,2973	127,1396	37321,8516	11370,996	11370,996
		375	13154,8	0	0	149,2973	127,1396	25850,6256	12763,5085	12763,5085
		750	13430	0	0	149,2973	127,1396	40004,8766	14154,021	14154,021
1B12	4025	250	-7668	0	0	149,2973	127,1396	-2604,50765	-3421,4	-2604,50765
		2262,5	44,17	0	0	149,2973	127,1396	4816,892348	46,3785	46,3785
		4275	7156,35	0	0	149,2973	127,1396	12331,05995	7514,1675	7514,1675
1B13	4050	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-2727,00906
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4275	7156,35	0	0	149,2973	127,1396	12331,32594	7514,1675	7514,1675
1B14	4050	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-2727,00906
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4275	7156,35	0	0	149,2973	127,1396	12331,32594	7514,1675	7514,1675
1B15	4050	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-2727,00906
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4275	7156,35	0	0	149,2973	127,1396	12331,32594	7514,1675	7514,1675
1B16	3350	150	-5475,7	0	0	149,2973	127,1396	-2292,7905	-3292,6325	-2292,7905
		2075	-176,7	0	0	149,2973	127,1396	5035,842	-185,535	-185,535
		4000	6636,25	0	0	149,2973	127,1396	11993,4043	6937,5625	6937,5625
1B17	3650	150	-6979,7	0	0	149,2973	127,1396	-2292,7905	-3292,6325	-2292,7905
		2075	-176,7	0	0	149,2973	127,1396	5035,842	-185,535	-185,535
		4000	6636,25	0	0	149,2973	127,1396	11993,4043	6937,5625	6937,5625
1B18	4500	250	-7951,5	0	0	149,2973	127,1396	-4040,6324	-8349,075	-4040,6324
		2500	0	0	0	149,2973	127,1396	4308,4426	0	0
		4750	7951,5	0	0	149,2973	127,1396	12657,5176	8349,075	8349,075
1B19	4500	250	-7951,5	0	0	149,2973	127,1396	-4040,6324	-8349,075	-4040,6324
		2500	0	0	0	149,2973	127,1396	4308,4426	0	0
		4750	7951,5	0	0	149,2973	127,1396	12657,5176	8349,075	8349,075
1B2	4775	0	-7293,7	0	0	149,2973	127,1396	-3600,1621	-7600,4745	-3600,1621
		2387,5	1141,73	0	0	149,2973	127,1396	4060,312398	1198,8165	1198,8165
		4775	9579,15	0	0	149,2973	127,1396	14118,4199	10058,1075	10058,1075
1B20	4550	225	-8039,9	0	0	149,2973	127,1396	-4180,74542	-8441,8425	-4180,74542
		2500	0	0	0	149,2973	127,1396	4261,097077	0	0
		4775	8039,95	0	0	149,2973	127,1396	12702,93958	8441,8425	8441,8425
1B21	9500	250	-16787	0	0	149,2973	127,1396	-15584,9838	-17625,825	-15584,9838
		5000	0	0	0	149,2973	127,1396	2040,841231	0	0
		9750	16786,5	0	0	149,2973	127,1396	19666,66623	17625,825	17625,825
1B22	9500	250	-16787	0	0	149,2973	127,1396	-15584,9838	-17625,825	-15584,9838
		5000	0	0	0	149,2973	127,1396	2040,841231	0	0
		9750	16786,5	0	0	149,2973	127,1396	19666,66623	17625,825	17625,825
1B23	9500	250	-16787	0	0	149,2973	127,1396	-15584,9838	-17625,825	-15584,9838
		5000	0	0	0	149,2973	127,1396	2040,841231	0	0
		9750	16786,5	0	0	149,2973	127,1396	19666,66623	17625,825	17625,825
1B24	9550	225	-16875	0	0	149,2973	127,1396	-15688,4363	-17718,5925	-15688,4363
		5000	0	0	0	149,2973	127,1396	2030,156199	0	0
		9775	16874,9	0	0	149,2973	127,1396	19742,7457	17718,5925	17718,5925
1B25	9500	250	-16787	0	0	149,2973	127,1396	-15584,9838	-17625,825	-15584,9838
		5000	0	0	0	149,2973	127,1396	2040,841231	0	0
		9750	16786,5	0	0	149,2973	127,1396	19666,66623	17625,825	17625,825
1B26	9500	250	-16787	0	0	149,2973	127,1396	-15584,9838	-17625,825	-15584,9838
		5000	0	0	0	149,2973	127,1396	2040,841231	0	0
		9750	16786,5	0	0	149,2973	127,1396	19666,66623	17625,825	17625,825
1B27	9500	250	-16787	0	0	149,2973	127,1396	-15584,9838	-17625,825	-15584,9838
		5000	0	0	0	149,2973	127,1396	2040,841231	0	0
		9750	16786,5	0	0	149,2973	127,1396	19666,66623	17625,825	17625,825
1B28	4550	225	-8039,9	0	0	149,2973	127,1396	-4180,74542	-8441,8425	-4180,74542
		2500	0	0	0	149,2973	127,1396	4261,097077	0	0
		4775	8039,95	0	0	149,2973	127,1396	12702,93958	8441,8425	8441,8425
1B29	5350	250	-9276,8	0	0	149,2973	127,1396	-6116,66382	-9740,5875	-6116,66382
		2925	176,7	0	0	149,2973	127,1396	3623,923682	185,535	185,535
		5600	9630,15	0	0	149,2973	127,1396	13732,58118	10111,6575	10111,6575
1B3	4775	0	-7293,7	0	0	149,2973	127,1396	-3600,1621	-7600,4745	-3600,1621
		2387,5	1141,73	0	0	149,2973	127,1396	4060,312398	1198,8165	1198,8165
		4775	9579,15	0	0	149,2973	127,1396	14118,4199	10058,1075	10058,1075
1B30	5350	250	-9276,8	0	0	149,2973	127,1396	-6116,66382	-9740,5875	-6116,66382
		2925	176,7	0	0	149,2973	127,1396	3623,923682	185,535	185,535
		5600	9630,15	0	0	149,2973	127,1396	13732,58118	10111,6575	10111,6575

1B31	4000	750	-7951,5	0	0	149,2973	127,1396	-4040,6324	-8349,075	-4040,6324
		2000	0	0	0	149,2973	127,1396	4306,4426	0	0
		4000	7951,5	0	0	149,2973	127,1396	12637,5176	8349,075	8349,075
1B32	4000	250	-7951,5	0	0	149,2973	127,1396	-4040,6324	-8349,075	-4040,6324
		2000	0	0	0	149,2973	127,1396	4306,4426	0	0
		4000	7951,5	0	0	149,2973	127,1396	12637,5176	8349,075	8349,075
1B37	4000	2000	-7951,5	0	0	149,2973	127,1396	-4040,6324	-8349,075	-4040,6324
		2000	0	0	0	149,2973	127,1396	4306,4426	0	0
		4000	7951,5	0	0	149,2973	127,1396	12637,5176	8349,075	8349,075
1B34	4000	250	-7951,5	0	0	149,2973	127,1396	-4040,6324	-8349,075	-4040,6324
		2000	0	0	0	149,2973	127,1396	4306,4426	0	0
		4000	7951,5	0	0	149,2973	127,1396	12637,5176	8349,075	8349,075
1B35	2000	1000	-176,7	0	0	149,2973	127,1396	-4343,13203	-4174,5375	-4174,5375
		1000	176,7	0	0	149,2973	127,1396	4017,67056	-165,535	-165,535
		2000	3622,25	0	0	149,2973	127,1396	14021,13006	2313,5675	2313,5675
1B36	2000	200	-3622,25	0	0	149,2973	127,1396	-5214,20506	-5003,4875	-5003,4875
		1000	176,7	0	0	149,2973	127,1396	4017,67056	135,335	135,335
		2000	3622,25	0	0	149,2973	127,1396	12192,20006	4174,5375	4174,5375
1B37	4000	200	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2000	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B38	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B39	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B4	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B40	4000	200	-7156,4	0	0	149,2973	127,1396	-2604,50765	-7421,4	-7421,4
		2000	0	0	0	149,2973	127,1396	4816,892346	-46,3785	-46,3785
		4000	7156,4	0	0	149,2973	127,1396	12331,05985	7514,1675	7514,1675
1B41	4000	225	-7156,4	0	0	149,2973	127,1396	-2697,27515	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4816,892346	-46,3785	-46,3785
		4000	7156,4	0	0	149,2973	127,1396	12331,05985	7514,1675	7514,1675
1B42	4000	225	-7156,4	0	0	149,2973	127,1396	-2697,27515	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4816,892346	-46,3785	-46,3785
		4000	7156,4	0	0	149,2973	127,1396	12331,05985	7514,1675	7514,1675
1B43	4000	200	-7156,4	0	0	149,2973	127,1396	-2604,50765	-7421,4	-7421,4
		2000	0	0	0	149,2973	127,1396	4816,892346	-46,3785	-46,3785
		4000	7156,4	0	0	149,2973	127,1396	12331,05985	7514,1675	7514,1675
1B44	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B45	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B46	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B47	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B5	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B6	4000	225	-7156,4	0	0	149,2973	127,1396	-2727,00906	-7514,1675	-7514,1675
		2250	0	0	0	149,2973	127,1396	4787,158444	0	0
		4000	7156,4	0	0	149,2973	127,1396	12301,32594	7514,1675	7514,1675
1B7	4000	200	-7085	0	0	149,2973	127,1396	-2604,50765	-7421,4	-7421,4
		2000	0	0	0	149,2973	127,1396	4816,892346	-46,3785	-46,3785
		4000	7156,4	0	0	149,2973	127,1396	12331,05985	7514,1675	7514,1675
1B8	750	375	-10829,5	0	0	149,2973	127,1396	-37221,6516	-11370,996	-11370,996
		375	12154,8	0	0	149,2973	127,1396	25830,6556	13762,5083	13762,5083
		750	13450	0	0	149,2973	127,1396	40004,6766	14154,021	14154,021
1B9	3275	225	-8040	0	0	149,2973	127,1396	-2522,03403	-5442,0315	-5442,0315
		1000	-8253,1	0	0	149,2973	127,1396	3919,997465	-2065,755	-2065,755
		3000	3532,82	0	0	149,2973	127,1396	9630,506465	3710,511	3710,511
1C1	2000	250	-2385	0	0	74,27159	74,27159	-2473,600	-3473,500	-3473,500
		1000	117,5	0	0	74,27159	74,27159	0,000	123,690	0,000
		2000	2391,5	0	0	74,27159	74,27159	2721,180	3721,180	3721,180
1C10	2000	150	-2776,1	0	0	74,27159	74,27159	-3630,405	-5030,405	-5030,405
		1325	-117,3	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2000	2659,5	0	0	74,27159	74,27159	2783,035	3783,035	3783,035

1011	2350	150	-2386,1	0	0	74,27159	74,27159	-3030,405	-3030,405	-3030,405
		1325	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2000	-2650,5	0	0	74,27159	74,27159	2783,025	2783,025	2783,025
		2500	-2650,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1012	2350	150	-2386,1	0	0	74,27159	74,27159	-3030,405	-3030,405	-3030,405
		1325	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2000	-2650,5	0	0	74,27159	74,27159	2783,025	2783,025	2783,025
		2500	-2650,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1013	2350	150	-2386,1	0	0	74,27159	74,27159	-3030,405	-3030,405	-3030,405
		1325	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2000	-2650,5	0	0	74,27159	74,27159	2783,025	2783,025	2783,025
		2500	-2650,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1014	2350	150	-2650,5	0	0	74,27159	74,27159	-2783,025	-2783,025	-2783,025
		1425	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2000	-2386,1	0	0	74,27159	74,27159	3030,405	3030,405	3030,405
		2500	-2386,1	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1015	2350	150	-2650,5	0	0	74,27159	74,27159	-2783,025	-2783,025	-2783,025
		1425	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2000	-2386,1	0	0	74,27159	74,27159	3030,405	3030,405	3030,405
		2500	-2386,1	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1016	2150	125	-2650,5	0	0	74,27159	74,27159	-2783,025	-2783,025	-2783,025
		1250	0	0	0	74,27159	74,27159	0,000	0,000	0,000
		2375	-2650,5	0	0	74,27159	74,27159	2783,025	2783,025	2783,025
		2500	-2650,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1017	2350	125	-2650,5	0	0	74,27159	74,27159	-2783,025	-2783,025	-2783,025
		1250	0	0	0	74,27159	74,27159	0,000	0,000	0,000
		2375	-2650,5	0	0	74,27159	74,27159	2783,025	2783,025	2783,025
		2500	-2650,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1018	4250	125	-5006,5	0	0	74,27159	74,27159	-5256,825	-5256,825	-5256,825
		2250	0	0	0	74,27159	74,27159	0,000	0,000	0,000
		4375	-5006,5	0	0	74,27159	74,27159	5256,825	5256,825	5256,825
		4500	-5006,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1019	4250	125	-5006,5	0	0	74,27159	74,27159	-5256,825	-5256,825	-5256,825
		2250	0	0	0	74,27159	74,27159	0,000	0,000	0,000
		4375	-5006,5	0	0	74,27159	74,27159	5256,825	5256,825	5256,825
		4500	-5006,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
102	2100	350	-2356	0	0	74,27159	74,27159	-2473,800	-2473,800	-2473,800
		1300	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2050	-2356	0	0	74,27159	74,27159	2721,180	2721,180	2721,180
		2500	-2356	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1020	4350	125	-5006,5	0	0	74,27159	74,27159	-5256,825	-5256,825	-5256,825
		2250	0	0	0	74,27159	74,27159	0,000	0,000	0,000
		4375	-5006,5	0	0	74,27159	74,27159	5256,825	5256,825	5256,825
		4500	-5006,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1021	4250	125	-5006,5	0	0	74,27159	74,27159	-5256,825	-5256,825	-5256,825
		2250	0	0	0	74,27159	74,27159	0,000	0,000	0,000
		4375	-5006,5	0	0	74,27159	74,27159	5256,825	5256,825	5256,825
		4500	-5006,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
1022	4750	125	-5598,5	0	0	74,27159	74,27159	-5875,275	-5875,275	-5875,275
		2300	0	0	0	74,27159	74,27159	0,000	0,000	0,000
		4875	-5598,5	0	0	74,27159	74,27159	5875,275	5875,275	5875,275
		5000	-5598,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
103	2100	350	-2356	0	0	74,27159	74,27159	-2473,800	-2473,800	-2473,800
		1300	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2050	-2356	0	0	74,27159	74,27159	2721,180	2721,180	2721,180
		2500	-2356	0	0	74,27159	74,27159	0,000	-123,690	-123,690
104	2100	350	-2356	0	0	74,27159	74,27159	-2473,800	-2473,800	-2473,800
		1300	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2050	-2356	0	0	74,27159	74,27159	2721,180	2721,180	2721,180
		2500	-2356	0	0	74,27159	74,27159	0,000	-123,690	-123,690
105	2350	150	-2386,1	0	0	74,27159	74,27159	-3030,405	-3030,405	-3030,405
		1425	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2600	-2386,1	0	0	74,27159	74,27159	3030,405	3030,405	3030,405
		2500	-2386,1	0	0	74,27159	74,27159	0,000	-123,690	-123,690
106	2450	150	-2386,1	0	0	74,27159	74,27159	-3030,405	-3030,405	-3030,405
		1375	0	0	0	74,27159	74,27159	0,000	0,000	0,000
		2600	-2386,1	0	0	74,27159	74,27159	3030,405	3030,405	3030,405
		2500	-2386,1	0	0	74,27159	74,27159	0,000	-123,690	-123,690
107	2350	150	-2386,1	0	0	74,27159	74,27159	-3030,405	-3030,405	-3030,405
		1425	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2600	-2386,1	0	0	74,27159	74,27159	3030,405	3030,405	3030,405
		2500	-2386,1	0	0	74,27159	74,27159	0,000	-123,690	-123,690
108	2350	150	-2386,1	0	0	74,27159	74,27159	-3030,405	-3030,405	-3030,405
		1325	-1117,8	0	0	74,27159	74,27159	0,000	-123,690	-123,690
		2000	-2650,5	0	0	74,27159	74,27159	2783,025	2783,025	2783,025
		2500	-2650,5	0	0	74,27159	74,27159	0,000	-123,690	-123,690
2A1	2750	250	-33381	-7524,4	66030,49	570,3475	240,6796	62993,185	235426,918	62993,185
		1625	-16574	-4340,8	66030,49	570,3475	240,6796	82933,892	253367,623	82933,892
		3000	-2210,1	-1977,52	66030,49	570,3475	240,6796	100497,326	272921,057	100497,326
		3500	-2210,1	-1977,52	66030,49	570,3475	240,6796	0,000	-123,690	-123,690
2A10	2750	250	-115047	-43413,22	29506,78	570,3475	240,6796	-63588,620	-44554,472	-44554,472
		1625	-96636	-36046,03	29506,78	570,3475	240,6796	-34421,367	-15397,719	-15397,719
		3000	-78112	-31319,47	29506,78	570,3475	240,6796	-10009,640	5024,508	5024,508
		3500	-78112	-31319,47	29506,78	570,3475	240,6796	0,000	-123,690	-123,690
2A11	2750	250	-32068	-7322,21	66956,38	570,3475	240,6796	63895,090	348257,559	63895,090
		1625	-16260	-4132,63	66956,38	570,3475	240,6796	83475,787	268193,256	83475,787
		3000	-1896,2	-1775,33	66956,38	570,3475	240,6796	101039,231	285761,700	101039,231
		3500	-1896,2	-1775,33	66956,38	570,3475	240,6796	0,000	-123,690	-123,690
2A12	1100	0	70281,9	29226,76	59728,29	570,3475	240,6796	356738,289	356738,289	356738,289
		350	75117,5	39985,03	59728,29	570,3475	240,6796	372593,485	361468,485	361468,485
		1100	82609,2	32253,78	59728,29	570,3475	240,6796	382841,916	371716,916	371716,916
		1100	82609,2	32253,78	59728,29	570,3475	240,6796	0,000	-123,690	-123,690
2A13	1100	0	71416,1	29246,66	61309,76	570,3475	240,6796	368561,674	364666,248	364666,248
		350	76825,2	30602,91	61309,76	570,3475	240,6796	375039,145	371144,319	371144,319
		1100	84903,6	32871,66	61309,76	570,3475	240,6796	385899,241	382005,015	382005,015
		1100	84903,6	32871,66	61309,76	570,3475	240,6796	0,000	-123,690	-123,690

2A14	1750	0	29026	11903,38	67546,46	570,3475	240,6796	203251,396	128773,587	102852,396
		875	30006,1	12860,91	67546,46	570,3475	240,6796	210244,362	338367,472	218244,362
		1750	49113,9	15130	67546,46	570,3475	240,6796	333333,119	333304,309	333333,119
2A15	1750	0	24090,7	12571,2	70821,66	570,3475	240,6796	208298,038	341766,453	208298,038
		875	38070,8	13038,33	70821,66	570,3475	240,6796	213427,924	351333,342	213427,924
		1750	49817,7	13299,53	70821,66	570,3475	240,6796	333626,372	366497,167	333626,372
2A16	4000	0	131247	8937,56	26838,43	570,3475	240,6796	28141,5177	68745,467	28141,5177
		2000	501,79	82,60	26838,43	570,3475	240,6796	72706,351	113312,407	72706,351
		4000	32944,6	10062,02	26838,43	570,3475	240,6796	117371,739	137573,336	117371,739
2A17	4000	0	-31443	-9777,34	32968,49	570,3475	240,6796	26051,414	95173,022	26051,414
		2000	947,83	233,62	32968,49	570,3475	240,6796	73396,334	149740,132	73396,334
		4000	31440,2	10210,68	32968,49	570,3475	240,6796	117961,234	134305,693	117961,234
2A18	4000	0	-29665	-9234,33	32191,03	570,3475	240,6796	31215,537	94306,037	31215,537
		2000	2770,28	715,68	32191,03	570,3475	240,6796	75703,477	138371,037	75703,477
		4000	32201	10715,68	32191,03	570,3475	240,6796	120743,406	133437,466	120743,406
2A19	4000	0	-21653	-7202,33	34302,43	570,3475	240,6796	41606,339	133413,912	41606,339
		2000	10339,3	2797,40	34302,43	570,3475	240,6796	83171,133	168850,983	83171,133
		4000	43032,3	12737,47	34302,43	570,3475	240,6796	130736,092	144269,042	130736,092
2A2	2750	0	-177736	-42461,4	28719,01	570,3475	240,6796	-82307,697	-47538,130	-47538,130
		1625	-96296	-36094,27	28719,01	570,3475	240,6796	-24114,942	-18329,427	-18329,427
		3000	-77772	-31367,7	28719,01	570,3475	240,6796	-9702,713	-6032,800	-6032,800
2A20	4000	0	-26691	-9257,13	33009,02	570,3475	240,6796	31215,513	95642,547	31215,513
		2000	2751,99	743,87	33009,02	570,3475	240,6796	75734,443	143007,477	75734,443
		4000	37194,3	10742,87	33009,02	570,3475	240,6796	120349,333	134772,417	120349,333
2A21	4000	0	-31222	-9717,43	33500,62	570,3475	240,6796	39002,449	97580,203	39002,449
		2000	1100,60	282,55	33500,62	570,3475	240,6796	72582,389	140135,143	72582,389
		4000	33343,6	10232,55	33500,62	570,3475	240,6796	118132,329	136120,093	118132,329
2A22	4000	0	-32164	-9930,11	37524,23	570,3475	240,6796	37968,323	11435,323	27968,323
		2000	278,6	119,89	37524,23	570,3475	240,6796	72533,265	116020,265	72533,265
		4000	32721,4	10119,89	37524,23	570,3475	240,6796	117098,203	130585,203	117098,203
2A23	2600	0	-34753	-15934,63	-47674,01	570,3475	240,6796	164150,033	-147036,713	-147036,713
		1300	31818,8	20159,62	-47674,01	570,3475	240,6796	126524,504	-124632,462	-124632,462
		2600	35637,6	21034,63	-47674,01	570,3475	240,6796	226170,263	-23006,501	-23006,501
2A24	2600	0	-36838,4	-16280,08	-47675,63	570,3475	240,6796	165487,617	-143176,163	-143176,163
		1300	32740,2	20511,06	-47675,63	570,3475	240,6796	187861,879	-120301,902	-120301,902
		2600	81330	31336,09	-47675,63	570,3475	240,6796	229507,639	-79155,941	-79155,941
2A25	1750	0	-50137	-10301,39	83513,53	570,3475	240,6796	101373,203	287396,086	101373,203
		1125	-149063	-8826,73	83513,53	570,3475	240,6796	112436,736	396359,621	112436,736
		2000	-32327	-7879,77	83513,53	570,3475	240,6796	123028,634	309251,508	123028,634
2A26	1750	0	40792,6	20085,42	-66872,01	570,3475	240,6796	357155,842	-268540,542	-268540,542
		875	56855,1	21999,48	-66872,01	570,3475	240,6796	349321,199	-196173,186	-196173,186
		1750	78790	26335,42	-66872,01	570,3475	240,6796	268905,163	-176791,220	-176791,220
2A27	1750	0	50119,6	20345,43	-69128,52	570,3475	240,6796	239032,203	-203141,524	-203141,524
		875	39982,1	22459,49	-69128,52	570,3475	240,6796	251397,569	-203776,167	-203776,167
		1750	74137	26793,42	-69128,52	570,3475	240,6796	270721,526	-184392,201	-184392,201
2A29	1350	0	48009	2364,63	83637,33	570,3475	240,6796	307431,464	245034,704	307431,464
		675	8799,7	3434,16	83637,33	570,3475	240,6796	214341,881	311943,123	214341,881
		1350	5213,84	5142,76	83637,33	570,3475	240,6796	224553,310	362156,550	224553,310
2A3	2750	0	-123514	-45405,65	32683,2	570,3475	240,6796	-74571,536	-42311,413	-42311,413
		1625	-104104	-39033,46	32683,2	570,3475	240,6796	-45404,776	-13344,660	-13344,660
		3000	-85580	-34311,9	32683,2	570,3475	240,6796	-20992,543	11067,567	11067,567
2A30	2750	0	14169,3	6836,21	63010,09	570,3475	240,6796	183299,915	224048,008	183299,915
		1375	31692,3	11562,77	63010,09	570,3475	240,6796	190212,132	318460,233	190212,132
		2750	59103	17929,96	63010,09	570,3475	240,6796	179476,933	347026,936	179476,933
2A31	2750	0	77211,7	30008	28438,26	570,3475	240,6796	218315,054	232861,419	218315,054
		1375	93734,9	35534,51	28438,26	570,3475	240,6796	242727,281	357273,646	242727,281
		2750	117146	41901,76	28438,26	570,3475	240,6796	271894,034	396440,399	271894,034
2A32	2750	0	27014,4	34592,4	33308,37	570,3475	240,6796	222281,530	262582,837	222281,530
		1375	105538	39319,01	33308,37	570,3475	240,6796	256993,747	291994,574	256993,747
		2750	126948	45686,2	33308,37	570,3475	240,6796	286180,510	321161,337	286180,510
2A33	2750	0	36754,7	31625,73	32686,32	570,3475	240,6796	222893,810	236678,037	222893,810
		1375	99277,9	36352,3	32686,32	570,3475	240,6796	247306,037	277090,254	247306,037
		2750	120689	42719,48	32686,32	570,3475	240,6796	276472,796	306257,007	276472,796
2A34	2750	0	33271,5	13633,47	47699,25	570,3475	240,6796	154734,504	249797,027	154734,504
		1375	31794,6	18560,03	47699,25	570,3475	240,6796	178766,720	274209,243	178766,720
		2750	73005,3	24927,22	47699,25	570,3475	240,6796	207923,473	303375,996	207923,473
2A35	2775	0	56237	34079,39	34273,2	570,3475	240,6796	189371,011	186369,113	186369,113
		1307,5	74994,9	28892,28	34273,2	570,3475	240,6796	213030,820	211028,927	211028,927
		2775	96398,6	35202,62	34273,2	570,3475	240,6796	242130,824	240138,931	240138,931
2A36	2750	0	32281,3	13509,73	47176,28	570,3475	240,6796	153079,961	246536,010	153079,961
		1375	30904,2	18238,37	47176,28	570,3475	240,6796	177493,173	270738,227	177493,173
		2750	72315,3	24602,5	47176,28	570,3475	240,6796	206658,931	299904,930	206658,931
2A37	2750	0	86593,2	31612,84	32333,19	570,3475	240,6796	222710,648	253615,719	222710,648
		1375	99116,4	36739,41	32333,19	570,3475	240,6796	247122,836	272027,937	247122,836
		2750	120527	42706,59	32333,19	570,3475	240,6796	276289,638	307194,699	276289,638

2A33	2750	0	87215,7	34665,18	33847,63	570,3475	340,6796	33369,099	370133,013	232669,209
		1375	105729	39391,24	33847,63	570,3475	340,6796	357281,426	294547,329	251281,426
		2750	137700	49738,93	33847,63	570,3475	340,6796	386448,199	333713,993	286448,199
2A39	2750	0	170786,8	30845,41	29152,43	570,3475	340,6796	218153,606	335899,443	218153,606
		1375	93543,8	33571,87	29152,43	570,3475	340,6796	242585,233	360111,670	242585,233
		2750	116954	41939,16	29152,43	570,3475	340,6796	271732,586	389378,423	271732,586
2A4	2750	250	-113737	-46375,88	33703,34	570,3475	340,6796	-56316,958	-19458,592	-19458,592
		1625	-91610	-34147,89	33703,34	570,3475	340,6796	-37151,235	-9507,863	-9507,863
		2050	-73087	-24411,32	33703,34	570,3475	340,6796	-2739,608	33920,592	33920,592
2A40	2750	0	11571,3	6433,93	61394,95	570,3475	340,6796	121779,858	361944,321	121779,858
		1375	30075,3	11165,52	67394,93	570,3475	340,6796	145192,096	536356,559	145192,096
		2750	51426,1	17827,71	67394,93	570,3475	340,6796	177358,349	355523,212	177358,349
2A42	1160	150	83512,0	11002,75	78435,2	570,3475	340,6796	349486,383	907674,527	349486,383
		700	75743	12440,9	78435,2	570,3475	340,6796	354800,945	422065,487	354800,945
		1250	26689,3	13202,78	78435,2	570,3475	340,6796	367070,002	434364,544	367070,002
2A5	3730	250	-29646	-12503,76	58156,34	570,3475	340,6796	-56773,043	-190145,744	-56773,043
		1625	-17670	-8136,37	58156,34	570,3475	340,6796	-79939,697	-219310,366	-79939,697
		3000	893,83	-1410,01	58156,34	570,3475	340,6796	-104232,003	-243722,724	-104232,003
2A6	3773	325	-117778	-40209,35	25373,96	570,3475	340,6796	-61937,033	-39390,565	-39390,565
		1612,5	-96374	-28898,71	25373,96	570,3475	340,6796	-32837,044	-30190,545	-30190,545
		3000	-77606	-20983,31	25373,96	570,3475	340,6796	-2077,235	-5430,726	-5430,726
2A7	2750	250	87958	-11921,33	56817,94	570,3475	340,6796	53501,556	153863,577	53501,556
		1625	-16541	-5554,04	56817,94	570,3475	340,6796	61688,309	238209,330	61688,309
		3000	1975,25	-827,43	56817,94	570,3475	340,6796	-106100,626	353441,357	-106100,626
2A8	2750	250	-112859	-40443,91	34056,53	570,3475	340,6796	-58115,243	-179721,147	-179721,147
		1625	-91486	-34076,73	34056,53	570,3475	340,6796	-36948,492	-11194,607	-11194,607
		3000	-72969	-29250,17	34056,53	570,3475	340,6796	-2536,276	36606,823	36606,823
2A9	2750	250	-136449	-45343,34	33121,85	570,3475	340,6796	-74442,817	-40225,374	-40225,374
		1625	-104038	-38981,16	33121,85	570,3475	340,6796	-45276,074	-11058,632	-11058,632
		3000	-23215	-34274,6	33121,85	570,3475	340,6796	-20863,853	18353,583	18353,583
2B1	6750	325	-11233	43,34	-13496	302,42	127,1846	11565,632	-16410,507	-16410,507
		3500	250,62	43,34	-13496	302,42	127,1846	35713,174	35713,174	35713,174
		6775	118246	43,34	-13496	302,42	127,1846	35870,717	11894,579	11894,579
2B10	3275	325	-33531	41,39	-1819,46	302,42	127,1846	17114,678	-37343,663	-37343,663
		1962,5	-8216,3	41,39	-1819,46	302,42	127,1846	58235,482	-16224,863	-16224,863
		3500	118288	41,39	-1819,46	302,42	127,1846	59356,284	4295,940	4295,940
2B11	750	0	19168,9	101,05	16872,33	302,42	127,1846	224874,731	91097,244	91097,244
		375	21773,4	101,05	16872,33	302,42	127,1846	229711,558	95934,069	95934,069
		750	28381,9	101,05	16872,33	302,42	127,1846	234348,381	100770,894	100770,894
2B12	4625	250	-32542	-5398,08	-324,67	302,42	127,1846	-4053,382	-49311,643	-4053,382
		2262,5	23,65	-4,32	-324,67	302,42	127,1846	38114,933	-1343,328	-1343,328
		4375	34451,5	5510,51	-324,67	302,42	127,1846	80054,569	40594,308	40594,308
2B13	4050	225	-54788	-5483,62	210,55	302,42	127,1846	-4453,092	-41392,277	-4453,092
		2250	-1517,9	78,1	210,55	302,42	127,1846	27313,629	632,436	632,436
		4275	34541,9	5639,82	210,55	302,42	127,1846	90050,332	43073,148	43073,148
2B14	4050	225	-85325	-5812,17	-768,13	302,42	127,1846	-5334,523	-46420,164	-5334,523
		2250	-661,27	-250,45	-768,13	302,42	127,1846	36903,189	-4183,452	-4183,452
		4275	34002,5	5311,27	-768,13	302,42	127,1846	79138,911	38053,271	38053,271
2B15	4050	225	-35703	-5703,81	644,2	302,42	127,1846	-5617,173	-40771,028	-5617,173
		2250	-1038,8	-142,09	644,2	302,42	127,1846	36619,550	1465,695	1465,695
		4275	27624,9	5419,63	644,2	302,42	127,1846	78866,262	43702,407	43702,407
2B16	4550	225	-36499	-5095,13	943,93	302,42	127,1846	-4973,169	-39657,564	-4973,169
		2500	136,76	-158,41	943,93	302,42	127,1846	33678,083	3962,459	3962,459
		4775	36771	4778,3	943,93	302,42	127,1846	77325,255	47612,460	47612,460
2B17	4550	225	-37546	-5531,77	1025,19	302,42	127,1846	-11324,060	-40465,373	-11324,060
		2500	-913,30	-394,46	1025,19	302,42	127,1846	32335,942	3184,629	3184,629
		4775	35721,4	4542,06	1025,19	302,42	127,1846	75975,954	4834,641	4834,641
2B18	1750	250	-34132	-5905	82124,91	302,42	127,1846	43429,390	599756,234	43429,390
		1125	-25060	-7440,13	82124,91	302,42	127,1846	53492,825	310799,759	53492,825
		2000	-16922	-6483,12	82124,91	302,42	127,1846	63084,711	320091,645	63084,711
2B19	2750	0	7222,01	4176,83	82083,64	302,42	127,1846	67725,482	356720,060	67725,482
		1375	21785,2	6540,1	82083,64	302,42	127,1846	85288,906	374235,423	85288,906
		2750	37393,4	9723,69	82083,64	302,42	127,1846	105229,603	394334,180	105229,603
2B2	4775	0	-7368,3	-78,85	-18626,41	302,42	127,1846	-24291,698	-86050,419	-86050,419
		2387,5	1069,13	-78,85	-18626,41	302,42	127,1846	32150,989	-77191,128	-77191,128
		4775	9206,56	-78,85	-18626,41	302,42	127,1846	42810,290	-68331,827	-68331,827
2B20	2150	125	-51716	-6538,84	-4516,64	302,42	127,1846	-41859,099	-48427,512	-48427,512
		1200	4937,63	1331,25	-4516,64	302,42	127,1846	77951,526	-10335,085	-10335,085
		2275	25406,2	5429,97	-4516,64	302,42	127,1846	103694,681	13408,070	13408,070
2B21	2150	225	-12921	-5088,75	5437,64	302,42	127,1846	-53406,590	3926,153	3926,153
		1300	-1841,6	-950,04	5437,64	302,42	127,1846	68383,359	19904,724	19904,724
		2375	15462,6	6721,82	5437,64	302,42	127,1846	94610,375	46131,740	46131,740
2B22	4050	225	-24825	-10437,03	-2847,96	302,42	127,1846	-813,463	-38242,859	-38242,859
		2250	1557,81	872,27	-2847,96	302,42	127,1846	39929,129	872,802	872,802
		4275	27940,5	11283,58	-2847,96	302,42	127,1846	79044,810	39963,484	39963,484

2017	4500	0	-56977	-13713.06	-158.28	108.1772	74.27159	34277.211	-4730.7491	-4857.311
		2050	774.39	-238.05	-102.28	104.1772	74.27159	1422.509	-1750.938	-3422.99
		4000	25414.6	11338.95	-153.25	105.1772	74.27159	45492.999	38202.882	28228.362
2018	4500	0	-58806	-14793.77	-208.55	108.1772	74.27159	35780.012	-6241.6894	-52676.889
		2050	2992.4	-2.1173	-203.6	108.1772	74.27159	7303.748	-1566.107	-1566.107
		4500	26896.4	16156.72	-238.85	108.1772	74.27159	47283.545	41545.9071	41343.907
2019	4500	0	-52874	-14473.32	-75.86	108.1772	74.27159	42869.735	-49737.715	-42869.72
		2050	-6472.9	-8793.32	70.36	106.1772	74.27159	-1369.915	-9151.475	-3689.925
		4500	19708.1	9116.78	78.86	108.1772	74.27159	37089.875	30331.316	36829.326
2020	2100	550	3381.73	-238.79	-233.1571	108.1772	74.27159	1618.296	-148121.543	1618.296
		1500	-7677.7	-3381.59	325.4707	108.1772	74.27159	4315.786	-146739.537	4315.786
		2500	-4604.9	-3381.59	-325.4707	108.1772	74.27159	-6513.276	-143927.763	-6513.276
2021	4500	0	-53534	-15354.87	-104.11	108.1772	74.27159	46006.345	-13389.937	-46006.345
		2050	9136.5	-9459.07	-104.11	108.1772	74.27159	6639.243	-12659.172	-6639.243
		4500	17089.5	-3415.13	-104.11	108.1772	74.27159	30300.592	-26330.835	36120.529
2022	4500	0	-52097	-15285.37	-125.74	108.1772	74.27159	46351.593	-35429.933	-46351.593
		2050	9136.5	-9459.07	-104.11	108.1772	74.27159	6639.243	-12659.172	-6639.243
		4500	17089.5	-3415.13	-104.11	108.1772	74.27159	30300.592	-26330.835	36120.529
2023	4500	0	-52947	-14567.36	-74.23	108.1772	74.27159	43550.211	-49719.847	-43550.211
		2050	-6741.9	-5833.56	-74.23	108.1772	74.27159	-2250.411	-9130.147	-3239.411
		4500	14499.1	9244.94	-74.23	108.1772	74.27159	36720.332	-30339.854	36720.332
2024	4500	0	-52938	-14627.83	-200.38	108.1772	74.27159	33653.410	-36033.601	-33653.410
		2050	261.7	-267.47	-200.38	108.1772	74.27159	7127.368	-716.141	-1376.14
		4500	26482.7	12132.43	-200.38	108.1772	74.27159	47107.208	-41335.951	41335.951
2024	4500	0	-57809	-12268.15	-146.67	108.1772	74.27159	34850.203	-42138.999	-34850.203
		2050	-1008.3	-385.15	-146.67	108.1772	74.27159	3139.593	-2879.179	-3139.593
		4500	25192.7	11489.85	-146.67	108.1772	74.27159	43108.397	-27900.822	27900.822
2025	4500	0	-51957	-9255.88	-177.824	108.1772	74.27159	23160.549	-26215.658	-23160.549
		2050	3094.45	-2639.32	-177.824	108.1772	74.27159	19812.251	-1766.162	-2766.162
		4500	-3295.5	14514.32	-177.824	108.1772	74.27159	-36793.051	-42348.982	-42348.982
2026	5000	0	-52976	-12400.09	-41.37	108.1772	74.27159	36950.017	-43036.338	-36950.017
		2050	2115.6	-903.56	-41.37	108.1772	74.27159	2742.589	-2364.211	-2742.589
		5000	24106.6	10639.94	-41.37	108.1772	74.27159	42493.223	-36338.415	36338.415
2027	2350	150	-20453	-2568.81	-23372.05	108.1772	74.27159	-13534.729	73005.446	-13534.729
		1425	-8383.5	-3072.7	-23372.05	108.1772	74.27159	3534.023	94393.197	3534.023
		2600	15641.7	1003.59	-23372.05	108.1772	74.27159	3041.734	117955.445	3041.734
2028	3450	150	-13667	-146.83	-21717.34	108.1772	74.27159	-2237.535	-155860.345	-2237.535
		1375	7735	-146.03	-21717.34	108.1772	74.27159	11947.555	-91337.263	11947.555
		2600	-13597	-146.01	-21717.34	108.1772	74.27159	-26232.650	-77990.171	-26232.650
2029	2350	250	-7533.7	4580.41	-26789.75	108.1772	74.27159	-1205.422	93684.093	-1205.422
		1425	2612.31	327.4	-26789.75	108.1772	74.27159	15931.131	115813.646	15931.131
		2600	-42266.4	-4666.21	-26789.75	108.1772	74.27159	31264.334	-331276.849	31264.334
2030	2100	250	-9708.6	-5384.34	-38224.85	108.1772	74.27159	1421.511	-153263.805	1421.511
		1300	-7233.8	2384.34	-33954.53	108.1772	74.27159	4029.401	-149768.315	4029.401
		2350	-4779	-2384.34	-33264.93	108.1772	74.27159	-6626.851	-147175.225	-6626.851
2030	2350	150	-16648	-1034.12	-36039.51	108.1772	74.27159	-5742.553	-144614.831	-5742.553
		1325	1956.93	1143.86	-30039.01	108.1772	74.27159	15680.265	-122992.013	15680.265
		2500	20828.1	3199.55	-30039.01	108.1772	74.27159	38336.485	-100683.810	38336.485
2031	2350	150	-13938	-139.82	-39659.83	108.1772	74.27159	-2129.887	-139335.567	-2129.887
		1325	4503.44	2028.47	-29659.82	108.1772	74.27159	19452.941	-117713.739	19452.941
		2500	23434.6	8434.16	-29659.82	108.1772	74.27159	41909.144	-95236.536	41909.144
2032	2350	150	-17271	-252.19	-19443.6	108.1772	74.27159	-5255.155	-14496.771	-5255.155
		1225	4647.43	1746.62	-19443.6	108.1772	74.27159	19674.123	-118697.068	19674.123
		2500	28217.3	6654.43	-19443.6	108.1772	74.27159	49759.941	-21131.615	49229.941
2033	3250	150	-17333	-3599.79	-29666.77	108.1772	74.27159	-3200.258	-146435.095	-3200.258
		1325	5004.52	1733.03	-29666.77	108.1772	74.27159	19699.178	-117325.692	19699.178
		2500	28254.9	6840.24	-29666.77	108.1772	74.27159	49364.931	-27959.935	49254.931
2034	2250	150	-15901	-150.68	-29666.55	108.1772	74.27159	-1993.811	-140402.157	-1993.811
		1325	4633.7	1989.92	-29666.55	108.1772	74.27159	19567.192	-118641.554	19567.192
		2500	28544.9	4375.68	-29666.55	108.1772	74.27159	41954.683	-96453.683	41954.683
2035	2350	150	-3849.2	-1119.43	-30841.74	108.1772	74.27159	-2157.385	-140002.339	-2157.385
		1325	1111.58	1046.93	-30841.74	108.1772	74.27159	14890.934	-127268.820	14890.934
		2500	13026.9	3300.58	-30841.74	108.1772	74.27159	28926.542	-113231.202	28926.542
2036	2350	250	-7522.3	-4364.02	-28443.82	108.1772	74.27159	246.915	-167988.524	246.915
		1425	3883.26	643.3	-28443.82	108.1772	74.27159	17378.479	-124218.087	17378.479
		2600	14377.9	4976.61	-28443.82	108.1772	74.27159	32841.671	-139681.281	32841.671
2037	2350	350	-6829.3	-2557.05	-25101.88	108.1772	74.27159	-2562.779	-95071.599	-2562.779
		1425	297.89	-167.59	-25101.88	108.1772	74.27159	12719.461	-105322.081	12719.461
		2600	6839.06	1942.3	-25101.88	108.1772	74.27159	21844.864	-114667.434	21844.864
2038	2250	125	-16273	-3933.14	-942.13	108.1772	74.27159	-6880.534	-18109.111	-6880.534
		1250	2992.73	1011.07	-942.13	108.1772	74.27159	17889.512	-8166.936	8166.936
		2375	18990.1	2944.95	-942.13	108.1772	74.27159	36112.335	-26233.759	36083.759
2039	2050	125	-13221	-3867.58	-1261.56	108.1772	74.27159	-3707.592	-21859.750	-3707.592
		1250	-6187.5	-1935.5	-1261.56	108.1772	74.27159	-4679.254	-13552.865	-4679.254
		2375	3254.9	1914.31	-1261.56	108.1772	74.27159	18612.402	-321.245	321.245

204	2100	250	-5023,4	-471,59	-30923,21	108,1772	74,27159	3355,483	-130660,263	3355,483
		1300	-2581,6	-471,59	-30923,21	108,1772	74,27159	10932,875	-130662,773	10932,875
		2350	7722	-471,59	-30923,21	108,1772	74,27159	13532,463	-130463,233	13532,463
2040	4250	125	-12763	-4377,19	-38427	108,1772	74,27159	11542,459	-18909,093	-11542,459
		2250	1662,04	474,57	-38427	108,1772	74,27159	9324,011	3857,373	3857,373
		4375	16027,3	5826,91	-38427	108,1772	74,27159	29990,470	24623,934	24623,934
2041	4250	125	-14043	-5241,37	-444,5	108,1772	74,27159	-18269,016	-18382,686	-18269,016
		2250	301,8	110,46	-444,5	108,1772	74,27159	7497,464	1733,794	2383,794
		4375	14093,1	5462,02	-444,5	108,1772	74,27159	20263,934	22130,264	22130,264
2042	4350	125	-14560	-5362,62	-596,15	108,1772	74,27159	-17942,024	-19678,764	-17942,024
		2250	-135,15	13,24	-596,15	108,1772	74,27159	6824,448	1087,708	1087,708
		4375	14290,1	5338,2	-596,15	108,1772	74,27159	27999,003	21534,163	21534,163
2043	4250	125	-12350	-4344,45	-171,7	108,1772	74,27159	-10758,361	-17017,749	-10758,361
		2250	2073,48	307,89	-171,7	108,1772	74,27159	10003,109	3748,721	3748,721
		4375	16300,7	6160,23	-171,7	108,1772	74,27159	30774,575	24515,190	24515,190
2044	4750	125	-16314	-4915,19	-227,57	108,1772	74,27159	-20454,561	-27626,139	-20454,561
		2500	-1987	-702,36	-227,57	108,1772	74,27159	3420,959	-3780,609	3420,959
		4875	14539,3	2502,49	-227,57	108,1772	74,27159	27296,488	30094,900	20094,900
205	4500	0	-20364	-5683,6	1815,97	108,1772	74,27159	-35151,565	-24117,012	-24117,012
		2250	5837,08	2006,4	1815,97	108,1772	74,27159	14238,419	15882,732	14238,419
		4500	32038,1	13861,4	1815,97	108,1772	74,27159	54808,215	35842,528	54808,215
206	4300	0	-26935	-13188,89	-64,61	108,1772	74,27159	-34486,883	-41351,006	-34486,883
		2250	-723,39	-313,68	-64,61	108,1772	74,27159	5492,918	1371,208	5492,918
		4500	26467,4	11561,13	-64,61	108,1772	74,27159	45472,918	39028,593	38638,593
207	4500	0	-25307	-11404,33	293,63	108,1772	74,27159	-31843,056	-27202,361	-31843,056
		2250	999,79	470,68	293,63	108,1772	74,27159	8136,255	3773,450	2777,450
		4500	27200,8	12345,68	293,63	108,1772	74,27159	40118,553	42737,250	42737,250
208	4500	0	-24181	-15017,33	-1218,61	108,1772	74,27159	-43065,034	-46763,957	-43065,034
		2250	-7979,6	-3142,33	-1218,61	108,1772	74,27159	-5083,234	-18798,157	-5083,234
		4500	18221,4	3732,67	-1218,61	108,1772	74,27159	34294,566	23183,643	23183,643
209	4500	0	-19014	-15821,46	-411,33	108,1772	74,27159	-46784,209	-55104,357	-46784,209
		2250	-9012,3	-3746,46	-411,33	108,1772	74,27159	-6804,405	-12124,759	-6804,405
		4500	10183,3	8128,55	-411,33	108,1772	74,27159	33173,401	24851,054	24253,034
3A1	2750	250	-52774	-7903,03	83479,9	678,7647	240,9291	75663,649	386967,919	75663,649
		1625	-24375	-4719,46	83479,9	678,7647	240,9291	108237,159	319541,429	108237,159
		3000	13301,7	-2256,18	83479,9	678,7647	240,9291	138433,394	349737,663	138433,394
3A10	2750	250	-118212	-42064,57	39698,61	678,7647	240,9291	-25979,005	-1556,153	-1556,153
		1625	-96867	-35897,37	39698,61	678,7647	240,9291	187,789	27610,623	187,789
		3000	-68278	-30970,51	39698,61	678,7647	240,9291	24599,888	39028,838	24599,888
3A11	2750	250	-51010	-7216,74	87632,07	678,7647	240,9291	78173,632	305942,216	78173,632
		1625	-23171	-4023,15	87632,07	678,7647	240,9291	110747,141	323313,726	110747,141
		3000	3224,33	-1669,57	87632,07	678,7647	240,9291	140943,388	349711,972	140943,388
3A12	1100	0	-84737,8	38558,64	82337,6	678,7647	240,9291	467234,345	464773,890	464773,890
		550	94933	39314,89	82337,6	678,7647	240,9291	478764,341	476304,486	476304,486
		1100	107645	31583,64	82337,6	678,7647	240,9291	494673,663	492212,307	492212,307
3A13	1100	0	-84519,8	28573,43	82731,65	678,7647	240,9291	467026,187	466220,843	466220,843
		550	-94745,1	29129,67	82731,65	678,7647	240,9291	472556,783	477751,439	477751,439
		1100	107632	31592,42	82731,65	678,7647	240,9291	494470,604	493663,260	493663,260
3A14	4000	0	-32232	-10106,39	-35796,38	678,7647	240,9291	51321,248	-194800,074	51321,248
		2000	210,93	-106,39	-35796,38	678,7647	240,9291	95886,083	-150335,134	95886,083
		4000	32633,6	8893,61	-35796,38	678,7647	240,9291	140451,117	-107670,205	140451,117
3A15	4000	0	-34200	-10437,44	-43103,45	678,7647	240,9291	48904,673	-227956,343	48904,673
		2000	-1729,6	-437,44	-43103,45	678,7647	240,9291	93420,613	-133541,463	93420,613
		4000	30683,2	9562,56	-43103,45	678,7647	240,9291	138034,553	-138776,463	138034,553
3A16	4000	0	-50287	-11333,7	-40556,12	678,7647	240,9291	31179,927	-234932,303	31179,927
		2000	-344,08	-1233,7	-40556,12	678,7647	240,9291	94119,857	-171992,373	94119,857
		4000	49298,7	8766,3	-40556,12	678,7647	240,9291	157059,797	-109052,453	157059,797
3A17	4000	0	-38096	-12152,72	-12716,71	678,7647	240,9291	43015,374	-106170,834	43015,374
		2000	-5653,3	-2152,12	-12716,71	678,7647	240,9291	87580,814	-61605,894	87580,814
		4000	26789,5	7247,38	-12716,71	678,7647	240,9291	132145,754	-17040,954	132145,754
3A18	4000	0	-30145	-11267,03	-40954,24	678,7647	240,9291	31293,674	-236490,660	31293,674
		2000	-202,41	-1267,03	-40954,24	678,7647	240,9291	94233,614	-173550,720	94233,614
		4000	49740,4	8732,97	-40954,24	678,7647	240,9291	157173,554	-110810,780	157173,554
3A19	4000	0	-31443	-10773,26	-43820,47	678,7647	240,9291	31706,823	-228121,673	31706,823
		2000	999,79	-523,26	-43820,47	678,7647	240,9291	96265,752	-183556,743	96265,752
		4000	23442,6	9466,14	-43820,47	678,7647	240,9291	140830,692	-138991,908	140830,692
3A2	2750	250	-117997	-42161,31	33612,78	678,7647	240,9291	-28823,237	-5960,871	-5960,871
		1625	-96556	-35794,12	33612,78	678,7647	240,9291	343,516	23205,882	343,516
		3000	-78033	-31087,56	33612,78	678,7647	240,9291	24755,743	47610,109	24755,743
3A20	4000	0	-32321	-10187,57	-36719,28	678,7647	240,9291	31142,779	-198854,723	31142,779
		2000	122,04	-187,57	-36719,28	678,7647	240,9291	95707,719	-154239,783	95707,719
		4000	32564,8	9812,43	-36719,28	678,7647	240,9291	140272,659	-109734,843	140272,659
3A21	2800	0	-27046,2	9767,04	-32653,69	678,7647	240,9291	186002,434	-99491,565	186002,434
		1300	55505,1	13993,04	-32653,69	678,7647	240,9291	220320,445	-64173,554	220320,445
		2600	95687,9	24267,04	-32653,69	678,7647	240,9291	273910,156	-10583,843	273910,156

3A22	2800	0	27051	9788,06	32865,71	678,7647	240,9291	186002,514	-99273,989	186002,514
		1300	30509,3	13993,06	-32865,71	678,7647	240,9291	230726,525	-65057,546	230726,525
		2600	25672,6	24887,06	-32865,71	678,7647	240,9291	273916,226	-11468,247	273916,226
		250	-41017	-17833,3	98913,2	678,7647	240,9291	187950,669	36446,417	187950,669
3A23	1750	1125	-24239	-8058,93	93913,6	678,7647	240,9291	137032,687	233573,014	197052,687
		2000	-2454,4	-8101,97	93913,2	678,7647	240,9291	304633,605	401303,953	204633,605
		0	33281,5	79635,54	83878,98	678,7647	240,9291	293491,123	-253716,262	293491,123
		275	70800,2	21557,6	-83678,96	678,7647	240,9291	215895,533	253313,853	215895,533
3A24	1750	1750	90591,4	35895,54	-83678,96	678,7647	240,9291	243316,570	-327990,235	243316,570
		0	58394,8	38334,6	-86430,53	678,7647	240,9291	700693,590	-281233,499	700693,590
		875	75913,5	20448,84	-86430,53	678,7647	240,9291	320090,009	-361827,990	320090,009
		1750	95694,7	26754,6	-86430,53	678,7647	240,9291	547511,038	-334404,961	547511,038
3A26	1750	250	-52653	-2491,56	101376,9	678,7647	240,9291	154714,095	361175,302	154714,095
		1125	-35935	-7028,73	101376,9	678,7647	240,9291	173116,652	328681,309	173116,652
		2000	-20090	-6071,89	101376,9	678,7647	240,9291	191447,620	398112,825	191447,620
		0	16661,3	5832,78	95057,82	678,7647	240,9291	307400,986	428861,334	307400,986
3A27	1350	675	28279,3	6402,31	99057,82	678,7647	240,9291	320312,957	452773,302	320312,957
		1350	42592,1	3110,9	99057,82	678,7647	240,9291	336925,938	469186,424	336925,938
		0	7591,86	7266,12	81514,35	678,7647	240,9291	134280,419	353525,179	134280,419
		1375	38148,1	11782,89	81514,35	678,7647	240,9291	191025,513	364973,219	191025,513
3A28	2750	2750	21328	18329,77	81514,35	678,7647	240,9291	223725,704	436772,704	223725,704
		0	70074,9	50623,16	77813,61	678,7647	240,9291	851343,968	375837,221	251343,968
		1375	94591,8	35349,12	37610,61	678,7647	240,9291	270756,186	293248,437	370756,186
		2750	116003	41716,91	37610,61	678,7647	240,9291	304932,948	324416,201	304932,948
3A3	2750	275	-127942	-45231,55	42523,22	678,7647	240,9291	-42327,187	-13340,952	-3240,982
		1625	-106538	-30264,76	42523,22	678,7647	240,9291	-13560,433	23923,731	-13560,433
		3000	-82014	-34137,6	42523,22	678,7647	240,9291	11051,783	50331,992	11051,783
		0	90134,3	34253,51	43382,55	678,7647	240,9291	270338,525	315433,525	270338,525
3A30	2750	1375	188648	39580,02	43382,55	678,7647	240,9291	204950,752	337846,152	204950,752
		2750	130059	43940,27	43382,55	678,7647	240,9291	324117,505	367012,505	324117,505
		0	117180	32027,74	42042,12	678,7647	240,9291	359079,437	323345,031	295979,437
		1375	127703	36754,31	42042,12	678,7647	240,9291	320391,674	357531,269	320391,674
3A31	2750	2750	127114	43121,09	42042,12	678,7647	240,9291	349538,417	328224,011	349538,417
		0	82735,6	13250,43	30553,55	678,7647	240,9291	227486,110	216499,710	216499,710
		1375	34276,7	22947	30553,55	678,7647	240,9291	231898,337	240611,937	240911,937
		2750	107689	29314,13	30553,55	678,7647	240,9291	281065,090	270073,690	270073,690
3A33	2775	0	80205,6	33270,27	13214	678,7647	240,9291	256153,859	173596,408	173596,408
		13875	28971,7	37083,16	13214	678,7647	240,9291	280913,667	198256,214	198256,214
		2775	120377	43392,71	13214	678,7647	240,9291	210013,695	227456,240	227456,240
		0	66737,6	18231,46	30756,52	678,7647	240,9291	257499,833	217363,908	217363,908
3A34	2750	1375	84280,2	22978,03	30756,52	678,7647	240,9291	251912,060	241778,135	241778,135
		2750	105671	29345,21	30756,52	678,7647	240,9291	281078,813	270944,888	270944,888
		0	117952	32061,1	42466,83	678,7647	240,9291	296778,655	355828,031	296778,655
		1375	136431	36787,66	42466,83	678,7647	240,9291	321190,882	360244,258	321190,882
3A35	2750	2750	157642	43154,85	42466,83	678,7647	240,9291	350337,635	389407,911	350337,635
		0	85934,3	31957,99	44096,12	678,7647	240,9291	286248,214	313140,609	286248,214
		1375	116439	39684,53	44096,12	678,7647	240,9291	303293,243	349183,638	303293,243
		2750	149991	46051,74	44096,12	678,7647	240,9291	345092,209	390983,203	345092,209
3A37	2750	0	76811	30712,18	38796,09	678,7647	240,9291	252210,670	275842,938	252210,670
		1375	95334,2	35438,74	38796,09	678,7647	240,9291	276622,886	300255,155	276622,886
		2750	167645	41805,93	38796,09	678,7647	240,9291	305789,650	329421,918	305789,650
		0	4283,78	6418,75	34081,37	678,7647	240,9291	151134,006	363014,451	151184,006
3A38	2750	1375	35442,2	11143,12	84031,27	678,7647	240,9291	122239,946	402059,490	183229,946
		2750	68822,1	17512,9	84031,27	678,7647	240,9291	230038,601	443539,045	230038,601
		0	4269,07	4724,56	101431,7	678,7647	240,9291	148754,621	435406,494	148754,621
		1375	30664,1	7087,84	101431,7	678,7647	240,9291	178950,563	465632,740	178950,563
3A39	2750	2750	58502,9	10271,43	101431,7	678,7647	240,9291	211524,377	498226,350	211524,377
		250	-151349	-40221,97	42393,86	678,7647	240,9291	-81833,829	-23099,727	-33099,727
		1625	-117907	-33854,79	42393,86	678,7647	240,9291	-20039,074	18703,829	-20039,074
		3000	-87313	-29128,22	42393,86	678,7647	240,9291	17005,966	55742,368	17005,966
3A40	1100	150	2593,11	4388,33	104259,4	678,7647	240,9291	355393,589	445004,585	355393,589
		700	13883,9	3866,51	104259,4	678,7647	240,9291	369016,184	458627,180	369016,184
		1250	24048,7	6588,38	104259,4	678,7647	240,9291	330447,156	470058,152	330447,156
		250	-9994,2	361,97	-2962,25	678,7647	240,9291	85067,799	-32555,292	85067,799
3A41	4025	2262,5	4941,37	361,97	-2962,25	678,7647	240,9291	100750,147	-6872,943	100750,147
		4275	19876,9	361,97	-2962,25	678,7647	240,9291	116432,485	3809,295	3809,295
		225	-20749	-538,3	2834,74	678,7647	240,9291	72808,944	-10466,739	72808,944
		2327,5	-5813,5	-538,3	2834,74	678,7647	240,9291	98491,292	5215,550	5215,550
3A43	1750	4250	9123,1	-538,3	2834,74	678,7647	240,9291	104173,630	20897,898	20897,898
		0	33613,6	11722,9	36015,89	678,7647	240,9291	266521,098	-408370,063	266521,098
		575	-49446	12678,93	36015,89	678,7647	240,9291	284152,047	426501,012	284152,047
		1750	66861,1	15551,02	36015,89	678,7647	240,9291	307325,946	449678,912	307325,946
3A44	1750	0	35076,1	12388,58	90330,21	678,7647	240,9291	268753,608	479232,717	268753,608
		875	50910,5	13343,61	90330,21	678,7647	240,9291	266384,557	446853,666	266384,557
		1750	70113,8	16214,7	90330,21	678,7647	240,9291	309562,446	470031,555	309562,446

3A5	3750	250	-47461	11528,05	81287,89	678,7647	240,9291	77772,307	279430,972	77373,227
		1625	-14019	-5160,57	81287,87	678,7647	240,9291	119173,782	321270,527	119172,782
		3000	16935,7	-434,3	81287,87	678,7647	240,9291	158217,822	558315,366	158217,822
		0	69505,9	27021,71	-11778	678,7647	240,9291	239410,244	518947,991	518947,991
3A6	3775	1387,5	86273,8	31854,6	-11778	678,7647	240,9291	264170,072	76654,596	76654,596
		2775	109633	30145,15	-11778	678,7647	240,9291	295270,678	105754,625	105754,625
		250	-47033	-11533,79	81688,3	678,7647	240,9291	77186,663	280969,734	77186,663
		1625	-14191	-5166,6	81688,9	678,7647	240,9291	118986,329	322768,299	118986,329
3A8	3750	3000	16963,8	-440,04	81688,9	678,7647	240,9291	156031,253	559813,338	156031,253
		0	-131820	-40161,67	42775,39	678,7647	240,9291	-67369,234	-21923,956	-21923,956
		1625	-112278	-32794,48	42775,39	678,7647	240,9291	-20469,667	19875,660	-20469,667
		3000	-57823	-29067,32	42775,39	678,7647	240,9291	16375,361	-6920,625	16375,361
3A9	3750	3500	-130126	-45139,92	43307,41	678,7647	240,9291	-44712,016	-15552,207	-44712,016
		1625	-103710	-38772,73	43307,41	678,7647	240,9291	-15545,265	56614,500	-15545,265
		3000	-90187	-34046,17	43307,41	678,7647	240,9291	8866,964	51036,777	8866,964
		0	33732	-11334,1	4331,65	185,9637	127,1396	-31661,731	-29227,170	-29227,170
3B1	3275	1362,5	20486	-7191,36	4331,65	185,9637	127,1396	-13345,321	-10910,760	-10910,760
		3500	-8300,4	-3877,91	4331,65	185,9637	127,1396	3404,112	-4329,677	3404,112
		0	33737,4	8397,31	21769,37	185,9637	127,1396	112589,600	135671,550	112589,600
		375	32345,8	8397,31	21769,37	185,9637	127,1396	117706,416	140508,375	117706,425
3B10	750	750	42950,4	8397,31	21769,37	185,9637	127,1396	122543,230	145345,200	122543,230
		225	-31892	-6393,09	-2200,82	185,9637	127,1396	-34940,745	-69900,552	-34940,745
		1862,5	-14317	-2160,35	-2200,82	185,9637	127,1396	-1579,509	-36339,622	-1579,509
		3500	11702	1153,1	-2200,82	185,9637	127,1396	29214,171	4254,359	4254,359
3B12	3275	225	-46764	-8500,07	-1887,14	185,9637	127,1396	-35948,356	-59590,755	-35948,356
		1862,5	-15125	-2307,33	-1887,14	185,9637	127,1396	-2587,473	-26229,830	-2587,473
		3500	10889,3	1006,12	-1887,14	185,9637	127,1396	28206,507	4564,151	4564,151
		0	32833,9	8239,97	22200,99	185,9637	127,1396	111747,297	136385,311	111747,297
3B13	750	375	37430,4	8239,97	22200,99	185,9637	127,1396	116584,123	141200,136	116584,122
		750	40038,9	8239,97	22200,99	185,9637	127,1396	121420,947	149036,961	121420,947
		250	-34994	-6265,86	-727,37	185,9637	127,1396	-30335,168	-48377,975	-30335,168
		2262,5	-427,81	-6702,11	-727,37	185,9637	127,1396	11633,147	-4209,680	11633,147
3B14	4025	4275	34000,1	4842,73	-727,37	185,9637	127,1396	93572,782	37729,976	37729,976
		225	-35543	5459,74	348,16	185,9637	127,1396	-30342,838	-41189,493	-30342,838
		2250	-878,21	101,93	348,16	185,9637	127,1396	11893,874	647,231	647,231
		4275	33385,3	5663,7	348,16	185,9637	127,1396	54130,596	42883,953	42883,953
3B16	4050	225	-34553	-5811,93	-1440,74	185,9637	127,1396	-29718,751	-48478,772	-29718,750
		2250	68,37	-250,31	-1440,74	185,9637	127,1396	12517,962	-6243,061	12517,962
		4275	34782,1	5311,51	-1440,74	185,9637	127,1396	54754,685	33994,662	33994,662
		0	34900	-5149,66	1220,38	185,9637	127,1396	-29342,385	-36925,965	-29342,385
3B17	4050	2250	-228,42	412,06	1220,38	185,9637	127,1396	12693,337	5310,858	5310,858
		4275	34407,3	5973,78	1220,38	185,9637	127,1396	55130,049	40547,570	40547,570
		225	-35309	-4708,4	1715,62	185,9637	127,1396	-30705,477	-54812,204	-30705,477
		2005	1326,16	238,32	1715,62	185,9637	127,1396	12944,595	5237,209	5237,209
3B18	4550	4775	37900,9	5165,04	1715,62	185,9637	127,1396	56594,547	52433,820	52433,820
		225	-36541	-4967,8	1873,91	185,9637	127,1396	-32271,646	-83712,358	-32271,646
		2500	93,93	-31,09	1873,91	185,9637	127,1396	11578,366	7936,457	7936,457
		4775	36728,7	4905,63	1873,91	185,9637	127,1396	59028,378	51586,469	51586,469
3B2	3275	225	-33011	-11258,05	3943,06	185,9637	127,1396	-30766,606	-29922,123	-29922,123
		1862,5	-19760	-7063,31	3943,06	185,9637	127,1396	-12450,207	-11605,724	-11605,724
		3500	-8074	-3751,85	3943,06	185,9637	127,1396	8299,247	4145,731	3299,247
		125	13041	-5341,73	-8042,36	185,9637	127,1396	-615,460	-5833,422	-615,460
3B20	2150	1200	3662,23	2320,5	-3042,36	185,9637	127,1396	38476,957	32591,006	38476,957
		3275	29860,2	8424,04	-8042,36	185,9637	127,1396	61220,111	3502,149	3502,149
		225	-25413	-4890,71	9551,87	185,9637	127,1396	-7876,562	8399,342	-7876,562
		1300	-4927,4	-754,02	9551,87	185,9637	127,1396	17974,570	54152,574	17974,570
3B21	2150	2575	21733,1	6914,9	9551,87	185,9637	127,1396	54028,145	70255,957	54028,148
		225	-41072	-9841,39	-714,6	185,9637	127,1396	-40750,144	-58460,380	-40750,144
		2250	3029,39	1028,92	-714,6	185,9637	127,1396	16970,204	1259,969	1259,969
		4275	47130,9	11899,28	-714,6	185,9637	127,1396	74690,562	58980,327	58980,327
3B23	4050	225	-35826	-5687,7	-637,27	185,9637	127,1396	-30670,575	-46056,024	-30670,575
		2250	-873,39	-125,98	-637,27	185,9637	127,1396	11659,577	-3725,873	11659,577
		4275	33879,3	5425,74	-637,27	185,9637	127,1396	53989,728	38604,279	38604,279
		225	-35839	-5689,37	-678,32	185,9637	127,1396	30917,146	-47315,006	-30917,146
3B24	4050	2250	-1195,5	-127,63	-678,32	185,9637	127,1396	11319,566	-5078,294	11319,566
		4275	33468,2	5424,07	-678,32	185,9637	127,1396	53556,278	37158,419	37158,419
3B25	2025	0	2714,32	-916,51	-757,57	185,9637	127,1396	27305,531	-1294,094	27305,531
		1012,5	27830,9	6251,57	-757,57	185,9637	127,1396	61264,372	22604,747	32604,747
		2025	46813,8	9953,79	-757,57	185,9637	127,1396	85025,890	56426,265	56426,265
		250	-39496	-12053,38	-1048,06	185,9637	127,1396	-28393,087	-58530,486	-28393,086
3B26	2000	1350	-29331	-8303,12	-1048,06	185,9637	127,1396	-13780,608	-42912,014	-13780,608
		2250	-12256	-1212,78	-1048,06	185,9637	127,1396	10543,524	-19593,882	10542,524
		250	-401443	-12338,06	-1289,62	185,9637	127,1396	-29683,079	-60835,037	-29682,079
		1250	-30276	-8586,59	-1289,62	185,9637	127,1396	-15070,617	-46222,575	-15070,617
3B27	2000	2250	-14201	-1496,25	-1289,62	185,9637	127,1396	9253,515	21898,443	9253,515

3B23	2025	0	1747,75	-1303,09	-997,42	185,9637	127,1396	25929,724	-5617,271	25929,724
		1012,5	24264,3	7964,99	-997,42	185,9637	127,1396	29028,564	32281,570	32281,570
		2025	45249,2	9667,22	-997,42	185,9637	127,1396	37710,082	54163,028	54163,028
3B24	4050	225	-37756	-6117,34	-1223,22	185,9637	127,1396	-33391,744	-51253,984	-51253,984
		2250	-7124,3	-555,62	-1223,22	185,9637	127,1396	-33391,744	-51253,984	-51253,984
		4275	31539,4	5006,1	-1332,23	185,9637	127,1396	33444,978	-3997,261	33444,978
3B3	4775	0	-22033	-7344,3	-13969,89	185,9637	127,1396	-19964,384	-13141,119	-19964,384
		2337,5	-1951,9	-702,64	-13969,89	185,9637	127,1396	-7992,138	-103460,690	-7992,138
		4775	12753	6745,49	-13969,89	185,9637	127,1396	34606,904	-72341,924	33606,904
3B30	4050	225	-33480	-5870,08	522,91	185,9637	127,1396	58705,489	-42081,163	-30705,489
		2250	-216,09	-307,36	322,91	185,9637	127,1396	11520,343	175,550	175,550
		4275	23247,6	5253,36	322,91	185,9637	127,1396	32764,953	42412,260	42412,260
3B31	4050	225	-43073	-10235,34	-1037,33	185,9637	127,1396	-43268,234	-60336,836	-43268,234
		2250	1023,61	611,97	-1037,33	185,9637	127,1396	14431,524	-2636,277	14431,524
		4275	45130,1	11422,27	-1037,33	185,9637	127,1396	72151,003	55084,082	55084,082
3B32	4050	225	-50622	-12627,85	298,16	185,9637	127,1396	53163,333	-64811,293	-37162,737
		2250	-389,29	81,25	298,16	185,9637	127,1396	11009,885	1361,436	1361,436
		4275	49269,7	12748,56	298,16	185,9637	127,1396	77061,482	67413,024	67413,024
3B4	4050	0	-18814	-5629,77	8264,71	185,9637	127,1396	-14930,389	3932,493	-14930,389
		2337,5	14855,5	5433,26	8264,71	185,9637	127,1396	32103,614	56036,108	32103,614
		4775	49227,7	20337,62	8264,71	185,9637	127,1396	24473,696	108406,363	84473,676
3B5	4775	0	-31523	-7233,24	24035,13	185,9637	127,1396	-15849,725	131799,131	-15849,725
		2337,5	-13573	-692,32	24035,13	185,9637	127,1396	8106,777	-103842,859	2106,777
		4775	19351,3	6739,25	24035,13	185,9637	127,1396	39721,554	-73227,822	39721,554
3B6	4050	225	-33480	-5870,08	721,39	185,9637	127,1396	-37643,496	67527,574	-27643,496
		2250	1149,87	594,15	721,39	185,9637	127,1396	14588,228	4909,149	4909,149
		4275	33852,4	6155,87	721,39	185,9637	127,1396	56824,932	47145,861	47145,861
3B7	4050	225	-23722	-5630,39	-1755,07	185,9637	127,1396	-23611,294	-49691,503	-23611,294
		2250	941,62	-68,66	-1755,07	185,9637	127,1396	13625,418	-6434,751	13625,418
		4275	35406,7	5493,06	-1755,07	185,9637	127,1396	35863,141	35781,922	35781,922
3B8	4050	225	-34619	-5275,61	-32,67	185,9637	127,1396	-29176,843	-42020,914	-29176,843
		2250	464,4	388,11	-32,67	185,9637	127,1396	13039,622	213,749	213,749
		4275	34109,2	5949,83	-32,67	185,9637	127,1396	55296,500	42450,461	42450,461
3B9	4025	250	-34180	-6063,17	-1143,97	185,9637	127,1396	-39445,783	-57033,310	-39445,783
		2262,5	-406,2	-468,42	-1143,97	185,9637	127,1396	12722,522	-4876,005	12722,522
		4275	34333,9	5646,42	-1143,97	185,9637	127,1396	34662,168	37069,641	37069,641
3CX1	4500	0	-20308	-9670,93	2536	141,633	74,27159	-18380,314	-20537,170	-18380,314
		2250	5892,52	2204,08	2536	141,633	74,27159	21599,496	19152,641	19152,641
		4500	32093,7	14079,03	2536	141,633	74,27159	61579,296	52137,441	59132,441
3CX10	4500	0	-62550	-9692,56	2692,15	141,633	74,27159	-18657,793	-30442,224	-18657,793
		2250	5630,89	2181,44	2692,15	141,633	74,27159	21322,002	15530,977	19320,977
		4500	31851,9	14056,44	2692,15	141,633	74,27159	61301,202	59810,777	59510,777
3CX11	5000	0	-21364	-12190,3	144,21	141,633	74,27159	-39744,153	-49626,722	-39744,153
		2500	-1124,4	-427,8	144,21	141,633	74,27159	9943,472	-1234,097	9943,472
		5000	25111,6	10934,7	144,21	141,633	74,27159	49641,097	33458,529	39458,529
3CX12	4500	0	-18223	-9058,64	-2220,7	141,633	74,27159	-16251,418	-23676,414	-16251,418
		2250	7307,78	2816,36	-2220,7	141,633	74,27159	23728,382	1303,386	1303,386
		4500	38908,8	14691,36	-2220,7	141,633	74,27159	63708,182	41283,186	41283,186
3CX13	4500	0	-34949	-11438,12	206,46	141,633	74,27159	-25129,840	-37360,764	-25129,840
		2250	1341,6	416,83	206,46	141,633	74,27159	14944,460	2713,536	2713,536
		4500	27632,6	12291,63	206,46	141,633	74,27159	39012,780	42787,836	42787,836
3CX14	4500	0	-24112	-11635,81	72,63	141,633	74,27159	-34429,836	-37219,896	-34429,836
		2250	2086,77	242,19	72,63	141,633	74,27159	12775,914	2279,904	2759,904
		4500	28239,2	12124,19	72,63	141,633	74,27159	55522,714	42739,704	42739,704
3CX15	2250	0	-2107,6	-2706,77	1558,65	141,633	74,27159	20091,023	441,242	441,242
		1125	24717,9	6004,17	1558,65	141,633	74,27159	58454,355	32804,504	58304,504
		2250	42780,9	2766,23	1558,65	141,633	74,27159	50742,629	61092,917	61092,917
3CX16	2250	0	-61396	-14285,51	1849,13	141,633	74,27159	-33269,842	-51699,607	-33269,842
		1125	-43333	-11121,44	1849,13	141,633	74,27159	-30951,415	-49411,124	-30951,415
		2250	-15908	-2410,51	1849,13	141,633	74,27159	7381,833	-11047,932	7381,833
3CX17	4500	0	-31405	-12701,97	251	141,633	74,27159	-34264,746	-46306,602	-34264,746
		2250	-5204,5	-1826,97	251	141,633	74,27159	5715,054	6328,802	5715,054
		4500	20996,5	10042,02	251	141,633	74,27159	45694,854	33650,999	33650,999
3CX18	4500	0	-31291	-13679,89	246,38	141,633	74,27159	-34121,400	-46183,030	-34121,400
		2250	-5090	-1804,88	246,38	141,633	74,27159	5853,411	-6205,269	5853,411
		4500	21111	10070,12	246,38	141,633	74,27159	45858,211	33774,531	33774,531
3CX19	2250	0	-81493	-14339,64	1862,9	141,633	74,27159	-52432,980	-71804,913	-52432,980
		1125	-43439	-11175,58	1862,9	141,633	74,27159	-31144,567	-49516,499	-31144,567
		2250	-15609	-2464,64	1862,9	141,633	74,27159	7218,695	-11153,237	7218,695
3CX2	4500	0	-27331	-12246,97	-280,4	141,633	74,27159	-38438,926	-42754,664	-38438,926
		2250	-1120,1	-371,97	-280,4	141,633	74,27159	11520,872	-2754,864	11520,872
		4500	23070,9	11503,05	-280,4	141,633	74,27159	51500,672	37224,936	37224,936
3CX20	2250	0	-3187,4	-2757,8	1576,7	141,633	74,27159	19973,672	354,501	354,501
		1125	24638,1	5933,14	1576,7	141,633	74,27159	58316,934	38717,763	38717,763
		2250	42701,1	9117,2	1576,7	141,633	74,27159	80605,347	61006,176	61006,176

30Y01	4500	0	-23061	-11816,37	38,11	141,633	74,27159	-25477,213	-39771,208	35477,715
		3250	1138,12	198,12	58,11	141,633	74,27159	14302,388	1648,995	1648,995
		4500	4734,5	1207,13	58,11	141,633	74,27159	54450,908	41633,593	41633,593
30Y02	4500	0	-27181	-11816,37	-21,753	141,633	74,27159	-28773,603	-42393,589	-28773,603
		3250	-949,77	-475	-21,753	141,633	74,27159	11605,997	2410,485	11605,997
		4500	3221,5	11946	21,753	141,633	74,27159	31506,797	37569,032	37569,032
30Y03	4500	0	-12739	-9174,67	-1194,38	141,633	74,27159	-16864,827	-35316,793	-16864,827
		3250	9961,96	1749,4	-3394,56	141,633	74,27159	23294,964	500,616	500,616
		4500	33173	14634,4	-2394,56	141,633	74,27159	63274,724	40341,416	40341,416
30Y04	5000	0	-20151	-12236,75	74,21	141,633	74,27159	-30683,586	-42041,384	-30683,586
		3250	1320,6	768,75	54,21	141,633	74,27159	9009,069	2048,954	2048,954
		5000	24339,4	10796,25	54,21	141,633	74,27159	40701,716	37145,666	37145,666
30Y05	4500	0	-23402	-11421,54	293,83	141,633	74,27159	-23417,829	-34531,359	-23417,829
		3250	5799,04	403,86	264,23	141,633	74,27159	17963,761	5123,994	5123,994
		4500	30000	17328,06	264,23	141,633	74,27159	37542,561	45703,794	45703,794
30Y06	4500	0	-37856	-14816,02	1533,91	141,633	74,27159	-41354,565	-60911,564	-41354,565
		3250	-10844	-2933,02	-1533,91	141,633	74,27159	1174,766	-30932,044	1174,766
		4500	15332,4	5994,92	-1533,91	141,633	74,27159	36803,034	19643,756	19643,756
30Y07	4500	0	-31145	-14163,72	483,18	141,633	74,27159	-34492,726	-45548,402	-34492,726
		3250	4946,4	3301,93	383,18	141,633	74,27159	3491,000	-3566,690	3491,000
		4500	10314,6	9561,03	483,18	141,633	74,27159	45488,026	34413,126	34413,126
30Y08	4500	0	-30940	-14141,23	451,53	141,633	74,27159	-34339,535	-45436,965	-34339,535
		3250	4169,2	-2362,22	402,12	141,633	74,27159	3740,076	-3457,165	3740,076
		4500	21461,8	9686,75	402,12	141,633	74,27159	45700,027	34502,633	34502,633
30Y09	4500	0	-37812	-14870,21	-1495,29	141,633	74,27159	-41593,181	-60930,592	-41593,181
		3250	7101,5	-2993,21	-1495,29	141,633	74,27159	1613,513	-20946,793	1613,513
		4500	15186,1	2579,79	-1495,29	141,633	74,27159	48367,282	19389,009	19389,009
30Y10	4500	0	-23097	-11455,13	525,86	141,633	74,27159	-25971,613	-34701,062	-25971,613
		3250	2304,06	419,80	324,86	141,633	74,27159	17008,182	5272,739	5272,739
		4500	29061,1	12094,83	525,86	141,633	74,27159	36937,932	45238,559	45238,559
30Y11	4500	0	-27359	-12235,13	-257,19	141,633	74,27159	-32403,207	-42706,461	-32403,207
		3250	14037,9	-410,13	-257,19	141,633	74,27159	11577,573	3726,661	11577,573
		4500	23133,1	11464,82	-257,19	141,633	74,27159	31527,383	37263,139	37263,139
30Y12	4500	130	-13730	-3075,23	540,58	108,1772	74,27159	-12685,326	-20019,435	-12685,326
		3250	102,26	-25,23	-540,58	108,1772	74,27159	7144,554	-3189,535	7144,554
		4500	13767,9	5024,77	-540,58	108,1772	74,27159	26974,474	17640,326	17640,326
30Y13	2350	350	-3188,7	-3430,5	27272,34	108,1772	74,27159	6736,540	111177,192	6736,540
		1425	3906,43	34,69	20872,64	108,1772	74,27159	16736,546	131197,195	16736,546
		2600	10481,6	2202,52	27272,34	108,1772	74,27159	35943,161	150383,212	35943,161
30Y14	2350	130	-3510,3	-1309	-33043,32	108,1772	74,27159	7774,202	-112030,173	7774,202
		1325	3270,91	858,92	33043,32	108,1772	74,27159	16980,823	-142845,360	16980,823
		2600	10358,1	3314,67	-33043,32	108,1772	74,27159	26960,823	-132325,557	26960,823
30Y15	2350	150	-3937,7	-2372,63	-1813,2	108,1772	74,27159	2919,805	-17319,981	2919,805
		1325	3245,58	-146,37	-1813,2	108,1772	74,27159	12104,864	-2133,312	12104,864
		2600	6759,61	2307,63	-1813,2	108,1772	74,27159	22132,933	1823,112	1823,112
30Y16	2350	0	-2956,6	117,43	840,5	108,1772	74,27159	8763,410	549,035	549,035
		1262,5	173,3	117,43	840,5	108,1772	74,27159	11891,573	3672,197	3672,197
		2535	3992,2	117,43	240,5	108,1772	74,27159	15014,744	6795,369	6795,369
30Y17	2350	150	-6993,2	-2367,31	-1817,37	108,1772	74,27159	2953,590	-17300,100	2953,590
		1325	-322,03	-140,9	-1817,37	108,1772	74,27159	12138,359	-8121,131	12138,359
		2500	6765,14	2312,61	-1817,37	108,1772	74,27159	22156,493	1897,063	1897,063
30Y18	2350	150	-3914,3	-1302,3	31361,83	108,1772	74,27159	6196,974	-33027,782	6196,974
		1325	3686,25	807,38	-31361,83	108,1772	74,27159	17323,371	-43502,382	17323,371
		2600	10734	3191,24	31361,83	108,1772	74,27159	22273,947	-133951,713	22273,947
30Y19	2350	250	-8238,1	-2327,31	38343,69	108,1772	74,27159	1492,334	168737,236	1492,334
		1425	2629,14	124,6	28343,69	108,1772	74,27159	1551,563	122774,925	1551,563
		2600	12539,5	2297	38343,69	108,1772	74,27159	46242,397	135303,404	46242,397
30Y20	2350	230	-3521,3	-3153,75	26215,94	108,1772	74,27159	2904,680	100337,183	2904,680
		1425	5884,39	1172,06	26215,94	108,1772	74,27159	30034,233	117516,746	30034,233
		2600	16278,9	5504,87	26215,94	108,1772	74,27159	35497,436	133939,949	35497,436
30Y21	2350	250	-3571,4	-2335,73	30951,45	108,1772	74,27159	3662,590	120434,045	3662,590
		1425	515,21	-145,69	30951,45	108,1772	74,27159	13013,062	130384,716	13013,062
		2600	7096,95	1964	30951,45	108,1772	74,27159	22132,475	139510,136	22132,475
30Y22	2250	125	-12603	-1097,77	1809,08	108,1772	74,27159	-3250,496	-3677,883	-3250,496
		1250	6462,92	1930,45	1809,08	108,1772	74,27159	22019,561	13592,175	13592,175
		2375	22560,3	3684,32	1809,08	108,1772	74,27159	40742,363	34314,977	34314,977
30Y23	4500	150	-14048	-5126,21	-317,87	108,1772	74,27159	-12071,106	-21469,833	-12071,106
		2250	-210,54	-79,81	-317,87	108,1772	74,27159	6758,763	1629,944	6758,763
		4500	13625,1	4970,15	-317,87	108,1772	74,27159	26583,643	18189,917	18189,917
30Y24	2250	125	-17033	-4932,33	-2479,37	108,1772	74,27159	-3679,586	-33475,463	-3679,586
		1250	-10931	-2993,36	-2479,37	108,1772	74,27159	-1492,722	-25091,592	-1492,722
		2375	1556,3	249,86	-2479,37	108,1772	74,27159	12441,403	-11157,462	12441,403
30Y25	4250	125	-11531	-4599,84	626,11	108,1772	74,27159	-9514,371	-14265,239	-9514,371
		2250	2894,47	792,7	626,11	108,1772	74,27159	10252,099	6501,191	6501,191
		4375	17319,7	6145,04	626,11	108,1772	74,27159	31618,585	27267,660	27267,660

3CV22	4200	120	-13320	-1997,66	734,42	108,1772	74,27159	-15405,962	19,773,969	-15405,962
		2250	954,75	-640,32	734,42	108,1772	74,27159	5300,497	1439,491	1439,491
		4500	13470,5	4307,07	734,42	108,1772	74,27159	24068,966	22204,560	20254,960
3CV23	4575	0	-5010	54,34	55,2	108,1772	74,27159	225,179	-5725,029	525,179
		2137,5	-464,3	-54,38	55,3	108,1772	74,27159	625,4617	312,249	8239,317
		4275	4689,55	-54,38	55,3	108,1772	74,27159	11445,054	5099,129	5099,129
3CV24	4875	0	-5750,8	45,67	60,37	108,1772	74,27159	875,604	-5351,326	575,604
		2137,5	-424,38	-45,62	60,37	108,1772	74,27159	6237,132	3240,430	6237,132
		4375	4708,29	-45,62	60,37	108,1772	74,27159	11495,559	5170,908	5170,908
3CV25	4200	120	-13320	-8069,72	616,57	108,1772	74,27159	-15983,162	-20296,590	15983,162
		2250	-1354,2	-757,36	616,97	108,1772	74,27159	4784,316	389,310	389,310
		4500	13011	2614,56	616,97	108,1772	74,27159	25345,736	21136,280	21136,280
3CV26	4250	150	-11840	4307,37	285,71	108,1772	74,27159	9773,148	-15574,577	9773,148
		2250	2777,53	1045,07	280,51	108,1772	74,27159	10094,321	7191,393	5191,393
		4500	17202,8	6191,21	280,51	108,1772	74,27159	31760,391	3,423,363	29939,363
3CV27	4750	120	-16680	5084,2	152,86	108,1772	74,27159	-30533,361	-35331,647	30533,361
		2500	-3073,9	-463,126	150,156	108,1772	74,27159	3351,839	4576,127	3351,839
		4875	14472,8	5929,48	152,86	108,1772	74,27159	31227,173	19499,593	19499,593
3CV3	3000	750	1364,32	-833,37	37941,24	108,1772	74,27159	14823,373	10745,702	14823,373
		1500	6976,32	915,91	37601,34	108,1772	74,27159	23414,712	16320,000	23414,712
		2250	13020,1	3941,03	37341,54	108,1772	74,27159	30592,703	17362,026	30592,703
3CV4	2100	150	3723,19	1604,14	4139,62	108,1772	74,27159	19791,036	50327,431	19791,036
		1200	6352,97	1664,24	4139,62	108,1772	74,27159	22338,546	13024,921	22338,546
		2250	12738,77	1604,94	4139,62	108,1772	74,27159	34986,056	16072,411	34986,056
3CV5	2100	150	3723,19	1659,93	4243,87	108,1772	74,27159	21051,134	53397,759	21051,134
		1200	7442,25	1659,93	4244,25	108,1772	74,27159	23684,564	187925,349	23684,564
		2250	9916,05	1659,93	4243,87	108,1772	74,27159	26281,114	190582,739	26281,114
3CV6	2100	150	1842,38	705,16	39071,79	108,1772	74,27159	15111,636	16083,609	15111,636
		1200	7124,93	1066,72	39071,79	108,1772	74,27159	22644,005	17318,193	22644,005
		2250	13278,2	3094,84	39071,79	108,1772	74,27159	31319,016	181193,106	31319,016
3CV7	2350	250	-17280	2038,66	20046,27	108,1772	74,27159	-7643,998	101728,321	-7643,998
		1425	-161,60	334,78	20046,27	108,1772	74,27159	13103,666	123474,184	13103,666
		2850	16984,3	246,84	20046,27	108,1772	74,27159	33026,250	141298,548	33026,250
3CV8	2450	150	-13984	-198,68	26054,87	108,1772	74,27159	-2782,147	12433,134	-2782,147
		1375	-378,56	-198,68	26054,87	108,1772	74,27159	11302,946	110036,561	11302,946
		2600	17228,2	-198,68	26054,87	108,1772	74,27159	29782,023	55751,579	29782,023
3CV9	3350	150	-8425,7	-4163,15	24383,23	108,1772	74,27159	1082,275	93978,325	1082,275
		1425	4582,36	744,65	24383,23	108,1772	74,27159	18217,823	110103,378	18217,823
		2600	14952,3	5077,45	24383,23	108,1772	74,27159	33681,031	133566,381	33681,031
4A1	3750	250	-33111	-9079,9	7588,57	678,7647	240,9291	71910,739	35319,343	71910,739
		1425	-39304	-9206,3	7588,57	678,7647	240,9291	91631,443	171739,931	91631,443
		3000	64940	-3533,02	7588,57	678,7647	240,9291	109414,880	238323,283	109414,880
4A10	2750	250	-55173	-2197,84	79793,78	678,7647	240,9291	75943,991	171781,257	75943,991
		1625	-34345	-5014,25	79793,78	678,7647	240,9291	93883,628	79708,254	93883,628
		3000	-21452	-2650,91	79793,78	678,7647	240,9291	113447,123	309269,688	113447,123
4A11	1100	0	38749,9	13295,72	48143,73	678,7647	240,9291	404081,313	238006,609	350006,609
		550	45124,5	15773,35	48143,73	678,7647	240,9291	410184,765	264110,154	264110,154
		1100	71900,5	14508,22	48143,73	678,7647	240,9291	418479,919	272431,301	272431,301
4A12	1100	0	40013,5	13487,63	48312,44	678,7647	240,9291	404458,640	239092,614	350092,614
		550	45452,3	13385,75	48312,44	678,7647	240,9291	410562,175	265196,148	265196,148
		1100	72218	15000,13	48312,44	678,7647	240,9291	418357,533	273491,306	273491,306
4A13	1750	0	59389,3	13285,78	76674,93	678,7647	240,9291	224746,893	397447,407	224746,893
		875	67847,6	13378,76	76674,93	678,7647	240,9291	304338,736	407539,293	304338,736
		1750	130744	16678,24	76674,93	678,7647	240,9291	319477,617	42678,130	319477,617
4A14	1750	0	58062,3	13693	80669,61	678,7647	240,9291	294240,217	414155,406	294240,217
		875	66240,4	14650,03	80669,61	678,7647	240,9291	303832,702	423747,293	303832,702
		1750	77287,2	17521,10	80669,61	678,7647	240,9291	319991,540	433666,150	319991,540
4A17	4000	0	-44824	-7523,55	35879,32	678,7647	240,9291	46795,942	93715,564	46795,942
		2000	5109,14	2474,05	35879,32	678,7647	240,9291	103758,875	158655,494	103758,875
		4000	55031,9	12474,05	35879,32	678,7647	240,9291	166679,815	221593,434	166679,815
4A18	4000	0	-42206	-7210,66	40578,36	678,7647	240,9291	43268,529	118545,215	43268,529
		2000	7726,32	2759,34	40578,36	678,7647	240,9291	106828,469	181483,155	106828,469
		4000	37679,1	12789,54	40578,36	678,7647	240,9291	169763,393	244423,035	169763,393
4A19	4000	0	-26303	-7993,35	36477,61	678,7647	240,9291	59271,326	116700,222	59271,326
		2000	5639,34	2036,65	36477,61	678,7647	240,9291	103636,315	161263,752	103636,315
		4000	33082,1	12036,65	36477,61	678,7647	240,9291	148401,235	205830,693	148401,235
4A2	2750	250	-148331	-39731,39	37560,03	678,7647	240,9291	-38143,826	-39703,010	-39703,010
		1625	-114879	-33364,2	37560,03	678,7647	240,9291	-18344,250	2096,566	-18344,250
		3000	-24325	-28637,64	37560,03	678,7647	240,9291	29709,779	39141,596	29709,779
4A20	4000	0	-26707	-7920,53	36849,62	678,7647	240,9291	59418,633	116469,981	59418,633
		2000	5736,01	2079,65	36849,62	678,7647	240,9291	103963,823	163974,510	103963,823
		4000	32178,9	12079,65	36849,62	678,7647	240,9291	149347,972	207539,850	149347,972
4A21	4000	0	-41735	-7000,51	41314	678,7647	240,9291	44491,124	122253,409	44491,124
		2000	8190,07	2909,46	41314	678,7647	240,9291	107431,064	183173,338	107431,064
		4000	58133,9	12909,49	41314	678,7647	240,9291	170371,004	248113,278	170371,004

4A22	4000	0	-36091	-7218.76	37015.71	678.7647	340.9291	60004.8901	120008.1246	60004.8901
		3000	6452.06	2704.22	37015.71	678.7647	240.9291	103369.8701	165227.256	103369.8701
		4000	30355.1	12734.32	37015.71	678.7647	340.9291	149934.1591	339792.216	149934.1591
4A24	3600	0	-5973.3	-830.94	-40325.3	678.7647	340.9291	136385.3121	181399.045	136385.3121
		1300	15068.3	1248.37	-40325.3	678.7647	340.9291	164491.3341	153073.511	164491.3341
		2600	43661.7	6826.77	-40325.3	678.7647	340.9291	202313.0251	111241.732	202313.0251
4A25	3600	0	-6553	-842.39	-40761.03	678.7647	340.9291	136431.2731	152158.734	136431.2731
		1300	15180.9	1170.11	-40761.03	678.7647	340.9291	164627.2391	153421.768	164627.2391
		2600	43732.7	3707.61	-40761.03	678.7647	340.9291	203439.0951	116110.922	203439.0951
4A26	1750	250	-731.66	-4796.93	67891.81	678.7647	240.9291	153650.636	301321.636	153650.636
		1125	-36438	-7248.19	67891.81	678.7647	240.9291	173051.607	320914.217	173051.607
		2000	-22604	-6206.16	67891.81	678.7647	240.9291	190623.646	331555.175	190623.646
4A27	1750	0	43117.3	15345.14	67891.81	678.7647	340.9291	183976.414	127447.375	183976.414
		875	33636.2	17757.31	67891.81	678.7647	340.9291	204331.843	164362.956	204331.843
		1750	25417.4	23093.14	67891.81	678.7647	340.9291	231803.861	1337139.028	231803.861
4A28	1750	0	29996.7	14392.39	67891.81	678.7647	340.9291	276519.754	151321.779	276519.754
		875	30509.3	16306.35	67891.81	678.7647	340.9291	296434.153	129497.360	296434.153
		1750	79290.5	29642.39	67891.81	678.7647	340.9291	323647.181	126734.332	323647.181
4A29	1750	250	32721	3083.04	91541.37	678.7647	240.9291	143674.413	312334.594	143674.413
		1125	31993	-6611.22	91541.37	678.7647	240.9291	174123.000	339631.151	174123.000
		2000	-30139	-5660.16	91541.37	678.7647	240.9291	191801.938	352261.120	191801.938
4A3	2750	250	123302	42871.52	67891.81	678.7647	340.9291	27231.403	141046.495	27231.403
		1625	125160	36503.83	67891.81	678.7647	340.9291	30435.838	103.070	30435.838
		3000	29664	-31777.27	40591.29	678.7647	340.9291	6690.202	37732.110	6690.202
4A30	2750	0	4233.3	4688.41	37484.25	678.7647	340.9291	148447.158	376989.692	148447.158
		1375	27733.4	7051.69	37484.25	678.7647	340.9291	129042.394	407185.924	129042.394
		2750	58637.2	10235.29	37484.25	678.7647	340.9291	211616.914	429739.454	211616.914
4A31	2750	0	16533.1	16829.53	60151.58	678.7647	340.9291	168172.303	365471.629	168172.303
		1375	47411.6	15356.09	60151.58	678.7647	340.9291	205217.133	401542.658	205217.133
		2750	30633.5	21723.26	60151.58	678.7647	340.9291	247016.257	441342.224	247016.257
4A32	2750	0	29320.7	33412.68	59664.73	678.7647	340.9291	278931.298	303881.252	278931.298
		1375	13721.5	38129.22	59664.73	678.7647	340.9291	313626.345	349706.881	313626.345
		2750	11131.7	44506.41	59664.73	678.7647	340.9291	355425.201	383706.447	355425.201
4A33	2750	0	10013	37483.01	39980.93	678.7647	340.9291	394182.015	322770.619	394182.015
		1375	140087	43109.57	39980.93	678.7647	340.9291	331227.044	359935.641	331227.044
		2750	174309	48576.76	39980.93	678.7647	340.9291	373026.620	401635.217	373026.620
4A34	2750	0	24106.4	33527.83	37701.68	678.7647	340.9291	287027.345	280083.092	287027.345
		1375	196636	38254.44	37701.68	678.7647	340.9291	291439.562	310471.809	291439.562
		2750	128040	44621.63	37701.68	678.7647	340.9291	320606.526	339842.072	320606.526
4A35	2750	0	39162.2	14418.2	39142.36	678.7647	340.9291	195970.730	110682.113	195970.730
		1375	63557.3	16781.48	39142.36	678.7647	340.9291	235766.966	250973.345	235766.966
		2750	82256	19965.67	39142.36	678.7647	340.9291	293340.478	286451.858	293340.478
4A36	2750	0	39169.7	14433.27	39378.74	678.7647	340.9291	195530.968	111610.365	195530.968
		1375	65594.5	16796.55	39378.74	678.7647	340.9291	225727.201	251806.601	225727.201
		2750	92245.1	19986.14	39378.74	678.7647	340.9291	286500.712	284386.110	286500.712
4A37	2750	0	35703.9	33591.69	38109.39	678.7647	340.9291	267771.642	285469.776	267771.642
		1375	107237	38318.25	38109.39	678.7647	340.9291	192133.375	313821.003	192133.375
		2750	126652	44685.41	38109.39	678.7647	340.9291	321300.622	342048.756	321300.622
4A38	2750	0	107378	37559.83	40644.73	678.7647	340.9291	391705.273	323102.042	391705.273
		1375	136133	42285.6	40644.73	678.7647	340.9291	328750.315	360147.081	328750.315
		2750	171574	48652.78	40644.73	678.7647	340.9291	370349.870	401946.636	370349.870
4A39	2750	0	36642.5	33750.3	40934.09	678.7647	340.9291	246156.314	299237.183	246156.314
		1375	103167	36477.36	40934.09	678.7647	340.9291	196157.731	327749.399	196157.731
		2750	126577	44244.55	40934.09	678.7647	340.9291	149304.394	351916.161	149304.394
4A4	2750	250	-115463	-46237.71	38144.48	678.7647	340.9291	14173.365	13277.858	-3277.858
		1625	-94051	-33370.52	38144.48	678.7647	340.9291	4993.332	27080.895	4993.332
		3000	-75528	-29143.96	38144.48	678.7647	340.9291	29405.605	50301.111	29405.605
4A40	2750	0	19728.5	12139.9	35537.57	678.7647	340.9291	170294.119	362740.694	170294.119
		1375	30282.9	16836.46	35537.57	678.7647	340.9291	209329.148	439785.623	209329.148
		2750	83724.8	23253.65	35537.57	678.7647	340.9291	251638.714	471583.198	251638.714
4A41	2750	0	4837.35	5192.6	91098.87	678.7647	340.9291	149345.007	393147.772	149345.007
		1375	31232.4	7556.88	91098.87	678.7647	340.9291	120040.054	423545.999	180040.054
		2750	59671.2	10740.43	91098.87	678.7647	340.9291	212613.574	455917.518	212613.574
4A43	2250	0	-41603	-10445.54	1403.69	678.7647	340.9291	115619.840	-48754.641	115619.840
		1125	-33293	-19445.54	1403.69	678.7647	340.9291	124336.363	-39987.518	124336.363
		2250	-24904	-10445.54	1403.69	678.7647	340.9291	133152.897	-31220.994	133152.897
4A45	2600	0	26805.6	10539.46	1403.69	678.7647	340.9291	231184.283	45526.730	45526.730
		1300	34237	10938.46	1403.69	678.7647	340.9291	238976.742	53319.189	53319.189
		2600	41648.4	10938.46	1403.69	678.7647	340.9291	246769.212	61111.609	61111.609
4A5	2750	250	-24633	-6057.36	46702.9	678.7647	340.9291	107095.987	163936.857	107095.987
		1625	-10971.7	-2574.26	46702.9	678.7647	340.9291	138841.362	185683.252	138841.362
		3000	2935.43	-510.98	46702.9	678.7647	340.9291	148209.503	205070.374	148209.503
4A50	2600	0	20753.2	11913.4	1291.79	678.7647	340.9291	236353.930	50225.417	50225.417
		1000	28174.8	11913.4	1291.79	678.7647	340.9291	244145.420	58017.885	58017.885
		2000	45596	11913.4	1291.79	678.7647	340.9291	251937.890	65810.357	65810.357

4A12	2250	0	-13654	-9470.6	1291.79	878,7647	240,9291	129799,317	-44057,344	100768,511
		1125	-29305	-9470.6	1291.79	878,7647	240,9291	129799,317	-44057,344	100768,511
		2250	-59610	-9470.6	1291.79	878,7647	240,9291	129799,317	-44057,344	100768,511
4A10	2750	250	-34312	-59610.14	46915.67	878,7647	240,9291	107779,266	165113,812	107779,266
		1625	-69624	-59610.14	46915.67	878,7647	240,9291	107779,266	165113,812	107779,266
		3000	-104936	-59610.14	46915.67	878,7647	240,9291	107779,266	165113,812	107779,266
4A11	3750	250	-115718	-104936.28	83483.63	878,7647	240,9291	142493,772	206127,215	142493,772
		1625	-231436	-104936.28	83483.63	878,7647	240,9291	142493,772	206127,215	142493,772
		3000	-347154	-104936.28	83483.63	878,7647	240,9291	142493,772	206127,215	142493,772
4A13	2750	250	-155414	-43754.59	41333.68	878,7647	240,9291	83744,191	-34453,113	-74453,113
		1625	-310828	-43754.59	41333.68	878,7647	240,9291	83744,191	-34453,113	-74453,113
		3000	-466242	-43754.59	41333.68	878,7647	240,9291	83744,191	-34453,113	-74453,113
4A14	2750	250	-110412	-39448.16	38843.84	878,7647	240,9291	83744,191	-34453,113	-74453,113
		1625	-220824	-39448.16	38843.84	878,7647	240,9291	83744,191	-34453,113	-74453,113
		3000	-331236	-39448.16	38843.84	878,7647	240,9291	83744,191	-34453,113	-74453,113
4B1	4750	125	-13304	-2147.33	13.67	185,9637	127,1396	9632,797	-31959,657	-9632,797
		2250	-26608	-4294.66	27.33	185,9637	127,1396	19265,594	-63919,314	-19265,594
		4275	-39912	-6441.99	41.00	185,9637	127,1396	28898,391	-95878,961	-28898,391
4B10	4025	250	-22271	-3555.21	14.58	185,9637	127,1396	19265,594	-63919,314	-19265,594
		2062.5	-44542	-7110.42	29.16	185,9637	127,1396	38531,188	-127838,628	-38531,188
		4275	-66813	-10665.63	43.74	185,9637	127,1396	57796,782	-191759,842	-57796,782
4B11	4025	250	-32998	-5069.81	16.75	185,9637	127,1396	38531,188	-127838,628	-38531,188
		2062.5	-65996	-10139.62	33.50	185,9637	127,1396	77062,376	-255677,256	-77062,376
		4275	-98994	-15209.43	50.25	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B12	4050	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		2250	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		4275	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B13	5275	225	-13304	-2147.33	13.67	185,9637	127,1396	9632,797	-31959,657	-9632,797
		1862.5	-26608	-4294.66	27.33	185,9637	127,1396	19265,594	-63919,314	-19265,594
		3000	-39912	-6441.99	41.00	185,9637	127,1396	28898,391	-95878,961	-28898,391
4B14	775	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		612.5	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		1000	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B15	5775	0	-13304	-2147.33	13.67	185,9637	127,1396	9632,797	-31959,657	-9632,797
		1862.5	-26608	-4294.66	27.33	185,9637	127,1396	19265,594	-63919,314	-19265,594
		3775	-39912	-6441.99	41.00	185,9637	127,1396	28898,391	-95878,961	-28898,391
4B16	775	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		612.5	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		1000	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B17	775	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		612.5	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		1000	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B18	5775	0	-13304	-2147.33	13.67	185,9637	127,1396	9632,797	-31959,657	-9632,797
		1862.5	-26608	-4294.66	27.33	185,9637	127,1396	19265,594	-63919,314	-19265,594
		3775	-39912	-6441.99	41.00	185,9637	127,1396	28898,391	-95878,961	-28898,391
4B19	2750	125	-13304	-2147.33	13.67	185,9637	127,1396	9632,797	-31959,657	-9632,797
		1260	-26608	-4294.66	27.33	185,9637	127,1396	19265,594	-63919,314	-19265,594
		2275	-39912	-6441.99	41.00	185,9637	127,1396	28898,391	-95878,961	-28898,391
4B2	4200	125	-13304	-2147.33	13.67	185,9637	127,1396	9632,797	-31959,657	-9632,797
		2250	-26608	-4294.66	27.33	185,9637	127,1396	19265,594	-63919,314	-19265,594
		4275	-39912	-6441.99	41.00	185,9637	127,1396	28898,391	-95878,961	-28898,391
4B20	3750	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		1300	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		2375	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B21	4050	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		2250	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		4275	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B22	4050	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		2250	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		4275	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B23	4050	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		2250	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		4275	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B24	4025	250	-22271	-3555.21	14.58	185,9637	127,1396	19265,594	-63919,314	-19265,594
		2062.5	-44542	-7110.42	29.16	185,9637	127,1396	38531,188	-127838,628	-38531,188
		4275	-66813	-10665.63	43.74	185,9637	127,1396	57796,782	-191759,842	-57796,782
4B25	4025	250	-22271	-3555.21	14.58	185,9637	127,1396	19265,594	-63919,314	-19265,594
		2062.5	-44542	-7110.42	29.16	185,9637	127,1396	38531,188	-127838,628	-38531,188
		4275	-66813	-10665.63	43.74	185,9637	127,1396	57796,782	-191759,842	-57796,782
4B26	4050	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		2250	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		4275	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564
4B27	4050	225	-34128	-5119.24	14.66	185,9637	127,1396	38531,188	-127838,628	-38531,188
		2250	-68256	-10238.48	29.32	185,9637	127,1396	77062,376	-255677,256	-77062,376
		4275	-102384	-15357.72	43.98	185,9637	127,1396	115593,564	-383515,844	-115593,564

4B30	4000	225	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
		2250	1802,93	606,64	-1615,27	185,9637	127,1396	14392,964	-5092,346	14392,964
		4775	45104,4	11476,94	-1615,27	185,9637	127,1396	72119,322	30823,013	52629,013
4B31	4000	225	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
		2250	1802,93	606,64	-1615,27	185,9637	127,1396	14392,964	-5092,346	14392,964
		4775	45104,4	11476,94	-1615,27	185,9637	127,1396	72119,322	30823,013	52629,013
4B32	2100	150	-13297	1163,53	49572,38	185,9637	127,1396	11769,414	195462,939	11769,414
		1300	-6467,8	2934,9	49572,28	185,9637	127,1396	20800,338	304494,053	20800,338
		2250	812,43	4963,03	49572,28	185,9637	127,1396	30374,284	214267,809	30374,284
4B33	1775	0	-3081,3	34,98	-1765,1	185,9637	127,1396	26831,104	-10560,123	25851,174
		387,5	104,78	34,98	-1765,1	185,9637	127,1396	29144,345	-7266,282	29144,345
		1775	3241	34,98	-1765,1	185,9637	127,1396	30437,526	-2933,641	32437,526
4B34	1000	0	-3081,3	34,98	-1765,1	185,9637	127,1396	26831,104	-10560,123	25851,174
		387,5	104,78	34,98	-1765,1	185,9637	127,1396	29144,345	-7266,282	29144,345
		1775	3241	34,98	-1765,1	185,9637	127,1396	30437,526	-2933,641	32437,526
4B35	1000	0	-3081,3	34,98	-1765,1	185,9637	127,1396	26831,104	-10560,123	25851,174
		387,5	104,78	34,98	-1765,1	185,9637	127,1396	29144,345	-7266,282	29144,345
		1775	3241	34,98	-1765,1	185,9637	127,1396	30437,526	-2933,641	32437,526
4B36	2000	0	-4426,3	-215,06	277,76	185,9637	127,1396	26831,104	-10560,123	25851,174
		1000	-2213,1	-215,06	277,76	185,9637	127,1396	26831,104	-10560,123	25851,174
		2000	-4426,3	-215,06	277,76	185,9637	127,1396	26831,104	-10560,123	25851,174
4B37	2000	0	-4426,3	-215,06	277,76	185,9637	127,1396	26831,104	-10560,123	25851,174
		1000	-2213,1	-215,06	277,76	185,9637	127,1396	26831,104	-10560,123	25851,174
		2000	-4426,3	-215,06	277,76	185,9637	127,1396	26831,104	-10560,123	25851,174
4B38	750	0	-6138,4	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
		375	-3069,2	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
		750	-6138,4	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
4B39	3500	0	-6138,4	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
		1750	-3069,2	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
		3500	-6138,4	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
4B40	3500	0	-6138,4	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
		1750	-3069,2	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
		3500	-6138,4	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
4B41	750	0	-6138,4	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
		375	-3069,2	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
		750	-6138,4	-4,95	77,13	185,9637	127,1396	21148,442	8118,466	5118,466
4B42	3850	250	-13297	1163,53	49572,38	185,9637	127,1396	11769,414	195462,939	11769,414
		2175	-6467,8	2934,9	49572,28	185,9637	127,1396	20800,338	304494,053	20800,338
		4100	812,43	4963,03	49572,28	185,9637	127,1396	30374,284	214267,809	30374,284
4B43	3850	250	-13297	1163,53	49572,38	185,9637	127,1396	11769,414	195462,939	11769,414
		2175	-6467,8	2934,9	49572,28	185,9637	127,1396	20800,338	304494,053	20800,338
		4100	812,43	4963,03	49572,28	185,9637	127,1396	30374,284	214267,809	30374,284
4B44	4250	250	-13297	1163,53	49572,38	185,9637	127,1396	11769,414	195462,939	11769,414
		2375	-6467,8	2934,9	49572,28	185,9637	127,1396	20800,338	304494,053	20800,338
		4500	812,43	4963,03	49572,28	185,9637	127,1396	30374,284	214267,809	30374,284
4B45	4250	250	-13297	1163,53	49572,38	185,9637	127,1396	11769,414	195462,939	11769,414
		2375	-6467,8	2934,9	49572,28	185,9637	127,1396	20800,338	304494,053	20800,338
		4500	812,43	4963,03	49572,28	185,9637	127,1396	30374,284	214267,809	30374,284
4B5	2100	150	-13297	1163,53	49572,38	185,9637	127,1396	11769,414	195462,939	11769,414
		1200	-6467,8	2934,9	49572,28	185,9637	127,1396	20800,338	304494,053	20800,338
		2250	812,43	4963,03	49572,28	185,9637	127,1396	30374,284	214267,809	30374,284
4B6	2100	150	-13297	1163,53	49572,38	185,9637	127,1396	11769,414	195462,939	11769,414
		1300	-6467,8	2934,9	49572,28	185,9637	127,1396	20800,338	304494,053	20800,338
		2250	812,43	4963,03	49572,28	185,9637	127,1396	30374,284	214267,809	30374,284
4B7	775	225	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
		612,5	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
		1000	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
4B8	3275	225	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
		1862,5	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
		3500	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
4B9	4050	225	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
		2250	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365
		4075	-44099	-10263,66	-4413,57	185,9637	127,1396	-42331,291	-53315,704	-41321,365

4BK1	890	0	67177.9	-461.35	1433.14	344.1093	0	321341.920	76067.387	76067.387
		425	63679.9	-461.35	1433.14	344.1093	0	322918.908	77644.434	77644.434
		890	70181.2	-461.35	1433.14	344.1093	0	324496.015	79221.482	79221.482
4BK10	775	0	63348.3	-439.55	826.33	344.1093	0	337512.554	66575.578	66575.578
		387.5	61715.3	-439.55	826.33	344.1093	0	339990.445	67713.168	67713.168
		775	63081.7	-439.55	826.33	344.1093	0	341358.346	69231.070	69231.070
4BK11	1000	0	42546.8	2147.34	-1114.03	344.1093	0	286324.895	42349.221	42349.221
		500	44315.8	2147.34	-1114.03	344.1093	0	262300.240	44103.371	44103.371
		1000	46080.9	2147.34	-1114.03	344.1093	0	264235.595	45960.621	45960.621
4BK12	1000	0	41417.2	2147.34	-1114.03	344.1093	0	259527.174	44820.273	44820.273
		500	43179.2	2147.34	-1114.03	344.1093	0	261182.524	43677.623	43677.623
		1000	44946.2	2147.34	-1114.03	344.1093	0	263027.894	44520.933	44520.933
4BK13	2375	250	-19979	-1917.47	40449.01	344.1093	0	67064.928	146593.314	146593.314
		1425	-1126.1	571.56	40449.01	344.1093	0	90208.147	169300.033	169300.033
		2850	17020.4	2624.34	40449.01	344.1093	0	111381.889	190575.756	190575.756
4BK14	2450	150	-17583	-262.13	-30155.76	344.1093	0	67699.043	-146057.235	67699.043
		1375	-2340.3	-262.13	-30155.76	344.1093	0	93609.349	-130236.933	93609.349
		2800	13207.4	-262.13	-30155.76	344.1093	0	99409.633	-114426.638	99409.633
4BK15	2500	250	-37383	-11227.42	9076.84	344.1093	0	37832.621	37832.621	37832.621
		1500	-19378	-6236.5	9076.84	344.1093	0	51912.033	10597.314	10597.314
		2750	-8093.4	-2930.55	9076.84	344.1093	0	73271.711	26556.002	26556.002
4BK16	2500	250	-59244	-36174.07	431.33	344.1093	0	3404.843	-73011.756	3404.843
		1500	-42139	-14783.45	431.33	344.1093	0	35664.426	-57771.363	35664.426
		2750	-30247	-10932.2	431.33	344.1093	0	41623.124	-41793.673	41623.124
4BK17	2500	0	22317.3	2219.48	-5620.63	344.1093	0	115001.051	8435.973	8435.973
		1350	33609.5	12125.73	-5620.63	344.1093	0	133460.745	34415.660	34415.660
		2500	47514.8	17516.36	-5620.63	344.1093	0	153721.155	44676.072	44676.072
4BK18	3350	150	-21132	-3034.84	-43938.38	344.1093	0	72877.273	-30353.878	72877.273
		1325	-22538	-1307.97	-43938.38	344.1093	0	89793.333	-133639.318	89793.333
		2500	10438.4	6215.29	-43938.38	344.1093	0	108376.754	-187956.397	108376.754
4BK19	3350	150	-3275.9	-2211.38	-3690.53	344.1093	0	79880.265	22311.912	79880.265
		1325	-210.82	-44.97	-3690.53	344.1093	0	90518.585	-11673.596	90518.585
		2500	8160.71	2478.93	-3690.53	344.1093	0	101990.877	-202.104	101990.877
4BK20	830	150	-67973	661.11	-2059.91	344.1093	0	178512.184	-81428.960	178512.184
		575	-82471	661.11	-2059.91	344.1093	0	180089.232	-79831.912	180089.232
		1000	-65969	661.11	-2059.91	344.1093	0	181666.279	-78274.865	181666.279
4BK20	2750	0	-5111.1	-214.68	1907.42	344.1093	0	72078.996	101.147	72078.996
		1375	-251.22	-214.68	1907.42	344.1093	0	77131.205	6001.066	77131.205
		2750	4872.37	-214.68	1907.42	344.1093	0	82283.431	10103.279	82283.431
4BK21	2350	150	-2194	-2194.94	-2694.9	344.1093	0	79978.249	-12222.186	79978.249
		1325	-393.65	-38.53	-2694.9	344.1093	0	90616.666	-11591.269	90616.666
		2500	3227.88	2425.28	-2694.9	344.1093	0	102082.166	-1122.267	102082.166
4BK22	2350	150	-13622	-5092.01	-44371.11	344.1093	0	73335.440	-203612.177	73335.440
		1325	-1844.2	1234.8	-44371.11	344.1093	0	90252.001	-188993.616	90252.001
		2500	10945.9	6142.61	-44371.11	344.1093	0	108234.911	-168415.706	108234.911
4BK23	2500	0	22361.1	7985.65	-5942.24	344.1093	0	117197.472	6801.627	6801.627
		1250	22533.6	11091.9	-5942.24	344.1093	0	133156.160	23760.315	23760.315
		2500	47458.5	17382.52	-5942.24	344.1093	0	153416.561	43020.716	43020.716
4BK24	2900	250	-57000	-20986.13	-454.17	344.1093	0	3553.431	-83792.520	3553.431
		1500	-42095	-15595.5	-454.17	344.1093	0	23913.843	-63532.109	23913.843
		2750	-31302	-11689.25	-454.17	344.1093	0	39772.330	-47573.421	39772.330
4BK25	2500	250	-49235	-19291.57	2510.79	344.1093	0	14538.056	-60358.064	14538.056
		1500	-35380	-12901.83	2510.79	344.1093	0	34725.457	-40027.663	34725.457
		2750	-34028	-8994.8	2510.79	344.1093	0	60754.144	-34182.975	60754.144
4BK26	2350	350	-4996.4	-3093.29	42513.51	344.1093	0	23445.691	171110.478	23445.691
		1425	3474.93	204.37	42513.51	344.1093	0	94849.720	182514.507	94849.720
		2800	11440.2	2404.05	42513.51	344.1093	0	105428.480	192093.368	105428.480
4BK27	775	225	-64833	-419.69	-3196.19	344.1093	0	208988.926	-53042.441	208988.926
		612.5	-63363	-419.69	-3196.19	344.1093	0	208426.311	-80605.550	208426.311
		1000	-62193	-419.69	-3196.19	344.1093	0	209864.212	-79167.648	209864.212
4BK28	775	225	-64849	-408.46	-3252.03	344.1093	0	207087.182	-32179.250	207087.182
		612.5	-63480	-408.46	-3252.03	344.1093	0	208525.074	-80741.399	208525.074
		1000	-62110	-408.46	-3252.03	344.1093	0	209962.975	-79303.497	209962.975
4BK29	775	0	18070.3	-313.44	-6216.23	344.1093	0	293727.597	-7988.453	293727.597
		387.5	19459.5	-313.44	-6216.23	344.1093	0	295163.489	-6550.541	295163.489
		775	20809.2	-313.44	-6216.23	344.1093	0	296603.389	-5112.639	296603.389
4BK3	830	150	-70758	635.03	-1973.95	344.1093	0	177629.355	-81930.757	177629.355
		575	-69266	635.03	-1973.95	344.1093	0	179206.392	-80373.720	179206.392
		1000	-67784	635.03	-1973.95	344.1093	0	180783.429	-78796.673	180783.429
4BK30	775	0	13165.9	-802.03	-6289.13	344.1093	0	293839.631	-8182.577	293839.631
		387.5	19553.3	-802.03	-6289.13	344.1093	0	295277.722	-6744.486	295277.722
		775	20504.7	-802.03	-6289.13	344.1093	0	296713.624	-5206.585	296713.624
4BK4	850	0	66963.2	-455.46	1647.16	344.1093	0	321124.717	76713.262	76713.262
		425	63467.1	-455.46	1647.16	344.1093	0	322701.765	78230.315	78230.315
		850	69949.1	-455.46	1647.16	344.1093	0	324278.812	79957.363	79957.363

4B15	850	150	-44725	-196,76	5464,43	344,1093	0	304121,729	-34217,137	264111,709
		575	-43023	-196,76	5464,43	344,1093	0	305098,677	-33640,679	265098,637
		1000	-41731	-196,76	5464,43	344,1093	0	307273,584	-31063,003	267273,584
		0	45100,7	573,39	-10375,99	344,1093	0	294582,348	-4294,093	4894,025
4B16	850	425	-45602,7	873,39	-10375,99	344,1093	0	301139,997	-5271,136	5271,136
		850	-45124,6	873,39	-10375,99	344,1093	0	302716,447	-7845,183	7845,183
		0	44974,6	566,56	-10754,79	344,1093	0	299564,590	-4164,562	-4164,562
		425	-46456,1	560,90	-10434,73	344,1093	0	300941,649	-5740,619	-5740,619
4B17	850	850	-47913,7	540,89	-10454,79	344,1093	0	302512,993	-7315,177	-7315,177
		150	-46120	85,57	5604,8	344,1093	0	284506,366	-5740,619	204506,366
		725	-42936	-96,57	5804,3	344,1093	0	306003,313	-30826,047	306003,313
		1000	-41456	91,77	5804,3	344,1093	0	307665,363	-13247,399	307665,363
4B18	725	0	59677,1	-496,42	513,17	344,1093	0	337703,563	-6522,577	-6522,577
		387,5	61001,7	-496,43	513,17	344,1093	0	339139,406	-66946,539	66946,539
		725	62371,1	-496,43	513,17	344,1093	0	340576,297	-68404,739	68404,739
		0								
4C10	4500	2250	4988,19	715,90	581,02	108,1772	74,27159	12312,549	7421,343	2041,343
		4500	19540,7	637,77	321,92	108,1772	74,27159	34439,671	29976,645	39558,645
		0	-17364	-6341,22	264508	108,1772	74,27159	-31601,399	-19604,723	-10604,835
		2250	8894,91	3397,93	1045,68	108,1772	74,27159	11378,413	20374,988	18378,413
4C11	5000	4500	32092,7	1420,71	2445,88	108,1772	74,27159	39059,113	60354,708	39059,113
		0	-5743	-13150,43	103,45	108,1772	74,27159	-35681,701	-4976,696	-5681,701
		3500	-1343,1	-587,93	103,45	108,1772	74,27159	-4010,945	-1378,071	-4010,945
		5000	34593,9	10974,57	153,45	108,1772	74,27159	43701,549	38414,555	38414,555
4C12	4500	0	-1847,07	-947,76	-304,45	108,1772	74,27159	-51062,365	-40400,041	-37062,365
		2250	9240,33	2447,34	-3054,5	108,1772	74,27159	18917,439	-420,242	18917,439
		4500	10497,5	14332,24	-3034,5	108,1772	74,27159	38991,226	29139,559	29139,559
		0	-5744	-12359,16	750,91	108,1772	74,27159	-34654,564	-38093,234	-34654,564
4C13	4500	2250	-642,75	-364,16	750,91	108,1772	74,27159	5326,568	1326,567	1326,567
		4500	35036,3	11510,84	750,91	108,1772	74,27159	45205,206	41266,367	41266,367
		0	-5741	-11295,44	153,92	108,1772	74,27159	-33750,661	-39835,507	-32753,661
		2250	-91056	379,01	152,93	108,1772	74,27159	6344,759	194,494	294,494
4C14	4500	4500	12399	12434,51	153,93	108,1772	74,27159	46324,529	40374,294	40374,294
		0	-99490	-13334,37	1377,03	108,1772	74,27159	-38603,265	-3941,2317	-38603,265
		2250	7269,7	-1619,27	1377,03	108,1772	74,27159	1376,435	767,284	767,284
		4500	1591,23	10195,73	1377,03	108,1772	74,27159	41356,235	40347,064	40347,064
4C15	4500	0	-25834	-13390,36	1388,29	108,1772	74,27159	-38709,665	-3947,611	-38709,665
		2250	-13303	-1715,66	1388,29	108,1772	74,27159	1270,153	508,190	508,190
		4500	22347,7	10139,13	1388,29	108,1772	74,27159	41349,942	40428,000	40428,000
		0	-32677	-11552,91	138,51	108,1772	74,27159	-34386,949	-40441,963	-34386,949
4C16	4500	2250	-1476,3	522,09	128,51	108,1772	74,27159	5590,851	-4821,168	5590,851
		4500	24724,7	12397,09	128,51	108,1772	74,27159	45370,651	39517,632	39517,632
		0	-5472	-12250,43	797,74	108,1772	74,27159	-33326,838	-36471,090	-33326,838
		2250	7400,3	-377,45	797,74	108,1772	74,27159	7750,964	-4508,711	4508,711
4C17	4500	4500	27621,5	11497,55	797,74	108,1772	74,27159	47153,764	44458,511	44458,511
		0	-30169	-9469,82	-3080,64	108,1772	74,27159	-24524,997	-44056,446	-24524,997
		2250	6054,06	2403,98	-3080,64	108,1772	74,27159	15454,803	-4076,646	15454,803
		4500	62232,1	14280,93	-3080,64	108,1772	74,27159	55434,603	35903,154	35903,154
4C18	4050	225	-16036	-4896,5	826,38	108,1772	74,27159	-4375,034	-12229,529	-8375,034
		2250	4503,73	664,80	826,38	108,1772	74,27159	12752,268	8997,774	8997,774
		4275	19063,3	6226,54	826,38	108,1772	74,27159	38279,580	30045,066	30045,066
		0	-37434	-11271,21	76,49	108,1772	74,27159	-26806,433	-4503,680	-39809,433
4C19	5000	2500	-1244	-708,11	76,49	108,1772	74,27159	3982,171	-1813,046	3983,181
		5000	34496	10242,79	76,49	108,1772	74,27159	43571,506	37839,530	37839,530
		0	-14174	-9515,6	1923,18	108,1772	74,27159	-18281,794	-16796,199	-16796,199
		2250	13027,5	2359,4	1923,18	108,1772	74,27159	21699,006	23193,601	21699,006
4C20	4500	4500	38228,5	14274,41	1923,18	108,1772	74,27159	61678,317	63782,412	61678,317
		0	-27094	-12153,91	342,48	108,1772	74,27159	-34897,454	-40161,799	-44807,454
		2250	-293,29	-172,91	242,48	108,1772	74,27159	5372,346	-201,999	5372,346
		4500	25317,6	11396,09	242,48	108,1772	74,27159	49353,146	59777,801	59777,801
4C21	4500	0	-37087	-11357,51	526,05	108,1772	74,27159	-33753,943	-39596,254	-33753,943
		2250	-896,17	537,69	336,05	108,1772	74,27159	6226,857	583,506	583,506
		4500	25314,8	12412,68	226,05	108,1772	74,27159	46206,657	40563,306	40563,306
		0	-30764	-13906,7	-1440,83	108,1772	74,27159	-40311,983	-52566,256	-40311,983
4C22	4500	2250	-4563,5	-2031,7	1440,83	108,1772	74,27159	-332,128	-12976,436	-332,128
		4500	31637,5	9842,3	-1440,83	108,1772	74,27159	39647,612	27003,365	27003,365
		0	-40827	-13638,89	-1396,76	108,1772	74,27159	-40406,131	-32845,293	-40406,131
		3250	-4621	-3093,89	-1396,76	108,1772	74,27159	-426,331	-12881,485	-426,331
4C23	4500	4500	21730	9811,11	-1396,76	108,1772	74,27159	39553,469	27094,316	27094,316
		0	-37556	-11376,12	257,26	108,1772	74,27159	-34279,171	-36875,441	-34279,171
		2250	-1354,3	764,89	257,26	108,1772	74,27159	5769,639	104,370	104,370
		4500	24946,5	12379,29	257,26	108,1772	74,27159	45686,429	40064,170	40064,170
4C24	4500	0	-24818	-12176,24	257,14	108,1772	74,27159	-32244,915	-37757,748	-32244,915
		2250	1362,93	-255,24	257,14	108,1772	74,27159	7734,825	3222,052	3222,052
		4500	27583,9	11379,76	257,14	108,1772	74,27159	47714,625	42201,872	42201,872
		0								

4D1	1000	0	2534.54	-339.73	1610.01	95.12275	95.12275	2619.570	-4361.772	2619.570
		500	12462.5	-434.75	1610.01	95.12275	95.12275	15049.530	15049.530	15049.530
		1000	23600.5	-352.73	1610.01	95.12275	95.12275	27460.214	36030.341	10460.214
		1500	34738.5	-270.73	1610.01	95.12275	95.12275	39870.898	48440.468	18569.570
4D10	1000	0	-1700.2	-319.57	1760.76	95.12275	95.12275	-15241.431	19834.235	10343.804
		500	-7104.9	-719.37	1760.76	95.12275	95.12275	-7517.651	-421.659	-471.659
		1000	-2005.06	-119.87	1760.76	95.12275	95.12275	-2407.155	14002.542	2607.387
		1500	-24700	-147.99	1760.76	95.12275	95.12275	-25784.267	-3505.305	-9505.305
4D11	2500	0	-24700	-147.99	1760.76	95.12275	95.12275	-25784.267	-3505.305	-9505.305
		1250	120.47	140.99	3654.42	95.12275	95.12275	376.633	16465.197	376.633
		2500	14940.5	140.99	3654.42	95.12275	95.12275	26937.622	42526.155	26937.622
		3750	26730.1	20.67	4493.83	95.12275	95.12275	-33139.042	55035.510	-33139.042
4D12	2500	0	-22147	90.67	-4493.83	95.12275	95.12275	2001.939	-52772.011	2001.939
		1250	31493.1	90.67	-4493.83	95.12275	95.12275	35462.559	-4911.213	35462.559
		2500	-21689	90.67	-4493.83	95.12275	95.12275	-22655.440	-38772.305	-22655.440
		3750	3130.63	90.67	-4493.83	95.12275	95.12275	3393.050	-32714.508	3393.050
4D13	2500	0	-21689	90.67	-4493.83	95.12275	95.12275	-22655.440	-38772.305	-22655.440
		1250	3130.63	90.67	-4493.83	95.12275	95.12275	3393.050	-32714.508	3393.050
		2500	-21689	90.67	-4493.83	95.12275	95.12275	-22655.440	-38772.305	-22655.440
		3750	3130.63	90.67	-4493.83	95.12275	95.12275	3393.050	-32714.508	3393.050
4D14	2500	0	-24402	224.5	4044.04	95.12275	95.12275	37443.030	-6453.595	37443.030
		1250	416.72	224.5	4044.04	95.12275	95.12275	35587.700	-2405.741	35587.700
		2500	20026.7	224.5	4044.04	95.12275	95.12275	673.281	13658.245	673.281
		3750	-14692	224.5	4044.04	95.12275	95.12275	26734.201	42719.246	26734.201
4D15	3000	0	-14692	224.5	4044.04	95.12275	95.12275	26734.201	42719.246	26734.201
		1500	-4907.6	664.09	3217.71	95.12275	95.12275	-4897.311	6617.172	-4897.311
		3000	24276.2	664.09	3217.71	95.12275	95.12275	24375.975	39890.361	24375.975
		4500	34276.2	664.09	3217.71	95.12275	95.12275	39890.361	39890.361	39890.361
4D16	3000	0	-43017	664.09	3217.71	95.12275	95.12275	-36170.411	22658.025	-36170.411
		1500	-4907.6	664.09	3217.71	95.12275	95.12275	-4897.311	6617.172	-4897.311
		3000	24276.2	664.09	3217.71	95.12275	95.12275	24375.975	39890.361	24375.975
		4500	34276.2	664.09	3217.71	95.12275	95.12275	39890.361	39890.361	39890.361
4D17	2000	0	-1700.2	-319.57	1760.76	95.12275	95.12275	-15241.431	19834.235	10343.804
		1000	2185.41	-1507.92	4150.37	95.12275	95.12275	711.365	18142.499	711.365
		2000	20041.4	-1507.92	4150.37	95.12275	95.12275	21560.154	56991.283	21560.154
		3000	-16850	-1477.14	4336.96	95.12275	95.12275	-19355.091	529.859	-19355.091
4D18	2000	0	-16850	-1477.14	4336.96	95.12275	95.12275	-19355.091	529.859	-19355.091
		1000	2292.71	-1477.14	4336.96	95.12275	95.12275	1493.690	16913.931	1493.690
		2000	22735.7	-1477.14	4336.96	95.12275	95.12275	20342.499	40767.731	20342.499
		3000	-16850	-1477.14	4336.96	95.12275	95.12275	-19355.091	529.859	-19355.091
4D19	2250	0	-16850	-1477.14	4336.96	95.12275	95.12275	-19355.091	529.859	-19355.091
		1125	2780.1	-1089.55	5018.62	95.12275	95.12275	4065.123	2713.1273	4065.123
		2250	12114.2	845.33	5018.62	95.12275	95.12275	14657.591	66410.466	14657.591
		3375	-16850	-1477.14	4336.96	95.12275	95.12275	-19355.091	529.859	-19355.091
4D2	4500	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2250	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4500	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6750	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D20	2250	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		1125	2780.1	-1089.55	5018.62	95.12275	95.12275	4065.123	2713.1273	4065.123
		2250	12114.2	845.33	5018.62	95.12275	95.12275	14657.591	66410.466	14657.591
		3375	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D21	4500	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2250	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4500	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6750	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D22	4500	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2250	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4500	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6750	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D23	4375	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2187.5	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4375	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6562.5	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D24	4250	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2125	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4250	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6375	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D25	4375	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2187.5	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4375	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6562.5	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D26	4375	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2187.5	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4375	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6562.5	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D27	4250	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2125	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4250	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6375	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D28	4375	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2187.5	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4375	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6562.5	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D29	4500	0	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		2250	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
		4500	44487.4	-121.6	-177.67	95.12275	95.12275	-325.721	-1070.775	-325.721
		6750	-14485	-121.6	-177.67	95.12275	95.12275	-47235.510	47982.564	-47235.510
4D3	1000	0	-32104	782.72	-1882.05	95.12275	95.12275	-22387.722	-36292.353	-22387.722
		500	-12178	782.72	-1882.05	95.12275	95.12275	-11963.322	-19567.932	-11963.322
		1000	-2240.4	782.72	-1882.05	95.12275	95.12275	-1338.932	-9443.542	-1338.932
			0	-1877.0	-6067.49	121.15	95.12275	95.12275	-22976.497	-33407.409
4D30	4500	0	-1877.0	-6067.49	121.15	95.12275	95.12275	-22976.497	-33407.409	-23407.409
		2250	-1935.9	695.62	121.19	95.12275	95.12275	-2784.107	-2275.109	-2375.109
		4500	12798.2	4676.26	121.19	95.12275	95.12275	12642.194	18837.192	18348.194
			0	-11240	-4318.54	2631.98	95.12275	95.12275	-18336.100	-3261.764
4D31	4375	2437.5	5090.6	1697.96	2631.98	95.12275	95.12275	7127.965	18182.304	7127.978
		4875	21142.7	2124.65	2631.98	95.12275	95.12275	21790.770	40235.034	21790.770

4D32	3000	0	-367.94	1.37	5.03	95.12275	95.12275	-41742.545	-41723.212	41722.212
		3500	-0.49	-1.27	5.03	95.12275	95.12275	-10.743	11.068	-10.243
		7000	35737.5	-1.37	5.03	95.12275	95.12275	41723.052	41744.052	41723.052
4D33	1414.2	0	-4379.01	418.42	520.28	95.12275	95.12275	7137.283	50583.753	50583.753
		307.11	14400.6	418.42	307.11	95.12275	95.12275	1.0000000	1.0014083	15568.767
		1414.21	32438.7	418.42	307.11	95.12275	95.12275	34300.103	34445.478	24000.162
4D34	1414.2	0	-6315.17	409.73	3746.97	95.12275	95.12275	7079.045	20656.379	8159.943
		707.11	14242.1	409.73	1046.97	95.12275	95.12275	17490.440	39137.114	15490.440
		1414.21	20373	409.73	3546.97	95.12275	95.12275	29421.546	37529.120	23921.546
4D35	4770	0	-2674.2	-394.02	-3814.96	95.12275	95.12275	-11351.014	-44043.246	-31101.014
		3625	1521.1	-394.02	-3814.96	95.12275	95.12275	-3001.949	-11724.821	-1061.935
		5090	24449.1	-394.02	-3814.96	95.12275	95.12275	26883.036	12590.304	12590.304
4D36	4770	0	-294.2	-393.23	-3543.16	95.12275	95.12275	-11341.038	-44124.100	-31241.038
		3625	-2491.2	-393.23	-3543.16	95.12275	95.12275	-3779.011	-10504.083	-10504.083
		5090	24479	-393.23	-3543.16	95.12275	95.12275	29391.014	12513.942	12513.942
4D37	1000	0	-52.700	770.62	-1180.34	95.12275	95.12275	-3506.530	20070.770	-3506.530
		500	12710	770.62	-1000.34	95.12275	95.12275	-10841.100	-27454.578	-12841.100
		1000	-2331.5	770.62	-1660.24	95.12275	95.12275	-2316.736	10030.178	-2316.736
4D38	4500	0	-430.48	-133.39	-113.81	95.12275	95.12275	-47440.570	-47917.899	-47440.570
		2000	-569.87	-133.39	-113.81	95.12275	95.12275	-520.733	1007.440	-520.733
		4500	44300.1	-133.39	-113.81	95.12275	95.12275	46700.603	45901.895	45901.895
4D39	1000	0	-2303.08	-319.27	-1860.78	95.12275	95.12275	-2971.375	10602.542	-3807.330
		500	12731.1	-319.27	-1660.78	95.12275	95.12275	-13031.000	-26426.943	-13031.000
		1000	-22659.1	-319.27	-1660.78	95.12275	95.12275	23456.139	30531.331	23456.139
4D40	1000	0	-1701	-339.75	-1610.01	95.12275	95.12275	-18339.271	11427.008	-11427.008
		500	7042.0	-339.75	-1610.01	95.12275	95.12275	-7304.977	1142.829	-1142.829
		1000	-2834.54	-339.75	-1610.01	95.12275	95.12275	2619.530	9351.572	2619.530
4D41	1000	0	-2242.4	782.72	-1860.05	95.12275	95.12275	-1532.973	9443.543	-1532.973
		500	7079.43	782.72	-1860.05	95.12275	95.12275	6635.462	9301.878	9301.878
		1000	-15607.6	782.72	-1860.05	95.12275	95.12275	-19300.068	11403.958	11403.958
4D42	1000	0	-1083.15	770.62	-1060.34	95.12275	95.12275	-2216.792	10030.178	-2216.792
		500	5046.10	770.62	-1060.34	95.12275	95.12275	6007.851	594.023	594.023
		1000	-16974.2	770.62	-1060.34	95.12275	95.12275	18635.140	10910.612	10910.612
4F1	3841.5	0	-368.53	13.41	100.09	50.89207	50.89207	-2800.377	2131.999	-2131.999
		1920.74	20.82	13.41	100.09	50.89207	50.89207	48.542	489.920	48.542
		3841.43	2747.97	13.41	100.09	50.89207	50.89207	3999.449	3719.227	2999.449
4F10	5094.9	0	-17.43	9.91	153.08	50.89207	50.89207	-2040.647	-1591.527	-1591.527
		1547.43	41.40	9.91	153.08	50.89207	50.89207	52.940	707.296	52.940
		3094.83	2130.32	9.91	154.08	50.89207	50.89207	2130.772	8003.168	2130.772
4F11	5094.9	0	-22.89	9.9	153.73	50.89207	50.89207	-2250.635	-1801.759	-1801.759
		1547.43	41.51	9.9	-115.22	50.89207	50.89207	-54.622	-101.947	-54.622
		3094.83	2145.5	9.9	-157.23	50.89207	50.89207	2242.810	1199.876	1290.876
4F12	2844.9	0	-378.87	0.2592	-223.19	50.89207	50.89207	-2376.322	-3213.625	-2276.322
		1422.43	-177.95	0.2592	-223.19	50.89207	50.89207	-164.945	-1107.342	-164.945
		2844.83	182.79	0.2592	-223.19	50.89207	50.89207	1946.332	1008.924	1008.924
4F13	2892	0	-19.13	-17.99	-60.38	50.89207	50.89207	-2067.722	-2323.419	-2067.722
		1440.83	-72.3	-17.99	-60.38	50.89207	50.89207	70.551	-1171.146	78.551
		3094.81	2156.86	-17.99	-60.38	50.89207	50.89207	2204.815	1969.118	1969.118
4F14	3094.9	0	-3196.3	7.18	-26.73	50.89207	50.89207	-2115.883	-2426.151	-2315.883
		1547.43	-9.03	-7.18	-26.73	50.89207	50.89207	-17.073	-129.330	-17.073
		3094.81	2179.37	-7.18	-26.73	50.89207	50.89207	2279.260	2167.484	2167.484
4F15	3094.9	0	-2126.1	-0.77	-26.73	50.89207	50.89207	-2115.883	-2426.151	-2315.883
		1547.43	-5.62	-0.77	-26.73	50.89207	50.89207	-17.073	-129.330	-17.073
		3094.81	2179.37	-0.77	-26.73	50.89207	50.89207	2279.260	2167.484	2167.484
4F16	2893	0	-2135.7	13.15	59.94	50.89207	50.89207	-2223.428	-1971.880	-1971.880
		1440	-91.64	13.15	59.94	50.89207	50.89207	77.167	174.584	77.167
		2892	1870.42	13.15	59.94	50.89207	50.89207	2064.106	1300.817	2064.106
4F2	3841.5	0	-2684.4	13.11	101.41	50.89207	50.89207	-2804.576	-2573.954	-2573.954
		1920.74	30.74	13.11	101.41	50.89207	50.89207	46.043	471.965	46.043
		3841.43	2745.91	13.11	101.41	50.89207	50.89207	2896.961	2323.882	2896.961
4F3	768.3	0	-1100.3	-741.7	299.76	50.89207	50.89207	-1314.569	-55.377	-55.377
		384.15	-537.24	-151.7	299.76	50.89207	50.89207	-744.387	514.601	-744.387
		768.2	-1421	-151.7	299.76	50.89207	50.89207	-174.206	1004.787	-174.206
4F4	768.3	0	-3.03	149.38	-288.35	50.89207	50.89207	154.928	-1056.142	154.928
		384.15	541.01	149.38	-288.35	50.89207	50.89207	725.120	-483.931	725.120
		768.5	1084.04	149.38	-288.35	50.89207	50.89207	1293.301	54.731	54.731
4F5	768.3	0	-511.24	13.38	-68.52	50.89207	50.89207	-323.382	-611.157	-523.382
		384.15	31.19	13.38	-68.52	50.89207	50.89207	40.799	-240.966	40.799
		768.3	574.22	13.38	-68.52	50.89207	50.89207	616.930	329.196	329.196
4F6	768.3	0	-505.69	14.37	77.69	50.89207	50.89207	-515.960	-877.098	-515.960
		384.15	57.34	14.37	77.69	50.89207	50.89207	34.252	-347.716	34.252
		768.3	590.37	14.37	77.69	50.89207	50.89207	624.404	322.466	322.466
4F7	3841.5	0	-2725.0	-2.14	-71.14	50.89207	50.89207	-2859.917	-2176.703	-2859.917
		1920.74	5.44	-3.14	-71.14	50.89207	50.89207	-9.009	-307.797	-9.009
		3841.43	3709.72	-3.14	-71.14	50.89207	50.89207	2841.909	2543.121	2543.121

4P8	3841.5	0	-3710	303	70.95	50.89207	50.89207	-3842.340	-2544.350	-2744.350
	1920.74	5.12		303	70.95	50.89207	50.89207	8.979	306.569	8.979
	3841.48	2720.27		303	70.95	50.89207	50.89207	2039.456	3157.476	2359.426
4P9	3844.9	0	-3768.3	1.11	-224.39	50.89207	50.89207	-2073.973	-3216.413	-3273.973
	1422.43	-156.06		1.11	-224.39	50.89207	50.89207	-162.696	-1103.136	-162.696
	2844.63	1254.35		1.11	-224.39	50.89207	50.89207	1940.788	1006.142	1006.142
5A1	2750	250	-39062	-3339.4	36471.53	678.7647	340.9291	89233.375	105611.194	59330.075
	1600	32271	-3145.51	33471.53	678.7647	340.9291	340.9291	109499.579	215551.891	109499.579
	3000	-6911.1	-2783.52	32471.53	678.7647	340.9291	340.9291	127033.019	233117.336	127033.019
5A10	2750	250	-39911	-7043.22	61353.31	678.7647	340.9291	94216.363	314793.301	94216.363
	1600	-20104	-3854.73	61353.31	678.7647	340.9291	340.9291	114150.905	234730.990	114150.905
	3000	-6398.2	-1495.43	61353.31	678.7647	340.9291	340.9291	131114.329	253302.401	131114.329
5A11	1100	0	42310.6	15177.7	14595.33	678.7647	340.9291	408336.521	347536.133	247536.133
	500	47645.4	15551.02	44595.23	678.7647	340.9291	340.9291	414239.556	227661.667	253661.667
	1100	54411.2	16890.2	44595.23	678.7647	340.9291	340.9291	433954.703	381536.214	361536.214
5A12	1100	0	41748.3	15041.28	44486.06	678.7647	340.9291	407901.463	246334.726	246334.726
	350	47191.2	15419.41	44466.08	678.7647	340.9291	340.9291	414109.010	232432.371	252432.371
	1100	53947.1	16553.73	44466.08	678.7647	340.9291	340.9291	432304.157	380783.412	360783.412
5A13	1750	0	230797	11254.82	60309.38	678.7647	340.9291	355071.184	239452.867	235071.184
	375	31205.1	13311.45	60319.36	678.7647	340.9291	340.9291	364663.020	259044.694	264663.020
	1750	42302	15121.97	60309.38	678.7647	340.9291	340.9291	379301.918	314182.541	275301.918
5A14	1750	0	28086.4	12643.03	61713.84	678.7647	340.9291	373539.514	302908.309	239539.514
	375	34244.5	13297.07	61713.84	678.7647	340.9291	340.9291	389151.411	318300.406	269151.411
	1750	45791.2	16408.16	61713.84	678.7647	340.9291	340.9291	384290.548	333639.343	284290.548
5A15	4000	0	-3755.00	27625.29	678.7647	340.9291	340.9291	41329.921	31380.034	21329.921
	2000	6691.53	2744.98	27625.29	678.7647	340.9291	340.9291	105894.861	136144.974	105894.861
	4000	35354.3	12744.92	27625.29	678.7647	340.9291	340.9291	130459.791	170709.903	130459.791
5A16	4000	0	-4159.2	31047.77	678.7647	340.9291	340.9291	44187.894	38307.263	44187.894
	2000	7230.44	2860.72	31047.77	678.7647	340.9291	340.9291	107127.834	141147.743	107127.834
	4000	87893.2	12840.53	31047.77	678.7647	340.9291	340.9291	170067.764	254987.672	170067.764
5A17	4000	0	-3710.3	28145.03	678.7647	340.9291	340.9291	38948.123	31380.691	28948.123
	2000	3849	2028.14	28145.03	678.7647	340.9291	340.9291	103513.013	121443.631	103513.013
	4000	37782.3	12028.14	28145.03	678.7647	340.9291	340.9291	140078.013	170510.571	140078.013
5A18	4000	0	-3678.2	28449.26	678.7647	340.9291	340.9291	39540.894	30153.782	29540.894
	2000	3660.33	2081.23	28449.26	678.7647	340.9291	340.9291	103905.836	127618.722	103905.836
	4000	32103.2	12021.32	28449.26	678.7647	340.9291	340.9291	148470.778	172183.682	148470.778
5A19	4000	0	-4151.1	31779.65	678.7647	340.9291	340.9291	44373.368	32571.370	44373.368
	2000	8430.2	3033.32	31779.65	678.7647	340.9291	340.9291	107813.306	143111.310	107813.306
	4000	32373.1	13033.32	31779.65	678.7647	340.9291	340.9291	170753.233	208451.343	170753.233
5A2	2750	250	-112748	-39374.66	29658.03	678.7647	340.9291	-21465.037	-35211.621	-31465.037
	1625	-97336	-33006.87	29658.03	678.7647	340.9291	340.9291	1701.716	7043.268	7701.716
	3000	-47812	-28280.31	29658.03	678.7647	340.9291	340.9291	32113.933	17366.349	17366.349
5A20	4000	0	-2502.1	28609.82	678.7647	340.9291	340.9291	63245.369	86230.240	63245.369
	2000	7419.33	3088.72	28609.82	678.7647	340.9291	340.9291	106610.209	131125.181	106610.209
	4000	36632.4	13038.72	28609.82	678.7647	340.9291	340.9291	151375.149	175760.120	151375.149
5A21	3600	0	-13128	-2232.36	-33984.77	678.7647	340.9291	131115.396	-179920.139	131115.396
	1300	11613.1	-219.86	-33984.77	678.7647	340.9291	340.9291	159311.352	-151772.153	159311.352
	2600	-42203.5	5211.65	-33984.77	678.7647	340.9291	340.9291	197147.218	-113941.317	197147.218
5A22	2600	0	-12859	-39246.03	678.7647	340.9291	340.9291	191443.153	-180738.674	131443.153
	1300	11281.7	-176.36	-39246.03	678.7647	340.9291	340.9291	159639.129	-152543.693	159639.129
	2600	-43474.3	3261.14	-39246.03	678.7647	340.9291	340.9291	197470.965	-114710.862	197470.965
5A23	1750	250	-54093	-6992.77	53181.51	678.7647	340.9291	132677.369	197599.600	132677.369
	1125	-31069	-7528.38	62816.51	678.7647	340.9291	340.9291	171198.965	316691.577	171198.965
	2000	-21051	-6571.24	62816.51	678.7647	340.9291	340.9291	192401.513	234322.526	189401.514
5A24	1750	0	37542	15805.6	-60836.59	678.7647	340.9291	374939.063	199492.383	374939.063
	375	53066.7	17119.67	-60836.59	678.7647	340.9291	340.9291	295343.493	-179087.939	295343.493
	1750	76943	22035.6	-60836.59	678.7647	340.9291	340.9291	302768.511	-152664.940	302768.511
5A25	1750	0	35930.6	14210.37	-63793.45	678.7647	340.9291	272195.768	314634.581	272195.768
	375	53449.2	16724.34	-63793.45	678.7647	340.9291	340.9291	292600.105	-194350.152	292600.105
	1750	52230.5	21060.27	-63793.45	678.7647	340.9291	340.9291	320023.123	-166827.140	320023.123
5A26	1750	250	-831971	-8163.39	65662.1	678.7647	340.9291	154583.758	311446.306	154583.758
	1125	-36379	-8698.74	65662.1	678.7647	340.9291	340.9291	170686.345	230549.393	170686.345
	2000	-20944	-5741.71	65662.1	678.7647	340.9291	340.9291	191317.394	242130.542	191317.394
5A27	2750	0	3352.16	4339.81	63100.34	678.7647	340.9291	147405.878	273118.997	147405.878
	1375	29747.2	6723.09	63100.34	678.7647	340.9291	340.9291	177805.125	303315.243	177805.125
	2750	37386	9906.69	63100.34	678.7647	340.9291	340.9291	210178.634	338328.733	210178.634
5A28	3750	0	22074.3	10812.86	58421.81	678.7647	340.9291	173242.828	279905.130	173242.828
	1375	32626.7	15339.45	58421.81	678.7647	340.9291	340.9291	210837.887	316948.160	210837.887
	2750	86070.6	21906.61	58421.81	678.7647	340.9291	340.9291	252687.432	332747.715	252687.432
5A29	2750	0	37306.4	23449.47	30155.09	678.7647	340.9291	366314.927	235571.000	355571.000
	1375	106030	30176.07	30155.09	678.7647	340.9291	340.9291	290727.143	277983.316	277983.316
	2750	127440	44543.22	30155.09	678.7647	340.9291	340.9291	319593.911	307149.900	307149.900
5A3	2750	250	-155190	-42880.13	50891.5	678.7647	340.9291	-88662.106	-78727.478	-88662.106
	1625	-121748	-36312.94	50891.5	678.7647	340.9291	340.9291	-26862.541	-36427.971	-26862.541
	2000	-91193	-31786.38	50891.5	678.7647	340.9291	340.9291	10182.468	617.159	617.159

5A30	2750	0	107303	33610,43	30577,3	678,7647	240,9291	551470,455	280387,935	280385,933
		1375	137857	47331,02	30577,3	678,7647	240,9291	325515,524	317630,975	317630,975
		2750	171292	48364,2	30577,3	678,7647	240,9291	370315,079	355461,520	355460,530
5A31	2750	0	87848,2	33458,56	29447,06	678,7647	240,9291	266672,855	251039,198	251039,198
		1375	106349	33177,12	29447,06	678,7647	240,9291	291055,362	275451,475	275451,425
		2750	127722	44244,31	29447,06	678,7647	240,9291	320351,835	304610,178	304610,178
5A32	2750	0	43063,1	16730,87	37772,96	678,7647	240,9291	207362,477	206897,506	207362,477
		1375	69460,6	12354,09	37772,96	678,7647	240,9291	231558,712	230393,838	231558,712
		2750	97399,4	21577,49	37772,96	678,7647	240,9291	264172,330	263467,356	264172,330
5A33	2750	0	42935,1	16031,04	36038,81	678,7647	240,9291	365315,615	227654,687	201223,615
		1375	69382,1	16944,32	33038,81	678,7647	240,9291	331419,361	251870,714	231419,361
		2750	97166,9	15772,92	33038,81	678,7647	240,9291	363993,381	284444,342	263993,381
5A34	2750	0	28281,8	33487,93	29756,21	678,7647	240,9291	267130,618	252615,047	252615,047
		1375	106787	33214,3	29756,21	678,7647	240,9291	291562,815	277227,876	277227,876
		2750	128198	44581,63	29756,21	678,7647	240,9291	330729,596	306394,620	306394,620
5A35	2750	0	107358	37741,95	31240,31	678,7647	240,9291	291555,068	285733,061	285733,061
		1375	138092	42468,42	31240,31	678,7647	240,9291	325900,108	320796,108	320796,108
		2750	171324	48935,7	31240,31	678,7647	240,9291	370699,665	363797,655	363597,655
5A36	2750	0	32300,7	33871,14	31500,56	678,7647	240,9291	267868,215	259817,933	259817,933
		1375	106894	33237,7	31500,56	678,7647	240,9291	292077,427	284330,149	284330,149
		2750	128305	44964,89	31500,56	678,7647	240,9291	331344,120	313396,913	313396,913
5A37	2750	0	32356,4	11866,78	31259,18	678,7647	240,9291	176442,670	294545,916	176442,670
		1375	14110,3	16573,25	31259,18	678,7647	240,9291	212487,709	331390,956	212487,709
		2750	32552,3	23905,33	31259,18	678,7647	240,9291	255287,264	373890,511	255287,264
5A38	2750	0	414839	5126,91	65915,63	678,7647	240,9291	149655,286	283363,256	149655,286
		1375	305482,9	7490,10	65915,63	678,7647	240,9291	179247,136	316731,472	179247,136
		2750	58382,7	10673,78	65915,63	678,7647	240,9291	211820,656	349354,992	211820,656
5A39	2750	0	115939	40188,56	28611,49	678,7647	240,9291	-24623,101	-43766,153	-24623,101
		1625	94529	-33821,37	28611,49	678,7647	240,9291	4543,663	14399,299	4543,663
		3000	-76000	-29094,81	28611,49	678,7647	240,9291	23955,879	9312,828	9212,828
5A40	2250	0	-41671	-10512,47	549,81	678,7647	240,9291	115476,011	-52454,166	115476,011
		1125	-33367	-10512,47	549,81	678,7647	240,9291	124242,522	-49717,643	124242,522
		2250	-34973	-10512,47	549,81	678,7647	240,9291	133009,668	-14951,109	133009,668
5A42	2000	0	26736,5	10870,53	549,81	678,7647	240,9291	231040,454	41796,605	41796,605
		1000	34157,9	10870,53	549,81	678,7647	240,9291	238832,924	49589,075	49589,075
		2000	41572,3	10870,53	549,81	678,7647	240,9291	246625,394	57381,545	57381,545
5A47	3000	0	30967,2	11965,35	468,83	678,7647	240,9291	236506,313	46930,348	46930,348
		1000	28228,7	11965,35	468,83	678,7647	240,9291	244298,783	54714,818	54714,818
		2000	47351,1	11965,35	468,83	678,7647	240,9291	252091,213	62507,288	62507,288
5A49	2250	0	-57300	-9478,65	468,83	678,7647	240,9291	120941,870	-47355,423	120941,870
		1125	-39151	-9478,65	468,83	678,7647	240,9291	129706,404	-38591,389	129706,404
		2250	-26203	-9478,65	468,83	678,7647	240,9291	138474,927	-29825,366	138474,927
5A5	2750	250	-23652	-4436,9	44132,34	678,7647	240,9291	110866,831	136518,389	110866,831
		1625	-5128,3	-1253,31	44132,34	678,7647	240,9291	132612,305	186659,243	132612,305
		3000	10555,8	1169,97	44132,34	678,7647	240,9291	151980,326	198027,365	151980,326
5A6	2750	250	-22301	-4624,77	44032,11	678,7647	240,9291	109936,667	155500,220	109936,667
		1625	-5824,5	-1441,18	44032,11	678,7647	240,9291	131682,041	177301,594	131682,041
		3000	10257,3	922,1	44032,11	678,7647	240,9291	151950,163	196673,715	151950,163
5A7	2750	250	-115527	-40097,59	28279,88	678,7647	240,9291	-34094,415	-42110,329	-34094,415
		1625	-94116	-37730,4	28279,88	678,7647	240,9291	5072,338	-12943,476	5072,338
		3000	-75593	-29003,84	28279,88	678,7647	240,9291	29484,565	11463,751	11463,751
5A8	2750	250	-154591	-42697,02	31660,34	678,7647	240,9291	67799,678	-74127,560	-67799,678
		1625	-101110	-36329,99	31660,34	678,7647	240,9291	26000,102	-32337,984	-26000,102
		3000	-90525	-31013,28	31660,34	678,7647	240,9291	11044,937	-4767,045	-4767,045
5A9	2750	250	-113472	-39028,07	30725,36	678,7647	240,9291	-3075,9291	-3050,728	-20753,930
		1625	-92006	-32660,88	30725,36	678,7647	240,9291	8410,823	-1753,975	8410,323
		3000	-73483	-27934,32	30725,36	678,7647	240,9291	38223,030	27538,253	32552,253
5B1	4200	150	-16943	-3456,67	-831,05	302,42	185,9367	776,886	-36980,824	776,886
		2250	-63381	-373,67	-831,05	302,42	185,9367	23304,256	-4553,514	23304,256
		4200	15615,6	4671,33	-831,05	302,42	185,9367	49631,626	17873,856	17873,856
5B10	4025	250	-34374	-6687,32	-87,45	302,42	185,9367	-17792,332	-45482,086	-17792,332
		2062,5	192,36	-1093,77	-87,45	302,42	185,9367	24375,983	-1313,771	24375,983
		4025	34620	4421,08	-87,45	302,42	185,9367	66315,629	40625,876	40625,876
5B11	4050	225	-16308	-3735,63	216,65	302,42	185,9367	-18981,371	-43237,593	-18981,371
		2250	-1641,9	-177,91	216,65	302,42	185,9367	23255,341	1000,881	23255,341
		4025	33021,3	5383,81	216,65	302,42	185,9367	65492,063	41235,843	41235,843
5B12	4050	225	-35292	-3965,51	-2216,43	302,42	185,9367	-13153,263	-52638,961	-13153,263
		2250	-627,87	-403,79	-2216,43	302,42	185,9367	34082,906	-10392,249	24082,909
		4025	34035,9	5177,93	-2216,43	302,42	185,9367	66319,631	31844,463	31844,463
5B13	4550	225	-35765	-4536,17	2483,59	302,42	185,9367	-19304,456	-57275,898	-19304,456
		2500	1471,77	788,54	2483,59	302,42	185,9367	24345,566	12376,004	12376,004
		4775	38106,5	5317,26	2483,59	302,42	185,9367	67995,578	56026,016	56026,016
5B14	4550	225	-33901	-4684,75	2597,06	302,42	185,9367	-20214,135	-31307,123	-20214,135
		2500	733,97	251,97	2597,06	302,42	185,9367	23435,877	11942,859	11942,859
		4775	37368,7	5188,89	2597,06	302,42	185,9367	87085,889	55562,901	55562,901

SB15	2150	1351	-15088	-4993,45	-9542,19	302,42	185,9367	25778,800	-61768,800	25778,800
		1200	-11105,6	-3670,61	-9542,19	302,42	185,9367	61871,016	-25616,332	61871,016
		2275	-31524,1	-8169,35	-9542,19	302,42	185,9367	97614,171	126,766	126,766
SB16	3150	1351	-27683	-4705,15	10671,18	302,42	185,9367	12534,044	10786,910	10786,910
		1200	-7180	-625,46	10671,18	302,42	185,9367	39007,145	36620,031	36620,031
		2275	-18734,5	7045,42	10671,18	302,42	185,9367	75511,724	77709,663	77709,663
SB17	4150	1351	-44190	-1221,47	302,42	185,9367	37029,464	37029,464	-27029,464	-27029,464
		1200	-2911,32	1370,34	-1221,42	302,42	185,9367	30690,295	394,779	394,779
		2275	-49012,3	-13220,64	-1221,42	302,42	185,9367	38411,253	35115,138	35115,138
SB18	4050	225	-43754	-11242,02	302,42	185,9367	-32550,459	33932,11	32550,459	32550,459
		1200	-367,86	-371,72	-430,5	302,42	185,9367	25161,634	1761,837	1761,837
		4275	-44469,1	10490,94	302,42	185,9367	33342,273	39481,306	59421,206	59421,206
SB19	4050	225	-43012	-11156,7	-1361,23	302,42	185,9367	34754,453	-33197,74	-34754,453
		1200	-1319	-366,4	-1361,23	302,42	185,9367	32963,900	-3399,109	31963,900
		4275	-42291,4	10603,9	-1361,23	302,42	185,9367	20706,743	49321,147	49321,147
SB20	4200	1351	-17117	-423,55	-430,57	302,42	185,9367	392,042	-2356,157	-392,042
		1200	-20,82	-379,97	-430,57	302,42	185,9367	33020,412	-3937,703	33020,412
		4275	-15301,2	-4670,02	-430,57	302,42	185,9367	45647,782	16424,602	16424,602
SB21	4025	225	-47123	-1331,21	-437,5	302,42	185,9367	-37314,946	-34432,981	-37314,946
		1200	-3034,1	-1600,72	-437,5	302,42	185,9367	30419,106	6693,264	30419,106
		4275	-40019,8	3119,71	-437,5	302,42	185,9367	77717,612	30349,034	30349,034
SB22	4025	1351	-33034	-1370,82	-280,34	302,42	185,9367	-27431,416	-33381,302	-27431,416
		1200	-2999,9	-1771,8	-280,34	302,42	185,9367	23312,630	7637,262	23312,630
		4275	-30789,1	9009,05	-280,34	302,42	185,9367	77610,511	40640,640	49640,640
SB23	4050	225	-47129	-11392,72	-1625,75	302,42	185,9367	-34281,351	-32321,109	-34281,351
		1200	-3027,9	-526,42	-1625,75	302,42	185,9367	21432,561	-10661,751	21432,561
		4275	-41074,1	10341,62	-1625,75	302,42	185,9367	75132,899	47154,598	47154,598
SB24	4050	225	-44230	-11473,92	241,53	302,42	185,9367	-34030,625	-32232,349	-34030,625
		1200	-300,11	-603,62	241,53	302,42	185,9367	25639,705	-311,691	25639,705
		4275	-43331,4	10266,62	241,53	302,42	185,9367	31360,082	37308,358	37268,358
SB25	4050	225	-42367	-10341,57	-1321,77	302,42	185,9367	-30115,315	-32112,905	-30115,315
		1200	-1394,02	-326,74	-1321,77	302,42	185,9367	27605,815	-4792,536	27605,815
		4275	-43595,5	11699,04	-1321,77	302,42	185,9367	35325,403	32237,823	32237,823
SB26	4350	225	-41450	-11555,24	-642,24	302,42	185,9367	-41071,114	-30774,347	-41071,114
		1200	-1019,72	-733,22	-642,24	302,42	185,9367	33101,692	3398,376	3398,376
		4275	-3993,21	-13420,72	-642,24	302,42	185,9367	91153,191	71449,959	71449,959
SB27	3275	225	-44132	-14631,06	1076,53	302,42	185,9367	-28185,933	-34786,348	-28185,933
		1200	-30361	-10458,32	1076,53	302,42	185,9367	-9869,523	-36470,438	-9869,523
		4275	-3502	-7144,04	1076,53	302,42	185,9367	3879,420	20720,994	3879,420
SB28	3275	225	-41738	-14659,25	932,87	302,42	185,9367	-28095,497	-33294,743	-28095,497
		1200	-78486	-10466,51	932,87	302,42	185,9367	-9779,037	-34873,333	-9779,037
		4275	-15200	-7153,06	932,87	302,42	185,9367	3970,337	-21228,290	3970,337
SB29	4775	0	-18147	-6479,01	-14382,35	302,42	185,9367	-4513,481	-36264,704	-4513,481
		2287,5	-1436,41	63,55	-14382,35	302,42	185,9367	23444,021	33317,202	23444,021
		4275	-23841,5	7514,66	-14382,35	302,42	185,9367	24058,297	-27653,026	54058,297
SB29	3000	0	-54725	-13614,38	-2010,31	302,42	185,9367	-29846,819	-35674,284	-29846,819
		1200	-16485	241,67	-2010,31	302,42	185,9367	20465,245	-8262,321	20465,244
		2000	-33695,2	14297,92	-2010,31	302,42	185,9367	70777,306	41948,842	41949,242
SB30	2100	1351	-10226,6	957,07	36196,39	302,42	185,9367	60377,608	163737,725	60377,608
		1200	-17055,8	2729,94	36196,39	302,42	185,9367	69308,729	172798,247	69308,729
		2250	-24336	4737,07	36196,39	302,42	185,9367	75082,476	182573,593	75082,476
SB30	4775	0	-17986	-6446,1	-14428,68	302,42	185,9367	-4259,766	-36633,335	-4259,766
		2287,5	-2177,6	92,48	-14428,68	302,42	185,9367	23666,726	-36378,843	23666,726
		4275	-22822,4	7545,59	-14428,68	302,42	185,9367	34281,502	-37694,067	34281,502
SB31	750	225	-9456	-36044,59	-1366,51	302,42	185,9367	553,321	-200190,423	553,321
		625	-922791	-35634,42	-15064,51	302,42	185,9367	1537,832	197500,327	1537,832
		1900	-89613	-34872,71	-15064,51	302,42	185,9367	5186,803	192991,353	5186,803
SB32	3500	0	-71351,5	12944,09	621,96	302,42	185,9367	78251,538	-49794,958	49794,958
		1750	50371,5	19965,77	621,96	302,42	185,9367	102974,945	76718,345	76718,345
		3500	71466,1	23252,7	621,96	302,42	185,9367	135973,654	107717,054	107717,054
SB33	3500	0	-31582,3	12939,89	777,88	302,42	185,9367	75269,117	50015,375	50015,375
		1750	30301,9	19961,57	777,88	302,42	185,9367	102792,518	76938,732	76938,732
		3500	71296,6	23259,5	777,88	302,42	185,9367	135791,227	107927,491	107927,491
SB34	750	225	-93976	-36009,47	-15056,56	302,42	185,9367	327,163	-200351,939	327,163
		625	-91929	-35399,32	-15206,56	302,42	185,9367	1992,965	-197771,805	1992,965
		1000	-89263	-34837,6	-15206,56	302,42	185,9367	5591,945	-194172,525	5591,945
SB35	1275	250	-33416	-6993,48	26397,97	302,42	185,9367	11928,703	68441,289	11928,703
		1187,5	-21343	-5147,94	26397,97	302,42	185,9367	26328,549	82241,136	26328,549
		2125	-10242	-4349,29	26397,97	302,42	185,9367	29143,526	95656,113	29143,526
SB36	1875	250	-33576	-7038,72	26399,42	302,42	185,9367	11713,632	68231,709	11713,632
		1187,5	-21508	-5393,21	26399,42	302,42	185,9367	26112,837	82631,314	26112,837
		2135	-10402	-4294,58	26399,42	302,42	185,9367	35927,304	95446,481	35927,304
SB37	1975	0	-16751,2	7470,01	26266,97	302,42	185,9367	76965,971	135680,706	76965,971
		987,5	23536,9	8618,98	26266,97	302,42	185,9367	90643,021	149358,017	90643,021
		1975	40992,0	10194,2	26266,97	302,42	185,9367	105353,004	164067,740	105353,004

SB38	1975	0	16561,6	7330,61	36212,15	302,42	185,9367	76715,490	139451,933	76715,490
		907,5	23369,7	8069,93	26372,15	302,42	185,9367	90292,709	149139,201	90292,709
		1975	40003,2	10144,75	46372,15	302,42	185,9367	135102,423	183336,913	135102,423
SB39	4250	250	-1151,58	-15515,23	-430,95	302,42	185,9367	-110944,492	-136694,545	-110944,492
		1375	-6107,1	-10492,79	-430,95	302,42	185,9367	-61161,472	-76911,324	-61161,472
		4500	-9982,3	-6360,32	-430,95	302,42	185,9367	-6923,473	-13626,574	-6923,473
SB4	2100	250	6996,09	2594,3	3877,98	302,42	185,9367	86726,155	102790,551	86726,155
		1200	10606,2	3794,8	3877,98	302,42	185,9367	32626,340	176687,186	62600,596
		2250	14317,3	7794,3	3877,98	302,42	185,9367	68502,625	180383,421	68502,625
SB40	4250	250	-11283,0	-15342	-387,69	302,42	185,9367	-110487,549	-136105,709	-110487,549
		2375	-8071,3	-10421,57	-387,69	302,42	185,9367	-80710,528	-76380,639	-80710,528
		4500	-9627,5	-6132,1	-387,69	302,42	185,9367	-7574,412	-13235,730	-7574,412
SB5	2100	250	9766,91	3952,94	39217,67	302,42	185,9367	61890,583	176593,559	61890,583
		1200	13477,6	2932,94	39217,67	302,42	185,9367	65736,788	131966,202	65736,788
		2250	17188,3	3952,94	39217,67	302,42	185,9367	69683,323	180381,527	69683,323
SB6	2100	250	11791,8	1884,49	38323,63	302,42	185,9367	62624,639	177109,162	62624,639
		1200	18630,8	3456,36	38323,63	302,42	185,9367	71712,760	184140,283	71712,760
		2250	25901	5404,49	38323,63	302,42	185,9367	81488,506	192914,032	81488,506
SB9	4050	250	34512	3891,33	-1568,27	302,42	185,9367	-17268,889	-5237,570	-17268,889
		2175	142,77	329,33	-2162,37	302,42	185,9367	34970,039	-10156,847	24976,039
		4275	34812,5	5031,89	-2363,31	302,42	185,9367	67712,551	32099,885	32099,885
SB8	4050	225	-3393,9	-3765,2	-8,02	302,42	185,9367	-18374,274	-43867,770	-18374,274
		2050	-1270,6	-141,48	-6,03	302,42	185,9367	25662,439	1031,047	25662,439
		4275	23373,1	2420,24	-6,03	302,42	185,9367	68299,061	40705,665	40705,665
SB9	4050	250	-34696	-6659,98	-439,3	302,42	185,9367	-18100,192	-45265,816	-18100,192
		2062,5	-128,4	-1068,21	-439,3	302,42	185,9367	24062,103	-10991,301	24062,103
		4275	34709,3	4448,61	-439,3	302,42	185,9367	66007,732	36842,325	36842,325
SBK1	2550	250	-15100	-1683,19	29451,07	244,1098	0	69070,329	101372,645	69070,329
		1425	-346,25	703,26	29451,07	244,1098	0	91271,330	124078,870	91271,330
		2600	10892,6	2019,32	29451,07	244,1098	0	113647,062	145449,802	113647,062
SBK10	2350	130	-1435,7	-2910,97	-29482,71	244,1098	0	71469,013	143250,324	71469,013
		1325	-3006,9	-401,24	-39482,71	244,1098	0	82385,573	-123318,264	82385,573
		2500	9921,85	3229,68	-29482,71	244,1098	0	106968,494	-107750,843	106968,494
SBK11	2500	250	-9490	-17988,11	4264,31	244,1098	0	12200,669	-39277,667	12200,669
		1500	-33093	-11647,49	4264,31	244,1098	0	38461,070	-29627,366	38461,070
		2750	-21800	-7741,24	4264,31	244,1098	0	54419,757	-13108,573	54419,757
SBK12	2500	250	-56780	-21014,33	-491,63	244,1098	0	3754,590	-85748,693	3754,590
		1500	-40815	-15623,71	-491,63	244,1098	0	34014,997	-53488,292	34014,997
		2750	-31782	-11717,46	-491,63	244,1098	0	39973,679	-48339,805	39973,679
SBK13	3500	250	-38742	-18103,2	2017,08	244,1098	0	15251,287	-6715,420	15251,287
		1500	-34853	-12712,58	2017,08	244,1098	0	35511,672	-41453,029	35511,672
		2750	-27244	-8206,33	2017,08	244,1098	0	51470,360	-13498,340	51470,360
SBK14	2550	250	-47383	-3352,42	30929,99	244,1098	0	83446,510	122460,512	83446,510
		1425	3732,82	37,24	30929,99	244,1098	0	94230,539	133844,542	94230,539
		2600	11696,2	3146,93	30929,99	244,1098	0	103429,310	144443,313	103429,310
SBK15	775	0	62966,9	1512,52	16311,18	244,1098	0	343279,141	138278,238	343279,141
		387,5	6405,7	1512,52	16311,18	244,1098	0	344717,033	129716,129	344717,033
		775	65675,2	1512,52	16311,18	244,1098	0	346134,937	141154,031	346134,937
SBK16	775	0	62966,9	1474,81	17059,15	244,1098	0	342841,169	138881,757	342841,169
		387,5	63926,4	1474,81	17059,15	244,1098	0	344779,091	140319,659	344779,091
		775	65295,8	1474,81	17059,15	244,1098	0	345716,982	141757,550	345716,982
SBK17	775	0	15424,9	-3172,39	29937,21	244,1098	0	283473,143	112771,000	283473,143
		387,5	16924,4	-3172,39	29937,21	244,1098	0	289911,046	111428,092	289911,046
		775	18164,3	-3172,39	29937,21	244,1098	0	291343,977	109995,297	291343,977
SBK18	775	0	15377,4	-3114,13	-30178,2	244,1098	0	289009,306	-173346,998	289009,306
		387,5	17246,8	-3114,12	-30178,2	244,1098	0	290447,187	-111909,105	290447,187
		775	18216,3	-3114,12	-30178,2	244,1098	0	291835,095	-110471,204	291835,095
SBK2	3450	150	-17729	-653,1	-31290,64	244,1098	0	67680,434	-108722,534	67680,434
		1375	-2621,5	-653,1	-31290,64	244,1098	0	83680,728	-91922,030	83680,728
		2600	12366,4	-653,1	-31290,64	244,1098	0	99481,012	-77121,755	99481,012
SBK3	2500	250	-34745	-13320,62	6233,52	244,1098	0	36019,938	-27237,863	36019,938
		1500	-20340	-8929,99	6233,52	244,1098	0	56280,399	-2977,254	56280,399
		2750	-9547,1	-3023,74	6233,52	244,1098	0	72239,087	12981,434	72239,087
SBK4	2500	250	-54153	-20300,7	200,5	244,1098	0	7366,893	-77229,443	7366,893
		1500	-40248	-14310,08	200,5	244,1098	0	27627,296	-56969,043	27627,296
		2750	-28956	-10903,93	200,5	244,1098	0	43583,983	-41012,394	43583,983
SBK5	2500	250	-47201	-17263,38	4024,87	244,1098	0	17750,450	-50782,534	17750,450
		1500	-33296	-11872,78	4024,87	244,1098	0	38010,851	-30323,133	38010,851
		2750	-22004	-7966,51	4024,87	244,1098	0	53969,538	-14364,445	53969,538
SBK6	2350	150	-16374	-3007,43	-29187,67	244,1098	0	69701,258	-143753,211	69701,258
		1325	-4895,5	-325,33	-29187,67	244,1098	0	86618,316	-126856,651	86618,316
		2500	8194,74	5433,15	-29187,67	244,1098	0	105201,239	-10253,730	105201,239
SBK7	2350	150	-2223,1	-2141,34	-947,83	244,1098	0	80009,281	-14862,960	80009,281
		1325	-256,82	24,67	-947,83	244,1098	0	90648,197	-4224,644	90648,197
		2500	2214,5	2478,57	-947,83	244,1098	0	102119,673	7246,833	7246,833

5B102	2120	0	-5134.7	-247.81	439.73	244.1098	0	73219.650	3420.701	73219.650
		1250	-245.48	-347.81	439.73	244.1098	0	73121.030	1381.412	73121.412
		2120	-433.77	-247.81	439.73	244.1098	0	32224.063	6432.624	64224.063
5B103	2120	0	-5135.4	-247.81	443.98	244.1098	0	73091.654	3420.617	73091.654
		1250	-192.11	32.00	443.98	244.1098	0	90730.171	-4122.800	90730.171
		2120	-2279.21	-247.94	443.98	244.1098	0	102751.063	7349.197	7349.197
5C1	4500	0	-13296	-5003.91	807.08	108.1772	74.27159	-11472.830	-15405.304	-11472.830
		2250	1660.47	108.01	807.08	108.1772	74.27159	9654.632	3719.098	9654.632
		4500	-4275	16220	8119.73	851.32	108.1772	34211.964	2604.410	2604.410
5C10	4500	0	-20596	-9614.71	1497.22	108.1772	74.27159	-35128.137	-23353.567	-35128.137
		2250	5605.11	2266.43	1497.22	108.1772	74.27159	14651.673	13636.338	14651.673
		4500	-21708.2	-14138.48	1994.11	108.1772	74.27159	-44331.473	-36908.326	-44331.473
5C11	5000	0	-27597	-12193.95	271.33	108.1772	74.27159	-33847.333	-40288.737	-33847.333
		2500	1351.3	-421.45	263.33	108.1772	74.27159	3245.227	-3296.112	3245.227
		5000	-2482.7	13631.33	363.33	108.1772	74.27159	-43327.612	-33796.512	-43327.612
5C12	4500	0	-20377	-9125.48	1135.98	108.1772	74.27159	-34544.943	-40137.258	-34544.943
		2250	9224	2548.52	-1139.98	108.1772	74.27159	16374.917	-1537038	16374.917
		4500	-32025	-14424.74	-2100.98	108.1772	74.27159	-38664.727	-39221.964	-38664.727
5C13	4500	0	-14607	-12370.39	253.74	108.1772	74.27159	-33244.097	-37336.130	-33244.097
		2250	1394.03	-492.99	253.74	108.1772	74.27159	3741.703	2743.680	3741.703
		4500	-37727	-11370.01	253.74	108.1772	74.27159	-47725.708	-42721.400	-47725.708
5C14	4500	0	-21599	-11370.33	30.22	108.1772	74.27159	-34225.766	-41291.487	-34225.766
		2250	-1393.2	304.12	30.22	108.1772	74.27159	9654.632	-3417.687	9654.632
		4500	-24801.9	-12370.13	-90.25	108.1772	74.27159	-45638.740	-33992.112	-45638.740
5C15	4500	0	-25938	-12398.48	1211.31	108.1772	74.27159	-39221.800	-40288.461	-39221.800
		2250	-1336.8	-1223.46	1211.31	108.1772	74.27159	754.499	743.681	754.499
		4500	-32499.3	-10051.55	1211.31	108.1772	74.27159	-40734.309	-39231.150	-40734.309
5C16	4500	0	-20374	-13742.18	1207.43	108.1772	74.27159	-39414.194	-40733.754	-39414.194
		2250	-13773	-1867.18	1207.43	108.1772	74.27159	585.604	-305.093	585.604
		4500	-32322	-10097.82	1207.43	108.1772	74.27159	-40545.472	-39123.807	-40545.472
5C17	4500	0	-17223	-11292.29	198	108.1772	74.27159	-34369.653	-41603.214	-34369.653
		2250	-1721.6	476.71	198	108.1772	74.27159	3530.143	1330.414	3530.143
		4500	-24587.4	-12331.71	198	108.1772	74.27159	-43359.948	-33351.367	-43359.948
5C18	4500	0	-24073	-12258.90	440.34	108.1772	74.27159	-32257.001	-36930.434	-32257.001
		2250	1605.66	-481.32	440.34	108.1772	74.27159	7772.705	1039.376	7772.705
		4500	-27905.7	-11292.06	440.34	108.1772	74.27159	-47772.509	-43009.178	-47772.509
5C19	4500	0	-33982	-9339.33	-1230.74	108.1772	74.27159	-25002.788	-40748.637	-25002.788
		2250	-3992.36	2485.67	-2250.74	108.1772	74.27159	14977.032	-1068.237	14977.032
		4500	-31700.4	-14360.67	-1250.74	108.1772	74.27159	-54956.832	-38910.963	-54956.832
5C2	4030	0	-14313	-4995.67	1053.5	108.1772	74.27159	-11898.648	-14396.357	-11898.648
		2250	1748.67	166.03	1053.5	108.1772	74.27159	9228.646	5128.036	9228.646
		4030	-1696.3	-6127.77	1053.5	108.1772	74.27159	-36355.940	-27453.232	-36355.940
5C20	5000	0	-14377	-12258.38	253.33	108.1772	74.27159	-38111.697	-40930.356	-38111.697
		2500	-1542.7	-693.86	253.33	108.1772	74.27159	3560.928	-1227.731	3560.928
		5000	-24557.4	-10369.62	253.33	108.1772	74.27159	-43273.353	-38404.693	-43273.353
5C2	4500	0	-20414	-9612.66	1881.85	108.1772	74.27159	-24935.137	-23634.129	-24935.137
		2250	9737.09	3262.34	1881.85	108.1772	74.27159	13044.663	18353.672	13044.663
		4500	-31951.1	-14137.34	1881.85	108.1772	74.27159	-50024.483	-36331.472	-50024.483
5C4	4500	0	-24555	-12337.37	-150.79	108.1772	74.27159	-32143.965	-39370.044	-32143.965
		2250	1644.25	-462.37	-150.79	108.1772	74.27159	7833.835	609.756	7833.835
		4500	-27247.3	-11415.63	-150.79	108.1772	74.27159	-47815.635	-40439.556	-47815.635
5C5	4500	0	-27758	-11440.07	1408	108.1772	74.27159	-34502.208	-41139.001	-34502.208
		2250	-1634.7	-404.37	1408	108.1772	74.27159	3416.404	-1177.231	3416.404
		4500	-24649.3	-12099.31	1408	108.1772	74.27159	-45391.244	-38207.779	-45391.244
5C6	4500	0	-31253	-14067.72	-462.39	108.1772	74.27159	-47995.953	-49550.758	-47995.953
		2250	-3353.9	-3192.72	-462.39	108.1772	74.27159	1018.142	-9550.941	1018.142
		4500	-31747.1	-9632.20	-462.39	108.1772	74.27159	-39963.832	-30428.632	-39963.832
5C7	4500	0	-31489	-14119.19	-433.97	108.1772	74.27159	-41295.578	-49711.511	-41295.578
		2250	-5287.8	-3544.10	-433.97	108.1772	74.27159	1315.776	-9731.211	1315.776
		4500	-30913.2	-9630.82	-433.97	108.1772	74.27159	-33664.024	-30248.329	-33664.024
5C8	4500	0	-27897	-11454.84	-3.53	108.1772	74.27159	-34727.101	-41236.457	-34727.101
		2250	-1896.4	-430.16	-3.53	108.1772	74.27159	3252.699	-1336.852	3252.699
		4500	-34504.6	-12291.18	-3.53	108.1772	74.27159	-45331.499	-38623.148	-45331.499
5C9	4500	0	-24528	-12541.48	-133.25	108.1772	74.27159	-33130.714	-39241.123	-33130.714
		2250	1662.92	-466.43	-133.25	108.1772	74.27159	7249.086	738.675	7249.086
		4500	-27664	-11408.52	-133.25	108.1772	74.27159	-47828.886	-40713.475	-47828.886
5D1	2250	125	-20041	-4205.44	-2890.44	95.12273	95.12273	-35870.075	-37609.923	-35870.075
		1250	-476.13	-359.23	-2890.44	95.12273	95.12273	-1490.018	-13439.866	-1490.018
		2250	-14921.3	-1576.63	-2690.44	95.12273	95.12273	-17322.793	-3192.947	-17322.793
5E10	4375	0	-7226.3	-2664.09	3772.28	95.12273	95.12273	-10490.376	3252.701	-10490.376
		2187.5	6902.42	3492.01	3772.28	95.12273	95.12273	9564.162	25707.132	9564.162
		4275	-21832.1	-9059.23	-3772.28	95.12273	95.12273	-31457.394	-47261.470	-31457.394

SD11	4500	0	-14474	-5078,22	492,04	95,12275	95,12275	36927,565	-10461,279	-10461,279
		2150	-250,03	295,62	492,03	95,12275	95,12275	604,435	2671,011	604,483
		4500	15034,2	366,73	892,93	95,12275	95,12275	31736,796	43302,623	21736,796
SD12	4500	0	-16543	-8049,96	0,358	95,12275	95,12275	-25727,979	-33726,315	-33726,315
		2250	-1759	-878,09	0,396	95,12275	95,12275	-2656,674	-2594,016	-2594,016
		4500	12960,1	4693,79	0,498	95,12275	95,12275	12536,627	15788,295	12536,627
SD13	4575	0	-10384	-4112,54	2017,48	95,12275	95,12275	-13437,457	-2938,635	-2938,635
		2437,51	2746,17	1903,94	2017,45	95,12275	95,12275	2002,637	16306,013	2002,637
		4575	22793,2	3370,67	2519,48	95,12275	95,12275	33685,419	41778,632	33685,419
SD14	5000	0	-39778	-109034	80,3	95,12275	95,12275	-41767,032	-41641,193	-41640,190
		2500	-3162	-14034	80,3	95,12275	95,12275	24,150	95,110	34,150
		5000	3671,4	-19034	80,3	95,12275	95,12275	41699,130	41724,410	41699,130
SD15	1414,2	0	-7688,5	-1311,61	16741,47	95,12275	95,12275	-9441038	79775,275	-9441038
		707,11	15142,8	1511,61	16741,47	95,12275	95,12275	17472,431	82306,607	17472,431
		1414,21	23178,7	1711,61	33481,47	95,12275	95,12275	23905,336	36638,631	23905,336
SD16	1414,2	0	-6782,54	-1475,71	17038,35	95,12275	95,12275	-871,373	30745,543	-871,373
		707,11	14812,8	-1475,71	17038,35	95,12275	95,12275	17168,763	38628,938	17168,763
		1414,21	22842,6	-1475,71	33928,35	95,12275	95,12275	25234,172	47915,343	25234,172
SD17	4750	250	-31417	-1660,68	-13094,74	95,12275	95,12275	-34731,332	-39736,540	-34731,332
		2625	-4446,7	-1660,68	-13094,74	95,12275	95,12275	-6412,407	-61414,815	-6412,407
		5000	25333,8	-1660,68	-13094,74	95,12275	95,12275	31905,318	33392,390	31905,318
SD18	4750	250	-31637	-1658,24	-13745,53	95,12275	95,12275	-34785,324	-39792,504	-34785,324
		2625	-4310,4	-1658,24	-13745,53	95,12275	95,12275	-6346,209	-61471,479	-6346,209
		5000	22660,1	-1658,24	-13745,53	95,12275	95,12275	29072,017	33154,454	29072,017
SD1	2125	0	-1497,24	-2245,02	6745,52	95,12275	95,12275	-3139,373	34465,537	-3139,373
		1137,5	11907,8	4007,97	6745,52	95,12275	95,12275	16175,565	44096,749	16175,565
		2125	21302,1	3046,64	6745,52	95,12275	95,12275	30816,182	39147,372	30816,182
SD2	4500	0	-14484	-3474,99	512	95,12275	95,12275	-20935,075	-18735,477	-18735,477
		2250	-120,18	-103,11	512	95,12275	95,12275	198,404	1344,024	198,404
		4500	15044,3	5268,76	512	95,12275	95,12275	21328,724	32479,124	21328,724
SD4	4500	0	-15817	-3214,91	311,5	95,12275	95,12275	-31348,033	-26039,723	-26039,723
		2250	-282,43	36,97	311,5	95,12275	95,12275	-215,722	1092,378	-215,722
		4500	14497,7	3428,94	311,5	95,12275	95,12275	20916,573	32224,878	20916,573
SD6	4375	0	-6947,5	-2851,5	3713,37	95,12275	95,12275	-10120,873	-5475,278	-10120,877
		2187,5	2491,42	2902,90	3713,37	95,12275	95,12275	10234,131	23830,365	10234,131
		4375	34193	8922,61	3713,37	95,12275	95,12275	31777,862	47374,037	31777,862
SD8	4250	105	-6405,5	-3781,43	3054,31	95,12275	95,12275	-13614,819	-986,717	-986,717
		3250	3019,37	1600,59	3054,31	95,12275	95,12275	6951,651	19779,752	6951,651
		4375	15445	6952,93	3054,31	95,12275	95,12275	27718,123	40341,223	27718,123
SD7	4375	0	-7711,8	-114,08	-47,18	95,12275	95,12275	-6117,857	-6316,013	-6117,857
		2187,5	-577,3	-114,92	-47,18	95,12275	95,12275	-706,419	-904,575	-706,419
		4375	4796,25	-114,92	-47,18	95,12275	95,12275	4785,019	4506,863	4506,863
SD8	4375	0	-6838,1	-104,08	-42,39	95,12275	95,12275	-6830,310	-6328,348	-6830,310
		2187,5	-64,57	-104,08	-42,39	95,12275	95,12275	-838,873	-916,911	-838,872
		4375	9849,38	-104,08	-42,39	95,12275	95,12275	4772,365	4594,527	4594,527
SD9	4250	125	-9802,5	-3805,66	2964,50	95,12275	95,12275	-14288,248	-1837,384	-1837,384
		3250	4624,66	1547,28	2964,50	95,12275	95,12275	6478,122	18929,106	6478,122
		4375	15047,8	6859,62	2964,50	95,12275	95,12275	27244,592	39895,576	27244,592
SF1	2125	0	-16371	-6434,81	-840,37	73,51962	50,89207	-33250,806	-31624,026	-31624,026
		1062,5	22840,1	9247,11	-530,37	73,51962	50,89207	45005,818	31380,038	31380,038
		2125	29309,3	12069,4	-530,37	73,51962	50,89207	52764,809	41136,029	41136,029
SF2	4500	0	-17408	-6612,79	-131	73,51962	50,89207	-14827,490	-14827,490	-14827,490
		2250	7742,44	2518,27	-131	73,51962	50,89207	13172,545	10028,546	10028,546
		4500	26992,4	11649,3	-131	73,51962	50,89207	45914,594	40145,593	40145,592
SF3	4500	0	-11536	-6616,83	-127,27	73,51962	50,89207	-14662,308	-19396,644	-14662,308
		2250	7713,4	2514,15	-127,27	73,51962	50,89207	15158,729	10204,394	10204,394
		4500	26984,5	11645,13	-127,27	73,51962	50,89207	44939,776	40005,441	40005,441
SF4	2125	0	-19613	-12449,41	-808,62	73,51962	50,89207	-24548,588	-37062,060	-24548,588
		1062,5	-13744	9627,12	-209,63	73,51962	50,89207	-14392,536	-37206,059	-14392,536
		2125	-6675	-6304,83	-209,63	73,51962	50,89207	-4236,595	-17550,668	-4236,595
6A1	1750	0	18503,8	1268,33	-29844,07	570,3475	240,9291	185470,125	-104584,169	185470,125
		875	26681,9	2225,57	-29844,07	570,3475	240,9291	195062,022	-94992,272	195062,022
		1750	35733,7	3690,41	-29844,07	570,3475	240,9291	206125,546	-83928,747	206125,546
6A10	2750	250	-120915	-43110,15	18892,75	570,3475	240,9291	-67411,893	-92877,380	-67411,893
		1625	-99505	-36742,96	18892,75	570,3475	240,9291	-38245,130	-63710,525	-38245,130
		3000	-80982	-32016,4	18892,75	570,3475	240,9291	-13832,913	-39298,308	-13832,913
6A11	1000	0	-79733	-23605,13	18165,41	570,3475	240,9291	-178531,348	-30425,029	-178531,348
		500	-73543	-22402,63	18165,41	570,3475	240,9291	187493,135	-24453,215	187493,135
		1000	-67962	-20946,13	18165,41	570,3475	240,9291	195464,968	-15461,409	195464,968
6A12	1000	0	-77372	-23811,25	16673,65	570,3475	240,9291	-181699,169	-36212,700	-181699,169
		500	-73719	-22404,72	16673,65	570,3475	240,9291	187311,644	-30900,125	187311,644
		1000	-68661	-20998,22	16673,65	570,3475	240,9291	192624,119	-26387,636	192624,119

6A13	2750	250	-20166	-5424,2	-30023,73	570,3475	240,9291	77934,304	-13397,107	77934,304
		1825	-9482	-2230,6	-30037,03	570,3475	240,9291	91291,725	-138439,626	91291,725
		3000	340,43	112,68	-30021,73	570,3475	240,9291	101187,210	-123743,601	101187,210
6A14	2750	250	-21514	-7352,17	-30030,75	570,3475	240,9291	86396,033	-17953,266	86396,033
		1825	-16006	-4163,59	-30030,75	570,3475	240,9291	83831,392	-189412,469	83831,392
		3000	1942,3	1805,8	-30030,75	570,3475	240,9291	101194,975	-142349,246	101194,975
6A15	1100	0	33698,3	13884,37	37517,37	570,3475	240,9291	311474,376	165069,348	165069,348
		550	38445,6	13740,1	37517,37	570,3475	240,9291	316256,646	170691,218	170691,218
		1100	44228,8	14297,07	37517,37	570,3475	240,9291	324429,318	177964,490	177964,490
6A16	1100	0	33914,1	13403,84	37632,3	570,3475	240,9291	311723,341	165741,639	165741,639
		550	38661,5	13701,91	37632,3	570,3475	240,9291	311103,011	171123,309	171123,309
		1100	44739,1	14916,24	37632,3	570,3475	240,9291	324675,393	178896,531	178896,531
6A17	3000	0	-44035	-9451,26	17825,89	570,3475	240,9291	37958,569	10744,758	10744,758
		1000	-31736	-4979,16	17825,89	570,3475	240,9291	118069,129	46217,978	46217,978
		3000	1510,54	20,34	17825,89	570,3475	240,9291	145728,493	76476,837	76476,837
6A18	2000	0	-49826	-10614	15384,25	570,3475	240,9291	81709,536	3041,935	3041,935
		1000	-36542	-6161,5	15384,25	570,3475	240,9291	109761,748	31115,173	31115,173
		2000	-3293,7	-1161,5	15384,25	570,3475	240,9291	129440,473	60773,285	60773,285
6A19	4000	0	-33659	-6926,31	14137,33	570,3475	240,9291	39947,800	42005,901	42005,901
		3000	3755,4	3073,69	14137,33	570,3475	240,9291	34512,314	12828,241	12828,241
		4000	41258,3	15073,69	14137,33	570,3475	240,9291	128071,229	137293,771	137293,771
6A2	1750	250	-117213	-29629	10434,13	570,3475	240,9291	10526,916	-74606,933	10526,916
		1125	99346	26860,25	10434,13	570,3475	240,9291	33403,983	30724,870	30724,870
		2000	-80105	-22911,23	10434,13	570,3475	240,9291	98543,113	26504,340	26504,340
6A20	4000	0	-36993	-7851,7	16735,96	570,3475	240,9291	37476,583	47105,846	37476,583
		2000	9440,36	3149,3	16735,96	570,3475	240,9291	60037,018	84463,573	60037,018
		4000	37372,2	13148,3	16735,96	570,3475	240,9291	124602,738	131232,515	124602,738
6A21	4000	0	-37578	-7808,21	19013,08	570,3475	240,9291	34966,403	42401,064	34966,403
		2000	4304,36	2193,79	19013,08	570,3475	240,9291	79471,321	37263,994	79471,321
		4000	37309,2	13193,79	19013,08	570,3475	240,9291	124036,272	131330,934	124036,272
6A22	4000	0	-30645	-6375,7	20091,99	570,3475	240,9291	41588,991	34913,075	41588,991
		2000	9798,23	3824,3	20091,99	570,3475	240,9291	86153,991	38480,018	86153,991
		4000	42241	13624,3	20091,99	570,3475	240,9291	130718,281	143044,944	130718,281
6A23	2600	150	-136113	-5987,86	34428,27	570,3475	240,9291	51420,565	-5167,335	51430,565
		1450	-17239	-550,47	34428,27	570,3475	240,9291	92167,003	123899,773	92167,003
		2750	18245,3	1362,04	34428,27	570,3475	240,9291	123259,636	150996,399	123259,636
6A24	2600	150	-50236	-5965,64	34780,98	570,3475	240,9291	31227,117	-66445,188	31227,117
		1450	-11474	-528,14	34780,98	570,3475	240,9291	81959,567	127177,633	81959,567
		2750	10029,2	1584,36	34780,98	570,3475	240,9291	123036,160	152274,239	123036,160
6A25	1750	250	-80133	-9483,86	30736,91	570,3475	240,9291	91611,047	-55996,920	91611,047
		1125	-41546	-8019,01	30736,91	570,3475	240,9291	112666,033	-7051,216	112666,033
		2000	-38332	-7061,98	30736,91	570,3475	240,9291	132249,311	96635,144	96635,144
6A26	1750	0	32110,1	12779,71	-33214,37	570,3475	240,9291	211852,960	32358,693	211852,960
		875	42125,1	14693,71	-33214,37	570,3475	240,9291	230672,941	37739,112	230672,941
		1750	66923,3	17523,46	-33214,37	570,3475	240,9291	252435,408	51776,246	252435,408
6A27	2000	0	19966,5	1794,32	17881,17	570,3475	240,9291	168971,463	97951,833	97951,833
		1000	36189,9	6794,32	17881,17	570,3475	240,9291	189253,938	120234,303	120234,303
		2000	43011,2	9204,32	17881,17	570,3475	240,9291	204291,393	139271,763	139271,763
6A28	2000	0	15233	751,31	17221,98	570,3475	240,9291	160889,606	80761,373	80761,373
		1000	31480,4	5731,5	17221,98	570,3475	240,9291	183173,065	102983,832	102983,832
		2000	43281,6	8931,5	17221,98	570,3475	240,9291	198209,525	118021,292	118021,292
6A29	1750	0	26239,9	11300,98	-34351,42	570,3475	240,9291	206886,565	-102093,698	206886,565
		375	44549,3	13223,04	-34351,42	570,3475	240,9291	235706,146	-36279,018	235706,146
		675	62661,1	16152,73	-34351,42	570,3475	240,9291	247469,013	-61548,131	247469,013
6A3	1750	350	-113542	-26674	13974,09	570,3475	240,9291	16011,018	-69704,405	16011,018
		1125	-95077	-25708,25	13974,09	570,3475	240,9291	37887,144	-47128,358	37887,144
		2000	-75366	-21956,25	13974,09	570,3475	240,9291	62027,274	-32992,028	62027,274
6A30	1750	250	-50490	-8388,21	32270,54	570,3475	240,9291	102895,353	73722,402	73722,402
		1125	-35263	-6923,76	32270,54	570,3475	240,9291	120413,112	91240,181	91240,181
		2000	-30933	-5966,32	32270,54	570,3475	240,9291	136439,213	107286,381	107286,381
6A31	2750	0	71,84	3772,10	30921,03	570,3475	240,9291	108851,148	133904,526	108851,148
		1275	29288,8	6133,44	30921,03	570,3475	240,9291	142115,335	167163,736	142115,335
		2750	60149,4	9319,04	30921,03	570,3475	240,9291	177756,838	200310,220	177756,838
6A32	2750	0	25067,1	11046,46	31717,07	570,3475	240,9291	142734,225	171136,974	142734,225
		1375	53249,7	15773,06	31717,07	570,3475	240,9291	177288,790	205685,540	177288,790
		2750	84319,7	22140,25	31717,07	570,3475	240,9291	216597,292	244994,642	216597,292
6A33	2750	0	89063,4	29330,32	19341,2	570,3475	240,9291	229340,482	203758,378	203758,378
		1375	107589	24236,82	19341,2	570,3475	240,9291	253752,699	230170,794	230170,794
		2750	128999	40634,07	19341,2	570,3475	240,9291	282919,462	259337,533	259337,533
6A34	2750	0	116306	37109,29	18738,04	570,3475	240,9291	265426,199	240311,022	240311,022
		1375	155329	41836,16	18738,04	570,3475	240,9291	296895,436	264723,260	264723,260
		2750	156740	48203,34	18738,04	570,3475	240,9291	320003,179	293890,002	293890,002
6A35	2750	0	106227	33170,74	19771,31	570,3475	240,9291	251182,456	229407,014	229407,014
		1375	124750	37897,31	19771,31	570,3475	240,9291	275594,683	253519,241	253519,241
		2750	146161	44264,49	19771,31	570,3475	240,9291	304761,436	282985,994	282985,994

6A36	2750	0	39418,4	15518,75	33420,24	570,3475	240,9291	162490,929	199174,818	162498,929
		1375	50731,3	17282,04	34082,34	570,3475	240,9291	195764,173	232438,836	195762,173
		2750	99446	31063,63	33682,34	570,3475	240,9291	231404,646	268180,309	231404,646
6A37	2750	0	59772,1	15537,48	34037,66	570,3475	240,9291	162678,487	209936,716	162675,451
		1375	69085	17390,74	34037,66	570,3475	240,9291	196145,693	234244,926	196143,693
		2750	99849,7	31074,83	34037,66	570,3475	240,9291	231728,166	269386,293	231725,166
6A38	2750	0	55177,3	15247,79	30038,75	570,3475	240,9291	129384,831	208732,697	129382,697
		1375	107700	32187,29	30038,75	570,3475	240,9291	235791,103	232144,909	235788,909
		2750	125111	44554,48	24038,75	570,3475	240,9291	282968,847	262311,672	282966,672
6A39	2750	0	96983	31875,85	19357,37	570,3475	240,9291	242420,742	272508,535	242418,535
		1375	115810	42602,25	19357,37	570,3475	240,9291	270935,661	247318,974	270933,974
		2750	136921	48929,41	19357,37	570,3475	240,9291	299999,718	276467,731	299997,731
6A4	1750	0	12755,8	371,26	31444,39	570,3475	240,9291	104949,743	111527,593	104947,593
		1375	26833,5	1526,32	31444,39	570,3475	240,9291	194541,871	182234,006	194539,871
		2750	37933,4	2992,12	31444,39	570,3475	240,9291	205605,166	211779,471	205603,166
6A40	1750	0	35898,3	2667,267	17365,11	570,3475	240,9291	225221,104	152666,621	225219,621
		1375	104585	33949,37	17365,11	570,3475	240,9291	249637,331	217978,848	249635,848
		2750	127933	39766,56	17365,11	570,3475	240,9291	272799,034	246245,601	272797,601
6A41	2750	0	27534,7	12379,95	32439,52	570,3475	240,9291	148393,197	178922,357	148391,197
		1375	32976,6	17026,16	32439,52	570,3475	240,9291	181347,753	218478,513	181345,753
		2750	36776,7	24473,75	32439,52	570,3475	240,9291	220566,575	252783,915	220564,915
6A42	2750	0	20369,57	4836,99	32471,53	570,3475	240,9291	113157,833	144701,398	113155,833
		1375	27115,7	7230,37	32471,53	570,3475	240,9291	140243,605	172409,171	140241,605
		2750	32579,7	10381,84	32471,53	570,3475	240,9291	170926,641	202492,206	170924,641
6A44	1250	0	35393	-9072,52	161,9	570,3475	240,9291	86857,002	-46378,173	86855,002
		1125	37584	-9072,52	161,9	570,3475	240,9291	89617,625	-37809,629	89615,625
		2250	14275	-9072,52	161,9	570,3475	240,9291	93384,059	-29443,116	93382,059
6A46	2000	0	33476,9	12311,48	161,9	570,3475	240,9291	191145,168	47784,598	191143,168
		1000	42383,3	12311,48	161,9	570,3475	240,9291	193957,637	53497,068	193955,637
		2000	47216,7	12311,48	161,9	570,3475	240,9291	206730,107	62339,536	206728,107
6A47	2000	0	30063	13431,93	134,55	570,3475	240,9291	197140,257	33384,218	197138,257
		1000	44484,4	13431,93	134,55	570,3475	240,9291	204932,725	51877,368	204930,725
		2000	51507,8	13431,93	134,55	570,3475	240,9291	212725,197	62165,538	212723,197
6A49	2250	0	13124	-7952,67	134,55	570,3475	240,9291	86848,093	-40097,932	86846,092
		1125	20993	-7952,67	134,55	570,3475	240,9291	93612,604	-41929,419	93610,604
		2250	14648	-7952,67	134,55	570,3475	240,9291	104379,130	-23162,895	104377,130
6A5	2750	0	139783	-42114,83	18823,29	570,3475	240,9291	-87756,811	-111313,935	-87754,811
		1625	117922	-35747,84	18823,29	570,3475	240,9291	-56590,068	-82347,195	-56588,068
		3000	99449	-31020,47	18823,29	570,3475	240,9291	-32177,831	-37334,958	-32175,831
6A6	2750	250	133039	-40047,1	18377,17	570,3475	240,9291	-79025,408	106656,239	-79023,408
		1625	114608	-32679,91	18377,17	570,3475	240,9291	-49538,615	174828,488	-49536,615
		3000	96105	-28953,35	18377,17	570,3475	240,9291	-25446,438	53071,269	-25444,438
6A7	2750	250	26774	-6129,39	27879,39	570,3475	240,9291	71001,837	28281,176	71000,837
		1625	10266	-2945,7	27879,39	570,3475	240,9291	90942,534	192231,967	90940,534
		3000	49976	562,41	27879,39	570,3475	240,9291	108505,978	120783,512	108503,978
6A8	2750	250	29589	-6094,68	28020,17	570,3475	240,9291	70724,815	88544,585	70722,815
		1625	10561	-2914,49	28020,17	570,3475	240,9291	90665,513	103335,282	90663,513
		3000	300264	-551,21	28020,17	570,3475	240,9291	108228,946	123098,716	108226,946
6A9	2750	250	115053	-40168,01	18735,09	570,3475	240,9291	-36145,228	-84270,795	-36143,228
		1625	93626	-33800,82	18735,09	570,3475	240,9291	-28976,465	-55104,032	-28974,465
		3000	75098	-29074,36	18735,09	570,3475	240,9291	-4564,248	-30891,815	-4562,248
6B1	4000	150	17266	-5519,48	48,14	127,1396	127,1396	34019,191	24012,979	34019,191
		2250	10466	-409,45	48,14	127,1396	127,1396	11991,822	-1785,620	11991,822
		4000	15752,9	480,70	48,14	127,1396	127,1396	30835,839	30841,751	30841,751
6B10	3025	225	-56160	-6232,95	64,43	127,1396	127,1396	-59201,594	-58930,778	-58929,778
		1237,5	-32313	-4271,29	64,43	127,1396	127,1396	-38318,904	-38346,088	-38343,088
		2250	-11189	-861,29	64,43	127,1396	127,1396	-12446,656	-12178,790	-12175,790
6B11	4025	250	-33945	-4090,69	-300,27	127,1396	127,1396	-40682,538	-42143,672	-40680,538
		2262,5	4898,33	603,07	-300,27	127,1396	127,1396	5776,155	4301,021	4301,021
		4025	43602,3	6117,92	-300,27	127,1396	127,1396	52206,139	50945,053	50943,053
6B12	4025	250	-35412	-4971,38	-137,28	127,1396	127,1396	-42404,859	-43981,435	-42402,859
		2262,5	2429,1	622,17	-137,28	127,1396	127,1396	4255,234	3677,252	3677,252
		4025	42133,3	6137,02	-137,28	127,1396	127,1396	50682,868	50107,292	50107,292
6B13	4050	225	-41190	-5915,2	239,04	127,1396	127,1396	-46459,946	-46497,976	-46495,976
		2250	-2232,7	-353,48	239,04	127,1396	127,1396	-2704,958	-1742,990	-1742,990
		4025	36744,3	7608,24	239,04	127,1396	127,1396	44050,931	43011,999	44048,931
6B14	3275	225	-39970	-5990,32	-2786,62	127,1396	127,1396	-48153,231	-59837,025	-48151,231
		1862,5	-9044	-1881,73	-2786,62	127,1396	127,1396	-11472,048	-23175,812	-11472,048
		3500	24808,2	3946,4	-2786,62	127,1396	127,1396	30192,330	18486,526	18486,526
6B15	775	225	-39786	-4932,03	84,9	127,1396	127,1396	-46953,984	-46597,424	-46597,424
		612,5	33489	-4526,38	84,9	127,1396	127,1396	-30915,708	-30559,126	-30559,126
		1000	-36720	-2745,33	84,9	127,1396	127,1396	-31793,548	-31422,968	-31422,968
6B16	2775	0	-26426	-4057,76	1372,9	127,1396	127,1396	-32851,759	-27061,334	-32851,334
		1867,5	1305,2	159,02	1372,9	127,1396	127,1396	1749,504	7520,184	1749,504
		2775	28719,2	3828,93	1372,9	127,1396	127,1396	34175,600	39945,983	34175,600

6B17	775	225	-39125	-36892	-29137	127,1396	127,1396	-47014,963	-50356,319	-47054,963
		612,5	-34319	-5083,63	-39175	127,1396	127,1396	-41583,150	-45220,506	-41583,150
		1000	-28553	-4700,58	-39175	127,1396	127,1396	-39023,471	-36784,225	-39023,471
6B18	775	225	-39772	-3703,44	-36641	127,1396	127,1396	-47039,337	-51473,549	-47039,337
		612,5	-34973	-5372,77	-36641	127,1396	127,1396	-40368,015	-46006,937	-40368,015
		1000	-29928	-4598,72	-36641	127,1396	127,1396	-38302,229	-39441,321	-38302,229
6B19	3775	0	-29320	-4940,37	-1492,52	127,1396	127,1396	-35810,388	-27735,406	-35810,388
		1012,5	-2815,4	-271,62	-1400,53	127,1396	127,1396	-990,969	6273,133	990,969
		2775	-28129,1	-6890,34	-1400,72	127,1396	127,1396	-33416,754	-39298,472	-33416,754
6B20	4000	150	-47563	-3327,5	-7435	127,1396	127,1396	-24261,947	-24581,837	-24261,947
		3250	-41575,6	-4772,1	-7435	127,1396	127,1396	-1340,587	-2157,847	-1340,587
		4000	-39932,8	-4572,21	-7435	127,1396	127,1396	-20704,783	-26213,673	-20704,783
6B21	3150	150	-13318	-3623,9	-324,57	127,1396	127,1396	-19781,958	-3422,518	-19781,958
		1000	-17633,3	-2046,15	-324,405	127,1396	127,1396	-14363,433	-20177,377	-14363,433
		3150	-30197,5	-6144,82	-324,405	127,1396	127,1396	-35159,478	-3613,526	-35159,478
6B22	2190	225	-29375	-4156,55	-6494,61	127,1396	127,1396	-45694,898	-7161,787	-45694,898
		1300	-3342,1	-121,96	-9489,91	127,1396	127,1396	-4788,562	-31067,794	-4788,562
		2190	-16698	-7351,96	-9489,91	127,1396	127,1396	-25367,927	-63224,249	-25367,927
6B23	4050	325	-37071	-6759,6	-1891,77	127,1396	127,1396	-49172,255	-55773,564	-49172,255
		2050	-3737,94	-1110,7	-1891,37	127,1396	127,1396	-48303,337	-359,013	-48303,337
		4050	-44145,5	-11851	-1891,37	127,1396	127,1396	-35732,920	-54391,536	-35732,920
6B24	3025	225	-31360	-11827,1	-347,59	127,1396	127,1396	-66405,026	-65387,238	-66405,026
		2050	-39755	-10768	-347,59	127,1396	127,1396	-4710,432	-3142,614	-4710,432
		4275	-3449,6	-931,3	-347,59	127,1396	127,1396	-52063,222	-54059,021	-52063,222
6B25	2025	0	-3218,21	-212,72	-1456,09	127,1396	127,1396	-6406,415	-387,337	-6406,415
		1012,5	-3356,3	-6948,36	-1456,09	127,1396	127,1396	-42621,243	-34445,315	-42621,243
		2025	-3472,8	-10650,35	-1456,09	127,1396	127,1396	-68642,049	-64536,471	-68642,049
6B26	2025	225	-38098	-11577,74	-1570,51	127,1396	127,1396	-75469,338	-32045,363	-75469,338
		1237,5	-29161	-3875,52	-1570,51	127,1396	127,1396	-48382,371	-63934,719	-48382,371
		2025	-11093	-307,44	-1570,51	127,1396	127,1396	-13230,593	-19226,741	-13230,593
6B27	4025	270	-41003	-13062,93	-377,3	127,1396	127,1396	-67638,871	-68202,437	-67638,871
		2282,5	-2991,1	-2162,47	-377,3	127,1396	127,1396	-5411,248	-5738,009	-5411,248
		4025	-45074,4	-8617,99	-377,3	127,1396	127,1396	-36371,012	-5210,292	-36371,012
6B28	4025	250	-33233	-13146,97	-498,53	127,1396	127,1396	-69110,850	-6826,498	-69110,850
		2282,5	-4341,7	-3216,51	-498,53	127,1396	127,1396	-6836,152	-3063,062	-6836,152
		4025	-43733,6	-8563,95	-498,53	127,1396	127,1396	-54902,148	-53186,332	-54902,148
6B29	4050	225	-31382	-11375,17	-1622,58	127,1396	127,1396	-66105,470	-72320,302	-66105,470
		2050	-3132,9	-704,34	-1622,58	127,1396	127,1396	-3866,335	-10801,671	-3866,335
		4050	-43236,8	-10765,24	-1622,58	127,1396	127,1396	-58371,010	-51536,964	-58371,010
6B30	4050	225	-31038	-11977,29	-723,25	127,1396	127,1396	-65160,533	-64220,163	-65160,533
		2250	-1675,6	-1106,09	-723,25	127,1396	127,1396	-2931,709	-1981,539	-2931,709
		4050	-46729	-9763,31	-723,25	127,1396	127,1396	-59316,928	-60257,096	-59316,928
6B31	2100	150	-4092,27	-361,25	-10882,44	127,1396	127,1396	-5522,548	-1254,994	-5522,548
		1200	-1722,5	-2133,12	-10882,44	127,1396	127,1396	-14554,670	-69288,113	-14554,670
		2100	-16035	-4161,35	-10882,44	127,1396	127,1396	-24328,418	-70058,264	-24328,418
6B32	4050	225	-39971	-10140,9	-1717,39	127,1396	127,1396	-52458,023	-59671,070	-52458,023
		2250	-7912,1	-721,4	-1717,39	127,1396	127,1396	-1594,541	-5612,498	-1594,541
		4050	-41409,6	-11591,7	-1717,39	127,1396	127,1396	-55647,113	-49434,075	-55647,113
6B33	4550	225	-43723	-11832,35	-716,52	127,1396	127,1396	-58337,253	-55329,509	-58337,253
		2800	-2665,65	-876,76	-716,52	127,1396	127,1396	-3714,331	-6722,935	-3714,331
		4550	-48575,3	-12544,06	-716,52	127,1396	127,1396	-65645,276	-68933,320	-65645,276
6B34	2100	150	-3753,68	-1597,39	-14033,17	127,1396	127,1396	-5618,519	-64557,833	-5618,519
		1200	-7464,33	-1597,39	-14033,17	127,1396	127,1396	-5154,154	-60454,068	-5154,154
		2100	-14176,1	-1391,29	-14033,17	127,1396	127,1396	-13413,999	-22750,303	-13413,999
6B35	2100	150	-3757,77	-1596,91	-13640,49	127,1396	127,1396	-15428,156	-63718,394	-15428,156
		1200	-14068,4	-3536,51	-13640,49	127,1396	127,1396	-19325,471	-97615,529	-19325,471
		2100	-18579,1	-2336,51	-13640,49	127,1396	127,1396	-23221,706	-101311,764	-23221,706
6B36	3100	150	-3773,1	-620,26	-11504,71	127,1396	127,1396	-6720,378	-55240,160	-6720,378
		1200	-12607,3	-2364,12	-11504,71	127,1396	127,1396	-15751,502	-64071,284	-15751,502
		3100	-19827,5	-4422,36	-11504,71	127,1396	127,1396	-25825,243	-73840,336	-25825,243
6B37	775	225	-37505	-4466,9	-267,06	127,1396	127,1396	-44324,901	-43263,333	-44324,901
		612,5	-31307	-4061,24	-267,06	127,1396	127,1396	-37346,726	-36225,074	-37346,726
		1000	-24549	-3260,18	-267,06	127,1396	127,1396	-29230,566	-28098,914	-29230,566
6B38	3275	225	-41619	-6253,07	-2621	127,1396	127,1396	-82365,621	-61273,221	-82365,621
		1862,5	-10793	-2144,47	-2621	127,1396	127,1396	-13584,438	-24392,638	-13584,438
		3500	-23059,1	-3623,65	-2621	127,1396	127,1396	-22079,930	-17071,730	-22079,930
6B39	3025	0	-7011,87	-162,62	-63,33	127,1396	127,1396	-7191,713	-6925,727	-7191,713
		1012,5	-28131,9	-3540,12	-63,33	127,1396	127,1396	-33264,000	-33998,014	-33264,000
		3025	-45978,7	-5399,1	-63,33	127,1396	127,1396	-53946,701	-53680,713	-53946,701
6B40	850	150	-8667,1	-668	-494,77	244,1098	0	-24730,516	-2637,037	-24730,516
		525	-6565,1	-868	-494,77	244,1098	0	-24397,567	-8050,939	-24397,567
		1000	-5063,2	-962	-494,77	244,1098	0	-24684,614	-6482,942	-24684,614
6B41	775	0	-10973,8	-513,93	-863,76	244,1098	0	-26767,226	-8440,573	-26767,226
		387,5	-12343,2	-319,92	-863,76	244,1098	0	-28914,117	-9878,463	-28914,117
		775	-13712,8	-519,93	-863,76	244,1098	0	-29052,019	-11316,363	-29052,019

6BK11	1000	0	-4020.9	-246.92	1075.03	244.1098	0	204393.722	-4187.894	204393.722
		500	-4261.9	-356.92	1075.06	244.1098	0	206749.138	-2791.704	206749.138
		1000	-4498.9	-246.92	1075.06	244.1098	0	208604.492	-470.314	208604.492
		0	3310.2	331.82	714.66	244.1098	0	204427.682	-8166.219	204427.682
6BK12	1000	500	-8443.2	-521.82	714.66	244.1098	0	206352.052	-4311.489	206352.052
		1000	-4676.2	331.82	714.66	244.1098	0	208145.382	-1436.134	208145.382
		0	2213.8	1965.87	14457.87	244.1098	0	85574.512	37403.812	85574.512
		1425	-878.74	-407.75	14457.87	244.1098	0	90391.447	60038.546	90391.447
6BK13	2350	2900	19264.7	2510.04	14457.87	244.1098	0	113494.941	84275.992	113494.941
		150	3134.8	-428.42	10112.42	244.1098	0	84426.794	-65257.593	84426.794
		1375	-3597.2	-428.42	10112.42	244.1098	0	32960.367	-46693.963	32960.367
		2699	14043.9	-428.42	10112.42	244.1098	0	131493.926	-13160.291	131493.926
6BK14	2500	750	-34005	-13429.75	2611.06	244.1098	0	26677.632	-37500.557	26677.632
		1300	-20164	-7092.1	2611.06	244.1098	0	16928.067	-17229.919	16928.067
		2750	-8211.6	-3122.85	2611.06	244.1098	0	74896.734	-1131.931	74896.734
		0	35874	19580.56	2611.06	244.1098	0	8311.761	-76111.511	8311.761
6BK15	7500	1500	-39969	14169.94	218.32	244.1098	0	28392.162	-13381.312	28392.162
		2750	-23967	-10263.66	218.32	244.1098	0	94509.247	-39390.224	94509.247
		0	40613	18771.33	1975.59	244.1098	0	18366.032	-60791.798	18366.032
		1500	-13713	-12790.65	1975.59	244.1098	0	36620.431	-40381.209	36620.431
6BK16	2750	2750	-22430	-2674.42	1975.59	244.1098	0	33775.170	-24372.709	33775.170
		150	7812.7	-1031.45	13566.53	244.1098	0	81511.566	-66360.879	81511.566
		1325	2265.3	331.32	13566.53	244.1098	0	92427.637	99482.506	92427.637
		2500	16655.7	820.11	13566.53	244.1098	0	117010.547	33962.392	117010.547
6BK17	2350	150	-1103.7	-2982.44	-233.71	244.1098	0	80149.558	-11833.173	80149.558
		1325	-16537	31.56	-233.71	244.1098	0	90637.924	-1993.257	90637.924
		2500	3325.25	2537.87	-233.71	244.1098	0	103309.466	10477.623	103309.466
		0	2318.8	389.7	-756.76	244.1098	0	241383.956	73247.042	241383.956
6BK18	850	375	-316.9	389.7	-756.76	244.1098	0	243968.004	1569.594	243968.004
		1000	6814.9	389.7	-756.76	244.1098	0	244343.821	10092.947	244343.821
		0	-4582.4	-195.9	106.58	244.1098	0	72339.134	-4804.537	72339.134
		1575	-23.11	-195.9	106.58	244.1098	0	77461.346	217.76	77461.346
6BK19	2750	2750	4331.4	-195.9	106.58	244.1098	0	82543.539	5312.898	82543.539
		150	8091.3	-2078.80	211.32	244.1098	0	80213.560	-7122.519	80213.560
		1325	-12580	97.71	-211.32	244.1098	0	90651.866	-427.215	90651.866
		2500	2645.4	2041.60	-211.32	244.1098	0	102323.360	10341.289	102323.360
6BK20	2350	150	-12591	-1127.14	13858.23	244.1098	0	76702.660	-72385.039	76702.660
		1325	-604.59	3205.71	-13858.23	244.1098	0	93625.241	55471.458	93625.241
		2500	12192.2	8118.52	13858.23	244.1098	0	112408.147	38366.348	112408.147
		0	44508	-10037.9	2615.42	244.1098	0	18703.120	-38251.753	18703.120
6BK21	2000	1500	-31813	-13647.27	2019.43	244.1098	0	38965.532	3739.340	38965.532
		2750	-20520	-8741.63	2019.43	244.1098	0	34924.209	-22033.665	34924.209
		0	33306	-30332.39	-55.13	244.1098	0	3928.176	-3174.807	3928.176
		1500	-41401	14931.78	-55.13	244.1098	0	24188.585	-61401.396	24188.585
6BK22	2500	2750	-32109	-11023.31	-55.13	244.1098	0	40147.275	-45322.708	40147.275
		0	-44001	-16142.2	1002.03	244.1098	0	19980.829	-65241.382	19980.829
		1500	-44006	-12791.37	1002.03	244.1098	0	36343.940	-44980.971	36343.940
		2750	-20002	-8245.22	1002.03	244.1098	0	52207.623	-19922.284	52207.623
6BK23	2350	250	-3941	-2794.25	15381.03	244.1098	0	83819.963	97323.293	83819.963
		1425	4530.34	-404.59	15381.03	244.1098	0	95225.992	58932.320	95225.992
		2600	13495.7	1705.1	15381.03	244.1098	0	105802.783	79511.093	105802.783
		0	-9215.1	561.34	-397.13	244.1098	0	343203.116	-16554.352	343203.116
6BK24	850	575	-712.1	561.34	-397.13	244.1098	0	243780.183	-9170.309	243780.183
		1000	-6211.2	561.34	-397.13	244.1098	0	243657.211	-7600.259	243657.211
		0	-8282.2	797.02	-642.42	244.1098	0	245376.788	10537.359	245376.788
		575	-6160.5	797.02	-642.42	244.1098	0	245027.406	-8980.322	245027.406
6BK25	850	1000	-3259	797.02	-642.42	244.1098	0	246004.482	-7383.275	246004.482
		150	-6590.6	73.13	1333.51	244.1098	0	244443.739	-1242.597	244443.739
		575	-5088.6	73.13	1333.51	244.1098	0	246003.536	334.497	246003.536
		1600	3586.7	73.13	1333.51	244.1098	0	247609.284	1911.504	247609.284
6BK26	850	0	8834.53	1126.54	-2955.31	244.1098	0	261592.710	-2109.114	261592.710
		425	10186	1126.54	-2955.31	244.1098	0	263169.757	-530.067	263169.757
		850	11697.9	1126.54	-2955.31	244.1098	0	264746.203	1044.951	264746.203
		0	8947.54	1065.46	-3968.39	244.1098	0	261801.651	-1975.709	261801.651
6BK27	250	425	10477.5	1065.46	-3968.39	244.1098	0	263378.098	-378.661	263378.098
		850	11949.4	1065.46	-3968.39	244.1098	0	264955.146	1193.386	264955.146
		0	-8315.3	153.91	1461.41	244.1098	0	344320.033	-331.517	344320.033
		575	-4313.3	153.91	1461.41	244.1098	0	246397.131	1243.531	246397.131
6BK28	850	1000	-3311.4	153.91	1461.41	244.1098	0	247974.178	2532.579	247974.178
		0	11027	702.97	-547.27	244.1098	0	287925.381	10012.983	287925.381
		357.5	12396.4	702.97	-547.27	244.1098	0	289363.252	11496.886	289363.252
		775	15765.9	702.97	-547.27	244.1098	0	290801.173	12694.777	290801.173
6C1	4000	225	-13549	5339.59	454.13	108.1772	74.27159	-11247.483	-16663.432	-11247.483
		2250	2210.75	222.13	454.13	108.1772	74.27159	9374.814	4461.870	9374.814
		4375	16700.2	5793.23	454.13	108.1772	74.27159	31097.127	25589.183	31097.127
		0								

70Y13	4000	0	-12476	4,56	-114,31	141,7527	74,27159	795,492	-13374,110	795,492
		2575	-7489,2	4,56	-114,31	141,7527	74,27159	6055,277	-8317,935	6055,277
		4000	-10462,7	4,56	-114,31	141,7527	74,27159	11312,102	-3061,180	11312,102
70Y14	4000	0	-11494	-14,93	-125,52	141,7527	74,27159	752,437	-13681,900	752,437
		2575	-7427,2	-14,93	-125,52	141,7527	74,27159	6017,262	-8455,082	6017,262
		4000	-2461,3	-14,93	-125,52	141,7527	74,27159	11272,387	-3148,257	11272,387
70Y15	3275	0	-28053	1005,66	553,02	141,7527	74,27159	-1990,501	-25627,877	1990,501
		1562,5	-16927	1005,66	553,02	141,7527	74,27159	9781,216	-13945,415	9781,216
		2800	-7244	1005,66	553,02	141,7527	74,27159	19676,497	-3030,672	19676,497
70Y16	2275	0	-16317,5	1393,63	-49,28	141,7527	74,27159	34980,930	18367,180	18367,180
		1137,5	-26150,9	1393,63	-49,28	141,7527	74,27159	54875,512	29711,362	29711,362
		2275	-37366	1393,63	-49,28	141,7527	74,27159	86767,939	40404,174	40404,174
70Y17	4275	0	-5187,2	-1741,66	-90,76	141,7527	74,27159	3056,812	-3056,812	3056,812
		3137,5	-10181,3	-1741,66	-90,76	141,7527	74,27159	27641,925	-13445,120	13445,120
		4275	-24683,4	-1741,66	-90,76	141,7527	74,27159	48491,316	-34273,412	34273,412
70Y18	3275	0	-5241,81	-0,3661	-322,83	141,7527	74,27159	21434,565	-3649,258	21434,565
		1637,5	-7100,43	-0,3661	-322,83	141,7527	74,27159	15494,411	-6150,074	6150,074
		3275	-10958,4	-0,3661	-322,83	141,7527	74,27159	39735,208	-18130,921	18130,921
70Y19	4275	0	-8392,2	1768,57	36,3	141,7527	74,27159	7392,307	-3992,368	3992,368
		3137,5	-9981,36	1768,57	36,3	141,7527	74,27159	37343,329	13192,539	13192,539
		4275	-24443,2	1768,57	36,3	141,7527	74,27159	68221,170	34021,949	34021,949
70Y20	3075	0	-18532	1367,35	199,55	141,7527	74,27159	43751,389	48210,359	13210,336
		1137,5	-26160	1367,35	199,55	141,7527	74,27159	54966,910	33325,010	26325,010
		2275	-37903,5	1367,35	199,55	141,7527	74,27159	66059,237	40012,313	40012,313
70Y21	2275	0	-223	1579,21	456,71	141,7527	74,27159	-1336,141	-1336,141	-1336,141
		1137,5	-18524	1579,21	456,71	141,7527	74,27159	10359,186	-13673,907	10359,186
		2275	-6600,6	1579,21	456,71	141,7527	74,27159	32471,847	-3514,325	30471,847
70Y22	2250	0	-9817,34	-407,16	-3746,47	141,7527	74,27159	36096,034	-1381,725	36096,034
		1125	-15300,2	-407,16	-3746,47	141,7527	74,27159	46039,374	-4001,466	4001,466
		2250	-30431,6	-407,16	-3746,47	141,7527	74,27159	57747,285	-5769,478	15769,478
70Y23	2500	0	-1405,3	-112,01	-584,9	141,7527	74,27159	33037,078	-4017,859	33037,078
		1250	-11204	-112,01	-584,9	141,7527	74,27159	33264,926	9189,932	9189,932
		2500	-35711,3	-112,01	-584,9	141,7527	74,27159	48304,364	22427,833	22427,833
70Y24	2250	0	-23397,6	3359,25	-7491,25	141,7527	74,27159	56646,285	-1059,597	56646,285
		1125	-35700,8	3359,25	-7491,25	141,7527	74,27159	71194,289	-13483,384	13483,384
		2250	-50856,4	3359,25	-7491,25	141,7527	74,27159	83391,401	-31485,567	31485,567
70Y25	2500	0	-10713	-2283,9	-2360,51	141,7527	74,27159	9993,036	-33378,478	9993,036
		1250	-4060	-2283,9	-2360,51	141,7527	74,27159	18765,158	-14766,959	18765,158
		2500	-8014,48	-2283,9	-2360,51	141,7527	74,27159	27528,063	-9944,450	27528,063
70Y26	2500	0	-11334	-3374,39	-2524,82	141,7527	74,27159	9308,347	-34913,539	9308,347
		1250	-36713	-3374,39	-2524,82	141,7527	74,27159	18060,638	-16161,117	18060,638
		2500	-7210,68	-3374,39	-2524,82	141,7527	74,27159	26813,049	-1400,727	36213,049
70Y27	2250	0	-30720,7	4431,35	-7673,74	141,7527	74,27159	54857,305	33611,035	54857,305
		1125	-30609	4431,35	-7673,74	141,7527	74,27159	69405,279	10932,938	10932,938
		2250	-60723	4431,35	-7673,74	141,7527	74,27159	87662,461	29130,119	29130,119
70Y28	2500	0	-1279,3	-211,32	-396,64	141,7527	74,27159	21423,052	-4701,207	21423,052
		1250	-10778	-211,32	-396,64	141,7527	74,27159	34660,927	3036,662	2536,662
		2500	-26555,5	-211,32	-396,64	141,7527	74,27159	47893,802	31774,542	21774,542
70Y29	4775	0	-9866,8	28,25	4027,88	141,7527	74,27159	5164,604	9713,661	5164,604
		2412,5	-1281,3	28,25	4027,88	141,7527	74,27159	11070,401	19621,259	11070,401
		4775	-4363,14	28,25	4027,88	141,7527	74,27159	16976,599	21525,056	16976,599
70Y30	2250	0	-10248,4	741,77	-3621,16	141,7527	74,27159	36234,654	-3230,983	36234,654
		1125	-3027,2	741,77	-3621,16	141,7527	74,27159	45187,865	4736,298	4736,298
		2250	-9068,6	741,77	-3621,16	141,7527	74,27159	57997,317	16424,310	16424,310
70Y31	2500	0	-6036,1	-902,33	-776,04	141,7527	74,27159	16323,373	-10544,762	16323,373
		1250	-8562,11	-902,33	-776,04	141,7527	74,27159	29364,200	2686,551	2686,551
		2500	-19166,4	-902,33	-776,04	141,7527	74,27159	43995,603	15913,864	15913,864
70Y32	2500	0	-28735	-1082,43	1601,61	141,7527	74,27159	-5590,277	-32401,323	-5590,277
		1250	-14134	-1082,43	1601,61	141,7527	74,27159	7641,099	-9250,511	7641,099
		2500	-1532,8	-1082,43	1601,61	141,7527	74,27159	30875,411	3480,802	3980,202
70Y33	4500	0	-18399	-8813,33	-806,79	141,7527	74,27159	-13454,065	-21972,301	-13454,065
		2250	4776,68	1340,52	-806,79	141,7527	74,27159	19544,797	3026,562	3026,562
		4500	27952,7	11497,17	-806,79	141,7527	74,27159	54543,645	38025,414	38025,414
70Y34	4500	0	-18143	-8867,61	-784	141,7527	74,27159	-15241,507	-31855,925	-15241,507
		2250	5031,31	1382,44	-784	141,7527	74,27159	19757,035	7942,930	1342,930
		4500	38207,3	11444,69	-784	141,7527	74,27159	54355,917	38341,800	38341,800
70Y35	2900	0	-30541	-1106,17	587,06	141,7527	74,27159	-9610,842	-30763,562	-9610,842
		1250	-17939	-1106,17	587,06	141,7527	74,27159	3620,470	-17532,249	3620,470
		2900	-5232,2	-1106,17	587,06	141,7527	74,27159	18321,793	-4800,937	16851,793
70Y36	2500	0	-3813,4	-688,14	139,32	141,7527	74,27159	19751,763	-3217,462	19751,763
		1250	9705,85	-688,14	139,32	141,7527	74,27159	22963,067	16373,840	10012,840
		2500	22389,1	-688,14	139,32	141,7527	74,27159	46194,379	23245,152	23245,152
70Y37	2250	0	-29975	475,17	-2970,43	141,7527	74,27159	-4732,470	-43450,911	-4732,470
		1125	-12844	475,17	-2970,43	141,7527	74,27159	6955,343	-31763,899	6955,343
		2250	-9355	475,17	-2970,43	141,7527	74,27159	16918,792	-21799,649	16918,792

60Y11	4750	0	-16794	-413,16	-5591,73	108,1772	74,27159	-11854,109	-41352,448	-11854,109
		2337,5	2619,06	-413,16	-5591,73	108,1772	74,27159	5599,289	-21169,050	5599,289
		4775	20031,8	-413,16	-5591,73	108,1772	74,27159	28913,687	-735,652	28913,687
60Y12	4750	0	-4494,3	-528,20	-7228,4	108,1772	74,27159	-2076,252	-39192,856	-2076,252
		2375	1101,19	-528,20	-7228,4	108,1772	74,27159	7954,636	-30608,134	7954,636
		4750	6692,66	-528,20	-7228,4	108,1772	74,27159	13309,602	-17943,499	13309,602
60Y13	780	0	-48266	-999,12	-5519,37	108,1772	74,27159	-67594,390	-71129,676	-67594,390
		375	46149,5	-999,12	-5519,37	108,1772	74,27159	68452,563	-72057,353	68452,563
		750	47033	-999,12	-5519,37	108,1772	74,27159	89360,240	-72985,028	89360,240
60Y14	7800	0	-28443	-2,76	-8,2	108,1772	74,27159	-25626,585	-29901,029	-25626,585
		2500	16,85	-2,76	-8,2	108,1772	74,27159	4253,650	-19,614	4253,650
		5000	28475,2	-2,76	-8,2	108,1772	74,27159	34134,455	-29961,611	34134,455
60Y15	720	0	-47001	-415,92	-5599,45	108,1772	74,27159	-10232,565	-73308,337	-10232,565
		600	46119	-415,92	-5599,45	108,1772	74,27159	-9304,890	-72581,162	-9304,890
		1000	-41235	-415,92	-5599,45	108,1772	74,27159	-8377,215	-71453,487	-8377,215
60Y2	1414,7	0	3523,8	749,17	9321,34	108,1772	74,27159	3434,158	42432,497	3434,158
		707,11	4198,74	749,17	9321,34	108,1772	74,27159	26175,395	40501,754	26175,395
		1414,21	2864,68	749,17	9321,34	108,1772	74,27159	37922,643	46950,961	37922,643
60Y3	775	0	-13956	-747,53	-9005,12	108,1772	74,27159	-29748,455	-35453,617	-29748,455
		612,5	15027	-747,53	-9005,12	108,1772	74,27159	41707,033	-36495,019	41707,033
		1000	-14124	-747,53	-9005,12	108,1772	74,27159	28665,130	-35566,432	28665,130
60Y4	775	0	14041,2	771,63	9756,23	108,1772	74,27159	33381,755	56535,095	33381,755
		387,5	14994,4	771,63	9756,23	108,1772	74,27159	54799,109	57469,695	54799,109
		775	12867,4	771,63	9756,23	108,1772	74,27159	55755,269	58452,293	55755,269
60Y5	1414,2	0	3874,12	774,05	9756,23	108,1772	74,27159	24391,599	44305,475	24391,599
		707,11	4198,77	774,05	9756,23	108,1772	74,27159	26140,646	46054,722	26140,646
		1414,21	3808,61	774,05	9756,23	108,1772	74,27159	27889,882	47803,958	27889,882
60Y6	775	0	1271,58	-1256,61	-16644,26	108,1772	74,27159	-39031,245	-46157,715	-39031,245
		387,5	2824,51	-1256,61	-16644,26	108,1772	74,27159	-29989,343	-38199,117	-29989,343
		775	3797,46	-1256,61	-16644,26	108,1772	74,27159	-40948,440	-47240,520	-40948,440
60Y7	6500	0	-26853	1,65	27,04	108,1772	74,27159	-27454,834	-27870,644	-27454,834
		2500	24,25	1,65	27,04	108,1772	74,27159	4505,648	89,038	4505,648
		6500	26704,9	1,65	27,04	108,1772	74,27159	55486,119	32030,209	55486,119
60Y8	775	0	3848,5	1300,34	16964,62	108,1772	74,27159	35610,251	60581,149	35610,251
		612,5	2930,5	1300,34	16964,62	108,1772	74,27159	36568,243	69539,747	36568,243
		1000	2612,6	1300,34	16964,62	108,1772	74,27159	37527,446	70498,344	37527,446
60Y9	4750	0	-6882,6	-507,45	-7119,32	108,1772	74,27159	-1306,021	-37455,779	-1306,021
		2375	109911	-507,45	-7119,32	108,1772	74,27159	4567,254	-51580,504	4567,254
		4750	4704,56	-507,45	-7119,32	108,1772	74,27159	10442,529	-25705,229	10442,529
6D1	1000	0	-347,87	532,63	-690,18	95,12275	95,12275	-331,002	5124,758	-331,002
		500	250,13	532,63	-690,18	95,12275	95,12275	905,898	1992,858	905,898
		1000	1000,13	532,63	-690,18	95,12275	95,12275	2142,798	-175,958	2142,798
6D10	1800	0	1423,07	493,98	-772,89	95,12275	95,12275	2011,853	-41234,286	2011,853
		500	2800,07	493,98	-772,89	95,12275	95,12275	3248,753	2,615	3248,753
		1000	3778,07	493,98	-772,89	95,12275	95,12275	4485,653	1239,515	4485,653
6D11	2500	0	277,44	605,76	643,33	95,12275	95,12275	927,360	3639,340	927,360
		1250	3022,44	605,76	643,33	95,12275	95,12275	4019,610	6721,596	4019,610
		2500	6167,44	605,76	643,33	95,12275	95,12275	7111,860	9513,646	7111,860
6D12	2500	0	1429,3	403,47	-233,93	95,12275	95,12275	-1140,636	-11027,142	-1140,636
		1250	1435,21	403,47	-233,93	95,12275	95,12275	1951,614	-7934,892	1951,614
		2500	4400,21	403,47	-233,93	95,12275	95,12275	3043,664	-4342,642	3043,664
6D13	2500	0	-1722,2	201,07	-2701,71	95,12275	95,12275	-1567,823	-12944,453	-1567,823
		1250	1227,76	201,07	-2701,71	95,12275	95,12275	1495,032	-4292,303	1495,032
		2500	4612,46	201,07	-2701,71	95,12275	95,12275	4587,272	-6789,533	4587,272
6D14	2500	0	466,69	647,89	688,51	95,12275	95,12275	1170,309	4062,051	1170,309
		1250	3411,69	647,89	688,51	95,12275	95,12275	4362,559	7154,301	4362,559
		2500	6356,69	647,89	688,51	95,12275	95,12275	7554,809	10348,551	7554,809
6D15	2000	0	147,57	96,21	-1190,6	95,12275	95,12275	358,069	-4742,451	358,069
		1000	2503,57	96,21	-1190,6	95,12275	95,12275	2181,569	-2368,651	2181,569
		2000	4859,56	96,21	-1190,6	95,12275	95,12275	5205,659	205,139	5205,659
6D16	3000	0	-94,94	-129,96	-1552,27	95,12275	95,12275	-234,045	-6753,575	-234,045
		1000	2261,06	-129,96	-1552,27	95,12275	95,12275	2239,753	-4279,779	2239,753
		2000	4617,06	-129,96	-1552,27	95,12275	95,12275	4713,555	-1805,979	4713,555
6D17	3000	0	-3423,5	335,19	-2265,66	95,12275	95,12275	-3171,726	-11687,496	-3171,726
		1000	1110,5	335,19	-2265,66	95,12275	95,12275	1538,975	-7976,098	1538,975
		2000	4644,5	335,19	-2265,66	95,12275	95,12275	5249,675	-4206,098	5249,675
6D18	3000	0	-3435,7	393,65	-2266,93	95,12275	95,12275	-3197,745	-11718,651	-3197,745
		1000	1047,26	393,65	-2266,93	95,12275	95,12275	1512,956	-8005,151	1512,956
		2000	4581,25	393,65	-2266,93	95,12275	95,12275	5223,656	-4297,451	5223,656
6D19	3250	0	-22295	-4634,61	-982,34	95,12275	95,12275	-20645,891	-31777,719	-20645,891
		1350	-639,07	-106,4	-982,34	95,12275	95,12275	-565,694	-4991,333	-565,694
		2375	17649,9	1747,43	-982,34	95,12275	95,12275	20267,281	16241,453	20267,281
6D2	4500	0	-8386,7	-335,37	-195,41	95,12275	95,12275	-7038,195	-7872,917	-7038,195
		2250	-1003,7	-335,37	-195,41	95,12275	95,12275	-1492,145	-2312,867	-1492,145
		4500	4215,28	-335,37	-195,41	95,12275	95,12275	4073,906	3253,184	4073,906

70Y39	2000	150	-30629	68289	-1961,54	141,7527	74,27159	8963,467	-44522,002	6843,487
		1825	-17211	68309	-3961,54	141,7527	74,27159	7123,792	-30444,203	7123,792
		2000	-9406,9	68309	-3961,54	141,7527	74,27159	15823,176	-12573,419	15998,196
70Y40	2100	0	31690,3	7201,35	2060,56	141,7527	74,27159	39469,539	61366,675	41568,276
		1125	-48343,3	6973,35	3060,56	141,7527	74,27159	31617,866	36113,657	36113,657
		2000	59445,1	14649,47	3060,56	141,7527	74,27159	39213,096	24312,043	34312,043
70Y41	2000	0	52553,37	-3,06	-841,48	141,7527	74,27159	6389,234	-3425,563	6389,234
		2000	636,53	-3,06	-601,43	141,7527	74,27159	12414,729	-1221,563	12414,729
		2000	6326,52	-3,06	-841,48	141,7527	74,27159	16626,239	3945,673	3945,673
70Y42	2100	250	-41150	-14944,97	-3169,56	141,7527	74,27159	32655,462	-73211,11	-32655,462
		1475	-34747	-13676,35	-3169,56	141,7527	74,27159	-26842,124	-62364,777	-31642,124
		2000	-29114	-11079,3	-3169,56	141,7527	74,27159	-15945,032	-45511,736	-15945,032
70Y43	2200	25	-41487	-13670,35	-3060,56	141,7527	74,27159	-33659,566	-7379,405	-33659,566
		1875	-14724	-12824,23	-3060,56	141,7527	74,27159	-41794,376	-63937,309	-41794,376
		2000	-25399	-11243,3	-2960,42	141,7527	74,27159	-16930,817	-54769,431	-16930,817
70Y44	2100	0	25907,3	8174,51	4300,54	141,7527	74,27159	71491,705	73720,645	71491,705
		1125	48200,5	9701,54	6212,89	141,7527	74,27159	87339,796	37360,414	37360,414
		2000	63293,1	11945,84	6302,66	141,7527	74,27159	100236,959	105461,803	100236,959
70Y45	2000	0	-34576	0,71	-4034,37	141,7527	74,27159	-216,3716	-38903,441	-216,3716
		1200	-11562	0,71	-4034,37	141,7527	74,27159	11140,159	-16235,566	11140,159
		2000	642,35	0,71	-1044,22	141,7527	74,27159	34703,034	-3617,691	34703,034
70Y46	2100	250	-32767	141,37	-761,49	141,7527	74,27159	-804,1716	-5125,439	-804,1716
		1375	-21430	141,37	-3060,56	141,7527	74,27159	3685,336	39425,499	3685,336
		2000	-12141	141,37	-3060,56	141,7527	74,27159	13743,53	23472,147	13743,53
70Y47	2100	125	2460,1	945,19	-3060,56	141,7527	74,27159	23461,056	-13380,892	23461,056
		1200	-487,76	945,19	-3060,56	141,7527	74,27159	33642,662	-3742,429	33642,662
		2000	1323	945,19	-3060,56	141,7527	74,27159	44584,769	2137,921	2137,921
70Y48	2100	225	-12745	474,7	4681,12	141,7527	74,27159	14765,059	-4443,511	4443,511
		1300	2314,2	474,7	4001,12	141,7527	74,27159	20668,163	15745,750	15745,750
		2000	1347,89	474,7	4001,12	141,7527	74,27159	33086,731	23664,214	23664,214
70Y49	4000	225	-11100	-4182,32	-391,07	141,7527	74,27159	-1464,205	-7835,941	-1464,205
		1200	-2497,62	897,53	-391,07	141,7527	74,27159	12138,296	1916,524	1916,524
		4000	12694	2007,27	-391,07	141,7527	74,27159	37685,131	21438,087	21438,087
70Y50	4000	205	-13017	-4569,35	-394,64	141,7527	74,27159	-3836,773	-2073,502	-3836,773
		2000	1080,2	445	-394,64	141,7527	74,27159	16705,701	1211,038	16705,701
		4000	13172,5	3492,82	-394,64	141,7527	74,27159	36248,154	18331,423	18331,423
70Y51	2075	225	-31704	601,66	-245,46	141,7527	74,27159	-8704,253	-33782,511	-8704,253
		1362,5	-2064,3	601,66	267,81	141,7527	74,27159	4893,546	32002,718	4893,546
		2000	-10844	601,66	267,81	141,7527	74,27159	15115,650	17382,608	15115,650
70Y52	4775	225	-6933,9	33,53	2435,45	141,7527	74,27159	3241,036	10700,283	3241,036
		2612,5	-3113,9	33,53	4125,45	141,7527	74,27159	11147,215	16108,470	11147,215
		5000	-411,32	33,53	4125,45	141,7527	74,27159	17033,411	23014,668	17033,411
70Y53	2075	0	16745,1	594,37	756,75	141,7527	74,27159	40908,737	18134,233	18134,233
		1137,5	36244,3	594,37	756,75	141,7527	74,27159	51026,203	60200,954	60200,954
		2000	34427	594,37	756,75	141,7527	74,27159	62726,646	39530,736	39530,736
70Y54	750	250	-19558	-19,15	-4247,05	141,7527	74,27159	58171,643	-35393,970	58171,643
		625	-18876	-19,15	-4247,05	141,7527	74,27159	39049,330	37466,193	39049,330
		1000	-17791	-19,15	-4247,05	141,7527	74,27159	60026,993	36838,320	60026,993
70Y55	3500	0	-14283	-9,11	219,17	141,7527	74,27159	22301,905	6352,154	6352,154
		1750	9305,1	-9,11	219,17	141,7527	74,27159	26631,065	10681,304	10681,304
		3500	12429,1	-9,11	219,17	141,7527	74,27159	30960,205	15010,454	15010,454
70Y56	3500	0	3140,53	1,81	232,43	141,7527	74,27159	21269,603	6375,443	6375,443
		1750	3068,22	1,81	232,43	141,7527	74,27159	24593,653	10704,593	10704,593
		3500	13826,2	1,81	232,43	141,7527	74,27159	32667,803	14013,742	14013,742
70Y57	750	250	-14562	62,34	-437,36	141,7527	74,27159	3613,156	-3993,771	3613,156
		625	-18681	-58,34	-437,36	141,7527	74,27159	59054,905	-37976,096	59054,905
		1000	-17797	-58,34	-437,36	141,7527	74,27159	39932,580	-37042,421	39932,580
8B1	100	250	-107257	-4271,07	721,18	183,9637	127,1396	397461,478	113041,644	397461,478
		500	-107263	-4274,57	721,18	183,9637	127,1396	397617,345	114094,716	397617,345
		800	-127140	-4233,07	721,18	183,9637	127,1396	397765,605	114756,516	397765,605
8B10	1250	0	41040,3	4011,43	-9591,25	183,9637	127,1396	82484,393	7021,736	7021,736
		625	42865,4	4243,6	9591,85	183,9637	127,1396	91693,615	10230,959	10230,959
		1250	47129	4648,93	9591,85	183,9637	127,1396	95543,681	14021,025	14021,025
8B11	700	150	-13412	-623,07	5055,47	183,9637	127,1396	58833,178	7963,996	7963,996
		500	-11365	-413,57	3395,47	183,9637	127,1396	61162,939	10293,759	10293,759
		800	-9270,9	-375,07	3395,47	183,9637	127,1396	62980,048	12110,868	12110,868
8B12	700	150	-13705	-632,38	5056,37	183,9637	127,1396	58488,331	9261,032	9261,032
		500	-11736	-350,84	3766,37	183,9637	127,1396	60816,133	11590,303	11590,303
		800	-10164	-214,34	3766,37	183,9637	127,1396	62633,301	13407,302	13407,302
8B13	2450	150	-7607,2	2104,6	-514,6	183,9637	127,1396	15238,487	-7531,442	15238,487
		1375	3271	2104,6	-514,6	183,9637	127,1396	19454,095	-3363,841	19454,095
		2000	1078,14	2104,6	-514,6	183,9637	127,1396	24328,702	1159,767	1159,767
8B14	3400	150	-7650,2	2017,04	-864,55	183,9637	127,1396	14822,716	-9755,546	14822,716
		1375	-3521,1	2017,04	-864,55	183,9637	127,1396	19429,384	-5210,742	19429,384
		2000	908,08	2017,04	-864,55	183,9637	127,1396	23974,991	-664,734	23974,991

6010	4500	0	-23227	-11471.09	109.29	108.1772	74.27159	-31944.917	-30076.140	-31944.916
		2250	973.04	399.91	119.89	108.1772	74.27159	-1034.284	-1903.661	-1903.661
		4500	27174.3	12374.91	104.08	108.1772	74.27159	48014.634	41383.461	41383.461
		0	-37182	-12365.73	108.43	108.1772	74.27159	-40181.585	-37329.954	-40181.585
6011	4500	2250	-4461.3	-1496.78	-103.28	108.1772	74.27159	-182.080	-11380.154	-11380.154
		4500	41239.6	18334.02	189.76	108.1772	74.27159	39791.720	30629.647	30629.647
		0	-36893	-4973.24	51.23	108.1772	74.27159	-30700.352	-43507.590	-43507.590
		2250	1362.3	-3799	-7320.27	108.1772	74.27159	-4735.454	-11443.026	-11443.026
6012	4275	0	-15457.2	1773.45	73.32	108.1772	74.27159	36152.702	21475.126	21475.126
		2250	37182	-1893.01	367.2	108.1772	74.27159	-14368.339	-19437.478	-19437.478
		4500	8734.14	2290.76	362.3	108.1772	74.27159	12409.773	12990.634	12990.634
		0	-34351.7	8763.71	362.3	108.1772	74.27159	-32773.687	-47355.594	-47355.594
6013	3000	0	-57358	-10490.23	174.11	108.1772	74.27159	-38955.876	-42115.837	-42115.837
		2250	-2316	-729.58	184.12	108.1772	74.27159	-2736.949	-2423.231	-2423.231
		4500	12923	10334.15	134.11	108.1772	74.27159	42428.574	37269.743	37269.743
		0	-17171	-3494.67	-1312.89	108.1772	74.27159	-3521.498	-3543.676	-3543.676
6014	4500	2250	1729.23	1331.31	-1313.46	108.1772	74.27159	14336.941	3110.374	3110.374
		4500	25630.3	11333.31	-1313.46	108.1772	74.27159	48708.641	32656.424	32656.424
		0	-38528	-11977.83	146.43	108.1772	74.27159	-30965.576	-41908.481	-41908.481
		2250	2318.6	-116.43	146.43	108.1772	74.27159	-4042.431	-1920.601	-1920.601
6015	4500	4500	23833.4	11371.36	146.43	108.1772	74.27159	40425.341	32651.130	32651.130
		0	-30777	182.36	22.34	108.1772	74.27159	-33276.271	-21029.001	-21029.001
		2250	23833.4	9323.3	22.34	108.1772	74.27159	63304.596	49356.216	49356.216
		4500	47058.1	13057.26	22.34	108.1772	74.27159	73256.671	61008.801	61008.801
6016	3250	0	-45106	-11229.18	-395.33	108.1772	74.27159	-45967.551	-61392.126	-61392.126
		2250	23833.4	3045.1	-295.33	108.1772	74.27159	-3401.302	-40479.630	-40479.630
		4500	13905	645.84	-295.33	108.1772	74.27159	-3986.454	-30412.326	-30412.326
		0	-39173	-13938.73	740.03	108.1772	74.27159	-38693.592	-42173.227	-42173.227
6017	4500	2250	10712.1	-3081.72	740.03	108.1772	74.27159	1268.308	3134.427	3134.427
		4500	33228.9	9792.28	740.03	108.1772	74.27159	41266.003	33781.373	33781.373
		0	-12747	-3298.68	453.64	108.1772	74.27159	-11635.821	-17126.553	-17126.553
		2250	1212.36	263.36	492.63	108.1772	74.27159	9504.431	4001.647	4001.647
6018	4500	4500	16771.2	5824.78	492.63	108.1772	74.27159	30631.774	3117.960	3117.960
		0	-15942	-15942.1	-35.39	108.1772	74.27159	-39277.576	-42706.514	-42706.514
		2250	15942.1	-2046.1	732.29	108.1772	74.27159	702.230	-3736.714	-3736.714
		4500	30639.1	9806.91	732.29	108.1772	74.27159	40620.040	37253.097	37253.097
6019	4500	0	-23211	-11460.94	-272.36	108.1772	74.27159	-31911.915	-39548.672	-39548.672
		2250	449.67	414.98	-272.36	108.1772	74.27159	3067.225	321.128	321.128
		4500	27156.9	12389.96	-272.36	108.1772	74.27159	45647.603	40310.928	40310.928
		0	-11961.4	-462.25	462.25	108.1772	74.27159	-34899.511	-39548.672	-39548.672
6020	4500	2250	1334.1	-83.4	462.25	108.1772	74.27159	5060.389	-235.978	-235.978
		4500	234.23	11768.6	462.25	108.1772	74.27159	43060.989	40408.778	40408.778
		0	-10876	-8652.7	-1530.39	108.1772	74.27159	-31376.082	-42236.384	-42236.384
		2250	3430.39	1347.3	-1530.39	108.1772	74.27159	13339.966	109.467	109.467
6021	4500	4500	7792	11347.2	-1530.39	108.1772	74.27159	47336.016	3435.517	3435.517
		0	-32452	-12321.83	301.01	108.1772	74.27159	-36878.290	-41962.133	-41962.133
		2250	2212	739.18	301.01	108.1772	74.27159	2813.725	3275.513	3275.513
		4500	24702	10803.32	301.01	108.1772	74.27159	42306.350	3747.101	3747.101
6022	4500	0	-10238	-898.68	-1258.72	108.1772	74.27159	-5093.004	-16972.386	-16972.386
		2250	4524.4	398.82	-1258.72	108.1772	74.27159	473.046	-11406.339	-11406.339
		4500	271.58	898.82	-1258.72	108.1772	74.27159	6135.058	-5840.389	-5840.389
		0	1335.51	1334.97	2301.04	108.1772	74.27159	10152.265	12324.372	10152.265
6023	4500	2250	6256.31	1854.97	2301.04	108.1772	74.27159	1715.311	13390.433	13390.433
		4500	12137.3	1854.97	2301.04	108.1772	74.27159	21384.848	24736.473	21384.848
		0	-145860	-14156.51	-339.50	108.1772	74.27159	-36113.652	-44743.454	-44743.454
		2250	-2658.7	-310.53	-339.50	108.1772	74.27159	3263.112	-4773.634	-4773.634
6024	4500	4500	23242.3	11364.47	-339.50	108.1772	74.27159	43244.912	35226.167	35226.167
		0	-20330.57	33.63	-25.43	108.1772	74.27159	-24778.142	-21455.804	-21455.804
		2250	38312.3	8744.76	-25.43	108.1772	74.27159	62603.467	49512.629	49512.629
		4500	46731.8	11909.63	25.43	108.1772	74.27159	74757.453	61465.415	61465.415
6025	3250	0	-43310	-11318.64	3.52	108.1772	74.27159	-46274.665	-59445.603	-59445.603
		2250	37091	-8154.57	3.52	108.1772	74.27159	-34323.368	-47493.107	-47493.107
		4500	-19109	356.36	3.52	108.1772	74.27159	-6395.065	-19465.803	-19465.803
		0	-29601	-13968.93	362.31	108.1772	74.27159	-39153.229	-44234.389	-44234.389
6026	4500	2250	-3399.6	-2091.98	362.31	108.1772	74.27159	826.381	-4244.478	-4244.478
		4500	22801.4	9783.62	362.31	108.1772	74.27159	40806.381	35735.322	35735.322
		0	-30112	-13957.03	367.57	108.1772	74.27159	-39679.216	-44641.924	-44641.924
		2250	-3918.5	-2023.05	367.57	108.1772	74.27159	300.584	-4668.124	-4668.124
6027	4500	4500	22240.5	9792.95	367.57	108.1772	74.27159	40380.384	35316.677	35316.677
6028	7000	0	-5289.1	1.63	26.22	108.1772	74.27159	-4432.171	-5587.451	-5587.451
		3500	-13.14	1.63	26.22	108.1772	74.27159	4226.115	72.339	72.339
		7000	9232.66	1.63	26.22	108.1772	74.27159	12884.412	8731.139	8731.139
		0	-16791	-401.88	-5527.57	108.1772	74.27159	-11836.999	-41267.267	-41267.267
6029	4775	2387.5	2622.19	-401.88	-5527.57	108.1772	74.27159	8544.399	-20824.489	-20824.489
		4775	22035	-401.88	-5527.57	108.1772	74.27159	28927.797	-501.070	-501.070

6D20	2375	0	8114.45	1083.49	3047.27	95.12275	95.12275	2813.716	31814.356	2813.716
		1137.5	12012.3	4546.44	3047.27	95.12275	95.12275	18361.919	29660.433	16661.919
		2375	21917.3	8035.11	3047.27	95.12275	95.12275	31580.341	44301.675	31580.341
6D21	4500	0	-14384	-3837.41	368.21	95.12275	95.12275	-20907.201	-19359.119	-19359.119
		3250	169.90	44.46	368.21	95.12275	95.12275	325.099	1761.181	325.099
		4500	14932	2416.34	768.21	95.12275	95.12275	-1352.399	23095.621	21637.309
6D22	4500	0	-15416	-3837.47	129.3	95.12275	95.12275	-22384.203	-21737.143	-21737.143
		3250	-661.46	-453.6	129.3	95.12275	95.12275	-1151.913	-608.213	-608.213
		4500	14991.7	4936.28	129.3	95.12275	95.12275	10940.387	30323.447	19400.337
6D23	4275	0	-3004.8	-3668.39	1841.7	95.12275	95.12275	-10513.054	-23311.314	-23311.314
		2137.5	7234.16	2490.11	1841.7	95.12275	95.12275	9779.904	17033.334	9779.904
		4275	22174.3	7637.53	1841.7	95.12275	95.12275	31323.716	39067.256	31323.716
6D24	4275	125	-10365	-4629.34	1003.59	95.12275	95.12275	-13544.046	-17356.282	-17356.282
		3250	3949.89	1113	1003.59	95.12275	95.12275	3231.504	13213.176	3231.504
		4275	18223.1	6465.34	1902.68	95.12275	95.12275	24937.994	29478.646	24937.994
6D25	4275	0	-8170.6	-68.62	-38.62	95.12275	95.12275	-3863.693	-6850.893	-3863.693
		2137.5	-305.86	-68.62	-38.62	95.12275	95.12275	-477.813	-679.661	-477.813
		4275	4767.89	-68.62	-38.62	95.12275	95.12275	4534.323	4771.973	4771.973
6D26	4275	0	5013.9	-62.48	-38.48	95.12275	95.12275	-3866.997	-680.123	-3866.997
		2137.5	-384.1	-62.48	-38.48	95.12275	95.12275	-448.959	-606.417	-448.959
		4275	4789.65	-62.48	-38.48	95.12275	95.12275	4665.175	4805.621	4805.621
6D27	4250	125	-13423	-4068.04	116.113	95.12275	95.12275	-19425.153	-2762.743	-2762.743
		2250	4400.63	1036.5	116.113	95.12275	95.12275	3341.277	12193.737	3341.277
		4250	13425.9	6432.62	116.113	95.12275	95.12275	28107.749	33930.199	28107.749
6D28	4375	0	-4237.1	-3132.12	1872.19	95.12275	95.12275	-9630.713	-1974.513	-1974.513
		2137.5	1891.8	2024.87	1872.19	95.12275	95.12275	10517.615	18360.515	10517.615
		4375	22947.2	7591.09	1872.19	95.12275	95.12275	32061.047	39924.247	32061.047
6D29	4500	0	-14932	-3602.5	147.23	95.12275	95.12275	-20676.386	-26078.146	-26078.146
		2250	171.11	-237.03	147.23	95.12275	95.12275	435.703	1034.153	435.703
		4500	13475.2	3134.25	147.23	95.12275	95.12275	21388.084	32206.456	21388.084
6D3	1000	0	-1937.8	-723.07	601.37	95.12275	95.12275	-3785.513	-239.775	-239.775
		500	749.31	-723.07	601.37	95.12275	95.12275	1843.626	977.136	-1548.636
		1000	426.19	-723.07	601.37	95.12275	95.12275	711.124	221.4030	-311.734
6D30	4500	0	-16884	-5890.87	92.1	95.12275	95.12275	-22703.035	-33218.269	-23318.269
		2250	1429.8	518.79	92.1	95.12275	95.12275	-3570.729	3183.969	-3183.969
		4500	10524.8	4833.06	92.1	95.12275	95.12275	18561.512	16943.332	18561.512
6D31	4275	0	-9985.3	-3993.24	1094.14	95.12275	95.12275	-14669.359	-10073.910	-10073.910
		2437.5	6351.73	2034.36	1094.14	95.12275	95.12275	5794.779	10380.167	8794.775
		4275	33463.9	8450.97	1094.14	95.12275	95.12275	33447.567	33042.949	33447.567
6D4	1000	0	-3411.3	-864.58	266.67	95.12275	95.12275	-3450.463	-1030.454	-2330.454
		500	1343.8	-864.58	266.67	95.12275	95.12275	-2313.586	-1082.354	-1093.514
		1000	25.72	-864.58	266.67	95.12275	95.12275	-976.663	-148.246	-976.663
6D5	4350	0	-6075.9	-363.03	-130.47	95.12275	95.12275	-6908.965	-7456.943	-6908.965
		2250	-3330.94	-363.03	-130.47	95.12275	95.12275	-1342.919	-1390.093	-1342.919
		4350	4915.06	-363.03	-130.47	95.12275	95.12275	4223.132	3675.153	3675.153
6D6	1000	0	-493.93	493.93	-772.89	95.12275	95.12275	-461.943	-3788.093	-461.943
		500	344.09	493.93	-772.89	95.12275	95.12275	774.923	-3471.186	774.923
		1000	1437.07	493.93	-772.89	95.12275	95.12275	2011.833	-1234.286	2011.833
6D7	1000	0	-1505.13	532.63	-890.18	95.12275	95.12275	2143.709	-153.958	2143.709
		500	2686.13	532.63	-890.18	95.12275	95.12275	3379.696	480.942	480.942
		1000	3364.13	532.63	-890.18	95.12275	95.12275	4616.598	1717.842	1717.842
6D8	1000	0	-4233.3	-725.07	601.37	95.12275	95.12275	-5359.334	-2733.570	-2733.570
		500	-3465.8	-725.07	601.37	95.12275	95.12275	-4023.424	-1496.670	-1496.670
		1000	1927.3	-725.07	601.37	95.12275	95.12275	-2768.324	-359.770	-359.770
6D9	1000	0	-4477.3	-864.58	266.67	95.12275	95.12275	-5914.365	-4804.254	-4804.254
		500	-3199.8	-864.58	266.67	95.12275	95.12275	-4681.363	-3567.354	-3567.354
		1000	-2431.8	-864.58	266.67	95.12275	95.12275	-3450.463	-2330.454	-2330.454
70Y1	3275	0	3284	-2.7	-368.79	141.7527	74.27159	31474.650	1398.447	1298.447
		1637.5	7141.93	-2.7	-368.79	141.7527	74.27159	28521.503	3947.203	3947.203
		3275	10999.9	-2.7	-368.79	141.7527	74.27159	39376.351	9998.142	9998.142
70Y10	3250	150	-2648	140.02	-8066.79	141.7527	74.27159	12703.184	-36513.939	12703.184
		2075	1887.26	140.02	-8066.79	141.7527	74.27159	17465.245	-31751.874	17465.245
		4000	6422.56	140.02	-8066.79	141.7527	74.27159	32127.314	-26939.809	32127.314
70Y11	4250	0	-5069	10.37	239.83	141.7527	74.27159	3581.651	-4364.223	3581.651
		3125	-62.46	19.37	239.83	141.7527	74.27159	13838.463	952.592	952.592
		4250	4944.04	10.37	239.83	141.7527	74.27159	19095.390	6209.417	6209.417
70Y12	3850	150	-2834.2	65.15	-8355.79	141.7527	74.27159	12432.231	-20998.703	12432.231
		2875	1701.07	65.15	-8355.79	141.7527	74.27159	17194.226	-33236.617	17194.226
		4000	6036.37	65.15	-8355.79	141.7527	74.27159	21956.331	-28474.372	21956.331
70Y13	4750	0	5219.62	3423.25	2269.75	141.7527	74.27159	21065.737	-477.837	21065.737
		3375	10912.1	3423.25	2269.75	141.7527	74.27159	27381.010	5417.339	5417.339
		4750	16410.6	3423.25	2269.75	141.7527	74.27159	32256.295	11292.614	11292.614
70Y14	4750	0	4903.04	3295.43	-2434.33	141.7527	74.27159	21039.113	-1615.751	21039.113
		2375	10498.5	3295.43	-2434.33	141.7527	74.27159	26914.390	4259.525	4259.525
		4750	16094	3295.43	-2434.33	141.7527	74.27159	32729.665	10134.805	10134.805

8B11	7000	0	33614	3360.9	-3361.73	185.9637	127.1396	-50330.246	41629.539	-20370.548
		3000	-3338.9	-3337.3	7315.75	185.9637	127.1396	3317.666	-17961.620	3317.666
		7000	18442.5	3255.3	-531.573	185.9637	127.1396	26923.375	5706.358	5706.358
8B16	67000	150	31790	-3726.35	-3611.34	185.9637	127.1396	-18640.522	-87240.505	-18690.522
		3000	-14307.5	-527.55	-2611.34	185.9637	127.1396	4369.725	-14282.553	4369.725
		6300	14335.4	2071.75	-2611.34	185.9637	127.1396	37429.773	9372.736	3737.941
8B17	67000	150	23124	-5457.01	-2734.39	185.9637	127.1396	-14767.353	-88344.148	-14767.353
		3000	-2460.7	-642.01	-2734.39	185.9637	127.1396	3993.015	13274.092	3993.015
		6300	16200.3	3150.93	-2734.39	185.9637	127.1396	26955.063	7765.850	26955.063
8B18	60000	0	-27580	-3576.52	-3311.59	185.9637	127.1396	-21161.713	-43209.923	-21161.713
		2000	-3232	-164.02	-3311.59	185.9637	127.1396	2565.132	19633.391	2565.132
		7000	13876.3	2049.49	-3311.59	185.9637	127.1396	26174.066	4445.317	26174.066
8B19	59500	150	-7280.9	-2357.52	-11664.64	185.9637	127.1396	3875.799	-39143.350	3875.799
		3125	-3012.7	-2387.52	-11664.64	185.9637	127.1396	10300.431	-51614.713	10300.431
		4100	6675.28	-2387.52	-11664.64	185.9637	127.1396	17738.663	-44433.083	17738.663
8B2	100	250	107444	-4191.73	-787.28	185.9637	127.1396	39744.403	113911.698	39744.403
		300	-107320	-4173.63	787.28	185.9637	127.1396	397636.311	-112774.231	397636.311
		350	107309	-4155.73	787.28	185.9637	127.1396	397773.541	115623.990	397773.541
8B21	14500	150	-7570	-2093.05	-956.41	185.9637	127.1396	3569.497	-51815.148	3569.497
		3125	-890.33	-2093.05	-956.41	185.9637	127.1396	8235.969	-40682.313	8235.969
		4100	6089.32	-2093.05	-956.41	185.9637	127.1396	17426.703	-36360.631	17426.703
8B21	7000	150	-26170	-3692.37	-19112.34	185.9637	127.1396	42905.649	-21447.683	42905.649
		3000	-34322	-2711.37	-19112.34	185.9637	127.1396	49233.311	-39167.911	49233.311
		8300	23628	-3290.37	-19112.34	185.9637	127.1396	47049.919	73330.313	47049.919
8B22	7000	150	-19303	-2154.69	-1036.54	185.9637	127.1396	30789.375	-34493.644	30789.375
		300	-13292	-1883.19	-1036.54	185.9637	127.1396	50340.499	-54943.130	50340.499
		330	-17446	-1746.69	-1036.54	185.9637	127.1396	53373.354	-63995.268	53373.354
8B23	1250	0	61190.1	7967.49	9117.33	185.9637	127.1396	113093.284	110962.324	110962.324
		625	64112.1	2261.37	9117.33	185.9637	127.1396	117001.377	114117.453	114117.453
		1250	67275.7	9604.99	9117.33	185.9637	127.1396	12651.611	117967.511	117967.511
8B24	1350	0	-21058	-452.31	-4528.26	185.9637	127.1396	15511.405	-3344.565	15511.405
		425	-17540	64.44	-4528.26	185.9637	127.1396	20092.499	1236.438	1236.438
		1350	-13523	240.69	-4528.26	185.9637	127.1396	23544.943	653.973	653.973
8B25	1100	200	-85102	-6696.36	-3402.64	185.9637	127.1396	-49296.116	-110063.314	-49296.116
		300	-51560	-6009.58	-3402.64	185.9637	127.1396	-44946.342	-112613.547	-44946.342
		1350	-77949	-5442.38	-3402.64	185.9637	127.1396	-40775.060	-101443.264	-40775.060
8B26	1100	200	-72521	-3934.18	-2942.51	185.9637	127.1396	-35535.697	-92639.149	-35535.697
		300	-44760	-3297.16	-2942.51	185.9637	127.1396	-28888.923	-98039.382	-28888.923
		1350	-65388	-2736.18	-2942.51	185.9637	127.1396	-24717.651	-83268.116	-24717.651
8B27	1100	250	-73035	-4024.61	-2958.48	185.9637	127.1396	-34113.891	-93331.434	-34113.891
		300	-69387	-3337.61	-2958.48	185.9637	127.1396	-29464.124	-98651.656	-29464.124
		1350	-83666	-2776.61	-2958.48	185.9637	127.1396	-25292.841	-94510.374	-25292.841
8B28	1100	250	-75061	-6782.86	-3490.82	185.9637	127.1396	-49644.105	-111597.466	-49644.105
		300	-81230	-6095.86	-3490.82	185.9637	127.1396	-44994.383	-106147.698	-44994.383
		1350	-77966	-5534.86	-3490.82	185.9637	127.1396	-40623.050	-102176.416	-40623.050
8B29	1350	0	-20139	-81.99	5004.26	185.9637	127.1396	16894.602	-314.252	16894.602
		675	-16832	464.76	5004.26	185.9637	127.1396	21475.605	4366.751	4366.751
		1350	-11900	1241.01	5004.26	185.9637	127.1396	26923.139	9319.285	9319.285
8B3	1250	0	43213.6	4437.52	-9195.47	185.9637	127.1396	98163.682	10364.802	10364.802
		625	45037.6	4671.8	-9195.47	185.9637	127.1396	94391.903	13574.043	13574.043
		1250	43301.3	5075.02	-9195.47	185.9637	127.1396	87231.549	17424.089	17424.089
8B30	1250	0	63155.4	8690.3	9765.24	185.9637	127.1396	116614.892	116452.014	116452.014
		625	69972.5	2924.63	9765.24	185.9637	127.1396	119224.153	119661.245	119661.245
		1250	69241	9210.6	9765.24	185.9637	127.1396	123674.168	123511.290	123511.290
8B31	100	200	-123666	-5968.52	-11609.73	185.9637	127.1396	379183.376	-184367.957	379183.376
		300	-123666	-5047.03	-11609.73	185.9637	127.1396	379352.175	-184119.768	379352.175
		350	-123438	-5237.52	-11609.73	185.9637	127.1396	379611.767	-183860.177	379611.767
8B32	100	250	-121568	-4893.14	-9382.68	185.9637	127.1396	371935.322	-175020.812	371935.322
		300	-121340	-4876.64	-9382.68	185.9637	127.1396	381183.710	-172774.622	381183.710
		350	-121112	-4859.14	-9382.68	185.9637	127.1396	382443.291	-172615.044	382443.291
8B33	4250	0	7098.93	1556.24	57.61	185.9637	127.1396	21192.582	5333.656	5333.656
		2125	20786.9	3922.21	57.61	185.9637	127.1396	38055.393	26186.507	26186.507
		4250	35236.9	6669.06	57.61	185.9637	127.1396	56112.112	44243.231	44243.231
8B34	4250	0	7013.23	1732.86	73.25	185.9637	127.1396	21084.245	5221.045	5221.045
		2125	30701.2	3904.73	73.25	185.9637	127.1396	37447.044	26143.845	26143.845
		4250	5151.2	6651.61	73.25	185.9637	127.1396	56093.778	44300.580	44300.580
8B35	3350	150	-6466.4	-1959.53	-7235.26	185.9637	127.1396	13655.341	-39235.350	13655.341
		1325	403.62	-919.67	-7235.26	185.9637	127.1396	21365.997	-30924.695	21365.997
		2500	1644.96	298.2	-7235.26	185.9637	127.1396	30200.917	-22085.779	30200.917
8B36	2800	250	-25812	-8742.55	-4158.53	185.9637	127.1396	13334.884	-15591.784	13334.884
		1500	-14423	-3736.03	-4158.53	185.9637	127.1396	2130.345	-1685.553	2130.345
		2750	-5093.8	-1391.05	-4158.53	185.9637	127.1396	17889.632	16473.733	16473.733
8B37	2000	0	32871.6	8793.27	1182.97	185.9637	127.1396	53841.798	38221.327	38221.327
		1250	32195.9	7673.27	1182.97	185.9637	127.1396	65661.082	49981.113	49981.113
		2500	46384.8	10360.77	1182.97	185.9637	127.1396	90066.302	64446.333	64446.333

8B38	2500	0	13200,3	1920,65	-2945,24	185,9637	127,1396	55816,761	3536,310	7230,310
		1250	21904,8	3797,65	-2945,24	185,9637	127,1396	47576,037	14617,566	14617,566
		2500	34093,1	6385,15	-2945,24	185,9637	127,1396	62041,267	29082,816	29082,816
		150	-1571,4	-5636,64	-9282,43	185,9637	127,1396	-504,936	61393,815	-504,936
8B39	2550	1325	-6113,8	-3546,89	-9282,43	185,9637	127,1396	11733,556	-49135,232	11733,556
		2500	-4199,8	-1191,14	-9282,43	185,9637	127,1396	25060,433	-35228,457	25060,433
		150	23849,8	1404,4	4459,44	185,9637	127,1396	64433,467	45736,269	45036,369
		825	29066,2	2180,65	4459,44	185,9637	127,1396	59636,002	50488,904	50488,904
8B4	1350	1500	31882,4	3727,4	4459,44	185,9637	127,1396	74467,005	55069,907	55069,907
		150	-2393,4	5,36	-966,06	185,9637	127,1396	19317,697	6742,333	19317,697
		1325	7034,63	2083,11	-966,06	185,9637	127,1396	31476,279	5516,320	5516,320
		2500	17353,1	4423,86	-966,06	185,9637	127,1396	44782,055	18223,004	18223,004
8B41	2750	0	-7480,8	-1454,61	130,86	185,9637	127,1396	8254,859	-3632,294	8254,859
		1375	3313,66	814,44	130,86	185,9637	127,1396	23053,371	4796,217	4886,217
		2750	14112,2	3683,19	130,86	185,9637	127,1396	36771,894	15804,330	15804,330
		150	-3327,1	-423,31	-3189,76	185,9637	127,1396	17964,645	-17334,644	17964,645
8B42	2350	1325	6287,97	1656,4	-3189,76	185,9637	127,1396	30023,230	-5076,362	30023,230
		2500	16585,3	4012,19	-3189,76	185,9637	127,1396	42680,006	8230,415	8230,415
		150	-14388	-3718,28	-5559,24	185,9637	127,1396	791,047	-61360,360	791,047
		1325	-4792,6	-3332,81	-5559,24	185,9637	127,1396	13045,629	-49001,773	13045,629
8B43	2500	2500	5524,78	1383,06	-5559,24	185,9637	127,1396	26336,405	-35695,002	26336,405
		0	12731,7	1720,64	-3133,87	185,9637	127,1396	35731,353	3021,998	3021,998
		1325	25056,1	3603,66	-3133,87	185,9637	127,1396	47531,179	13381,282	13781,282
		2500	33243	6191,16	-3133,87	185,9637	127,1396	61996,569	22246,312	22246,312
8B45	2500	0	-8913,8	7032,77	1841,82	185,9637	127,1396	58561,416	45705,251	45705,251
		1250	39456,3	5907,77	1841,82	185,9637	127,1396	70320,696	57464,537	57464,537
		2500	49645,3	11495,27	1841,82	185,9637	127,1396	84785,926	71139,767	71929,767
		250	-38870	-10167,95	2222,97	185,9637	127,1396	-28832,866	40074,836	-28832,866
8B46	2500	1900	-16989	-7580,48	2222,97	185,9637	127,1396	-14387,636	25804,605	-14387,636
		2750	-16377	-5705,48	2222,97	185,9637	127,1396	-2598,330	13550,319	-2598,330
		150	-8880,6	-1771,09	-7424,3	185,9637	127,1396	11343,323	-4184,335	11243,323
		1325	-10963	-731,21	-7424,3	185,9637	127,1396	19530,607	-33320,090	19530,607
8B5	1100	2500	5728,08	446,66	-7424,3	185,9637	127,1396	33386,076	-24696,383	28386,076
		150	64346,8	3437,33	-3138,36	185,9637	127,1396	117965,221	50991,353	57991,353
		700	67338,4	3998,23	-3138,36	185,9637	127,1396	132136,504	62160,636	62162,636
		1250	71499,8	4685,33	-3138,36	185,9637	127,1396	126796,261	68818,393	68812,393
8B6	1100	150	59316,8	3302,71	-2854,92	185,9637	127,1396	112543,391	53759,811	53759,811
		700	63723,4	3863,71	-2854,92	185,9637	127,1396	116713,674	57931,094	57931,094
		1250	66488,8	4550,71	-2854,92	185,9637	127,1396	121363,483	60580,872	62380,872
		150	65359,9	3304,95	-2920,71	185,9637	127,1396	113485,030	58426,132	55426,132
8B7	1100	700	62671,6	3865,95	-2920,71	185,9637	127,1396	116656,312	57997,414	57597,414
		1250	65412,9	4552,95	-2920,71	185,9637	127,1396	121206,083	60247,182	62247,182
		150	63335,5	3333,11	-3342	185,9637	127,1396	117315,807	56487,491	56487,491
		700	67244,2	3894,11	-3342	185,9637	127,1396	121487,089	60638,773	60638,773
8B8	1100	1250	70085,5	4581,11	-3342	185,9637	127,1396	126156,857	65308,541	65308,541
		150	64235,5	1553,23	4656,55	185,9637	127,1396	65206,940	46637,734	46637,724
		825	28654,1	2329,48	4656,55	185,9637	127,1396	70659,493	52090,259	52090,259
		1500	32470,2	2876,23	4656,55	185,9637	127,1396	75240,498	56671,262	56671,262
8CY1	3000	0	25327,3	1,94	1,33	207,4355	74,27159	65435,124	26601,246	26601,246
		1200	26961,3	1,94	1,33	207,4355	74,27159	69145,824	30314,946	30311,946
		2000	32393,3	1,94	1,33	207,4355	74,27159	72256,524	34022,646	34022,646
		150	-1089	-124,84	-1642,76	207,4355	74,27159	8727,328	-15503,072	8757,325
8CY10	6700	2500	-196,35	-164,84	-1642,76	207,4355	74,27159	17074,555	-7215,842	17074,555
		6850	7696,25	-104,84	-1642,76	207,4355	74,27159	28361,783	1671,389	1071,389
		150	-7574,5	-202,86	-1150,76	207,4355	74,27159	3204,566	-13419,431	3204,566
		3500	-81,91	-202,86	-1150,76	207,4355	74,27159	17091,796	-5152,201	17091,796
8CY11	6700	6850	2810,69	-202,86	-1150,76	207,4355	74,27159	25329,056	3155,030	3155,030
		150	-7692,9	-185,2	-1088,71	207,4355	74,27159	9115,779	-13844,608	9118,779
		3500	199,68	-185,2	-1088,71	207,4355	74,27159	17406,009	-4557,378	17406,009
		6850	8092,28	-185,2	-1088,71	207,4355	74,27159	23693,239	3729,852	3729,852
8CY13	6700	150	-8160,3	-114,68	-1684,28	207,4355	74,27159	8702,097	-15762,684	8702,097
		3500	-267,63	-114,68	-1684,28	207,4355	74,27159	16989,327	-7475,454	16989,327
		6850	7624,92	-114,68	-1684,28	207,4355	74,27159	25276,557	211,776	211,776
		150	-9130,6	-274,11	-1553,24	207,4355	74,27159	7526,328	-16388,565	7526,328
8CY14	6700	3500	-1228	-274,11	-1553,24	207,4355	74,27159	15813,358	-8100,855	15813,358
		6850	6664,57	-274,11	-1553,24	207,4355	74,27159	24000,728	186,373	186,373
		0	-3284,5	-103,07	-540,79	207,4355	74,27159	44992,371	-5838,277	44990,371
		1200	-457,31	-103,07	-540,79	207,4355	74,27159	47960,931	-2839,717	47960,931
8CY15	2400	2400	2369,89	-103,07	-540,79	207,4355	74,27159	50929,491	108,843	108,843
		150	-23377	-92,11	-537,36	207,4355	74,27159	25552,043	-28899,467	25552,043
		1225	-20844	-92,11	-537,36	207,4355	74,27159	32211,381	-24340,132	32211,381
		2500	-18312	-92,11	-537,36	207,4355	74,27159	34870,716	-21580,757	34870,716
8CY17	2100	150	-22405	-103,07	-540,79	207,4355	74,27159	29511,484	-36954,425	29511,484
		1225	-20872	-103,07	-540,79	207,4355	74,27159	32170,819	-24295,106	32170,819
		2500	-18339	-103,07	-540,79	207,4355	74,27159	34830,134	-21635,765	34830,134

8CV18	700	150	-22437	-2319.39	-1729.01	207.4355	74.27159	140350.740	-32625.947	140350.740
		300	-21612	-2319.39	-1585.01	207.4355	74.27159	141116.570	-31760.117	141116.570
		450	-20790	-2319.39	-1509.31	207.4355	74.27159	141982.400	-30944.287	141982.400
		600	-19968	-2319.39	-1433.61	207.4355	74.27159	142848.230	-30128.457	142848.230
8CV19	800	150	-33373	3.16	17.12	207.4355	74.27159	757.403	-33009.516	757.403
		300	-32738	3.16	17.13	207.4355	74.27159	4468.202	-34299.216	4468.202
		450	-32103	3.16	17.13	207.4355	74.27159	5179.032	-35588.916	5179.032
		600	-31468	3.16	17.13	207.4355	74.27159	38335.683	-36878.711	38335.683
8CV20	900	150	-30851	1.94	1.33	207.4355	74.27159	43175.203	33.919	43175.203
		300	-3196.12	1.94	1.33	207.4355	74.27159	46312.923	3363.549	46312.923
		450	0	3.16	17.13	207.4355	74.27159	39372.555	3310.514	39372.555
		600	-41.95	3.16	17.13	207.4355	74.27159	42112.130	29.117	42112.130
8CV21	1000	150	-3126.83	3.16	17.13	207.4355	74.27159	49451.360	3363.747	49451.360
		300	0	29.119	3.16	17.13	207.4355	69413.731	30659.204	69413.731
		450	-32652	3.16	17.13	207.4355	74.27159	73126.401	34560.964	73126.401
		600	-36187	3.16	17.13	207.4355	74.27159	76839.111	35971.582	76839.111
8CV22	700	150	16831.1	3651.82	-483.18	207.4355	74.27159	125411.849	16949.268	125411.849
		300	16333.7	2031.82	-483.18	207.4355	74.27159	186307.699	17815.068	17815.068
		450	17680.3	2031.82	-425.13	207.4355	74.27159	137173.529	18680.923	137173.529
		600	-3238	1.94	1.33	207.4355	74.27159	4376.791	-3845.031	4376.791
8CV23	800	150	-28838	1.94	1.33	207.4355	74.27159	8569.497	-30364.381	8569.497
		300	-28298	1.94	1.33	207.4355	74.27159	12280.124	-28352.692	12280.124
		450	0	3.16	17.13	207.4355	74.27159	143730.304	-37140.775	143730.304
		600	-17402	-3263.06	-4872.96	207.4355	74.27159	144846.234	-42234.943	144846.234
8CV24	900	150	-16777	-3263.06	-4872.96	207.4355	74.27159	143512.164	-41409.113	143512.164
		300	16771.9	3355.24	5000.91	207.4355	74.27159	137033.426	-31612.403	137033.426
		450	17093.5	3355.24	5000.91	207.4355	74.27159	137929.256	-42438.273	137929.256
		600	17921.1	3355.24	5000.91	207.4355	74.27159	120795.075	-43344.053	120795.075
8CV25	1000	150	-17452.3	-92.11	-337.36	207.4355	74.27159	72422.821	12971.309	72422.821
		300	-18928	-92.11	-337.36	207.4355	74.27159	75082.156	10030.644	75082.156
		450	-20317.7	-92.11	-337.36	207.4355	74.27159	77741.491	21289.979	77741.491
		600	-21707.1	-103.07	-340.79	207.4355	74.27159	72382.260	15916.341	72382.260
8CV26	1100	150	-18928	-103.07	-340.79	207.4355	74.27159	75041.575	18375.676	75041.575
		300	-20317.7	-103.07	-340.79	207.4355	74.27159	77760.935	21235.011	77760.935
		450	0	-3258.8	-92.11	-337.36	207.4355	42632.943	-3775.299	42632.943
		600	-429.65	-92.11	-337.36	207.4355	74.27159	48001.503	-2804.739	48001.503
8CV27	1200	150	-2397.57	-92.11	-337.36	207.4355	74.27159	50970.063	163.821	50970.063
		300	-3019.4	-237.84	-1478.92	207.4355	74.27159	7670.671	-15931.590	7670.671
		450	-1126.1	-237.84	-1478.92	207.4355	74.27159	15957.693	-3944.578	15957.693
		600	-6545.53	-237.84	-1478.92	207.4355	74.27159	24245.121	-642.832	24245.121
8D1	2250	135	-17409	-4375.04	-1929.57	95.12275	95.12275	-17622.738	-35726.092	-17622.738
		2250	-1824.8	-492.24	-1929.57	95.12275	95.12275	-5897.692	13401.243	-5897.692
		4500	-154.57	527.46	-1929.57	95.12275	95.12275	779.132	7324.223	779.132
		6750	-2711.6	1339	2166.26	95.12275	95.12275	-2833.131	6365.581	-2833.131
8D10	4375	2187.5	2919.14	2488.39	2166.26	95.12275	95.12275	11971.907	21076.619	11971.907
		4375	2187.5	5160.27	2166.26	95.12275	95.12275	27536.639	36635.231	27536.639
		4500	0	-14076	-3414.2	-967.31	95.12275	-10364.311	-20427.013	-10364.311
		4500	-2350	-1067.6	-336.08	967.31	95.12275	-3007.032	-7969.724	-3007.032
8D12	4500	0	-9039.4	-1537.68	873.71	95.12275	95.12275	-11105.945	-7436.363	-11105.945
		2250	3008.47	1040.44	873.71	95.12275	95.12275	4251.356	-7920.936	4251.356
		4500	-10050.3	3613.57	873.71	95.12275	95.12275	19403.636	23378.238	19403.636
		4575	0	-7477.8	-416.05	1249.26	95.12275	10090.849	-6413.957	-6413.957
8D13	4575	2437.5	5941.48	2137.87	1349.26	95.12275	95.12275	8704.103	14711.000	8704.103
		4575	19775.9	7819.3	1349.26	95.12275	95.12275	28975.422	34642.314	28975.422
		4575	0	6784.01	1331.93	3768.11	95.12275	8416.727	24242.789	8416.727
		4575	1187.5	11796	2959.36	3768.11	95.12275	15493.097	31319.159	15493.097
8D14	4500	0	-13659	-3154.99	-814.76	95.12275	95.12275	-17654.301	-21076.293	-17654.301
		2250	-1610.8	-576.86	-814.76	95.12275	95.12275	-2297.001	-5718.993	-2297.001
		4500	10437.1	2001.26	-814.76	95.12275	95.12275	10060.289	9638.297	10060.289
		4575	0	-2143.4	78.61	2130.43	95.12275	-2165.019	6779.997	-2165.019
8D15	4375	2187.5	9487.33	2553.61	2130.43	95.12275	95.12275	12645.008	21391.024	12645.008
		4375	21633.3	5325.49	2130.43	95.12275	95.12275	28201.731	37149.767	28201.731
		4375	125	-10412	-2431.53	-1410.41	95.12275	-13487.187	-19410.909	-13487.187
		4375	1315.44	137.2	-1410.41	95.12275	95.12275	1525.272	-4398.450	1525.272
8D16	4375	13044.3	2705.95	-1410.41	95.12275	95.12275	95.12275	16537.742	10614.020	16537.742
		4375	0	3740.36	731.69	-82.23	95.12275	4695.468	-4434.603	4695.468
		4375	2137.5	15271.1	3206.99	-82.23	95.12275	19506.995	19245.629	19506.995
		4375	21317.1	5878.86	-82.23	95.12275	95.12275	35065.737	34804.361	34804.361
8D17	4375	0	3740.36	731.69	-82.23	95.12275	95.12275	4695.468	-4434.603	4695.468
		2187.5	15271.1	3206.99	-82.23	95.12275	95.12275	19506.995	19245.629	19506.995
		4375	21317.1	5878.86	-82.23	95.12275	95.12275	35065.737	34804.361	34804.361
		4375	0	3740.36	731.69	-82.23	95.12275	4695.468	-4434.603	4695.468
8D18	4375	2187.5	15271.1	3206.99	-82.23	95.12275	95.12275	19506.995	19245.629	19506.995
		4375	21317.1	5878.86	-82.23	95.12275	95.12275	35065.737	34804.361	34804.361
		4375	0	3740.36	731.69	-82.23	95.12275	4695.468	-4434.603	4695.468
		4375	21317.1	5878.86	-82.23	95.12275	95.12275	35065.737	34804.361	34804.361

BP9	4350	125	-10246	-2432,2	-1431,73	95,12275	95,12275	-13211,743	-19325,003	-13311,743
		2250	1463,19	136,53	-1431,73	95,12275	95,12275	1700,727	-4313,539	1700,727
		4350	1321,2	2705,3	-1431,73	95,12275	23,12275	16713,197	10499,231	10699,231
BP1	3750	0	12839,5	32,51	-26,3	73,51962	50,89207	2644,251	-2745,971	2644,251
		1875	110,96	39,51	-26,3	73,51962	50,89207	1427,376	37,055	37,055
		3750	2761,48	89,51	-26,3	73,51962	50,89207	2210,301	3020,080	2920,080
BP10	3025	225	-9043,3	-1235,94	52,23	73,51962	50,89207	2096,048	-11125,607	-2396,036
		1237,5	-6459,5	-910,07	52,23	73,51962	50,89207	2039,259	-7393,714	2039,259
		3025	-3643,2	1,32	52,23	73,51962	50,89207	3002,564	2409,406	7002,564
BP11	2000	0	2369,7	26,32	162,52	73,51962	50,89207	13357,792	2914,033	2914,033
		1000	7669,97	1462,3	108,52	73,51962	50,89207	19509,436	10065,656	10065,656
		2000	13626,2	3362,3	-98,52	73,51962	50,89207	27236,126	18302,451	18302,451
BP12	1250	0	5235,38	79,51	-26,3	73,51962	50,89207	21367,314	5417,570	5417,570
		625	6751,22	263,38	-26,3	73,51962	50,89207	23125,400	7335,835	7335,835
		1250	9216,63	632,65	-26,3	73,51962	50,89207	28464,326	10514,324	10514,324
BP13	1250	0	5235,38	29,94	-25,53	73,51962	50,89207	21362,116	5415,602	5415,602
		625	6727,24	264,31	-25,53	73,51962	50,89207	23160,412	7333,902	7333,902
		1250	9231,20	323,66	-25,53	73,51962	50,89207	26459,341	10512,831	10512,831
BP14	2000	0	2163,72	-47,37	56,69	73,51962	50,89207	12121,730	3561,906	3561,906
		1000	7464,15	1443,36	80,89	73,51962	50,89207	19275,373	9713,561	9713,561
		2000	13614,5	3343,56	30,29	73,51962	50,89207	27600,139	16040,344	16040,344
BP15	3025	225	-10054	-1674,56	52,23	73,51962	50,89207	-3537,958	-2333,119	-2337,295
		1237,5	-6670,7	-935,63	52,23	73,51962	50,89207	17570,965	-7746,827	1797,996
		3025	-2652	-17,43	55,36	73,51962	50,89207	6761,306	2783,519	6761,306
BP16	4050	225	-11469	-1721,07	58	73,51962	50,89207	-8961,173	-12929,647	-3961,173
		2250	63,31	-63,89	-26	73,51962	50,89207	4890,366	107,499	4890,369
		4275	11600,3	1593,24	58	73,51962	50,89207	18741,917	13744,049	13744,049
BP17	3025	0	562,23	-291,25	546,11	73,51962	50,89207	4524,406	2132,540	2132,540
		1637,5	4732,05	345,00	546,11	73,51962	50,89207	11576,453	8384,586	8384,586
		3275	10470,7	1653,39	546,11	73,51962	50,89207	18793,141	16291,275	16291,275
BP18	775	225	-33182	-4071,2	-3310,44	73,51962	50,89207	-13676,156	-57227,247	-13676,156
		612,5	-27972	-3802,61	-3310,44	73,51962	50,89207	-14076,796	-5637,877	-14076,796
		1000	-33632	-3667,47	-3310,44	73,51962	50,89207	-12987,652	-54536,733	-12987,652
BP19	850	0	-33773	-2152,23	5879,69	73,51962	50,89207	-6060,147	-4658,514	-4658,514
		425	-13422	-1857,2	5879,69	73,51962	50,89207	-4094,675	-2795,042	-2795,042
		850	-22353	-1322,82	5879,69	73,51962	50,89207	-1534,552	-132,920	-132,920
BP2	3750	0	-1754,1	-29,94	25,53	73,51962	50,89207	2354,419	2010,116	2354,419
		1875	163,6	-29,94	25,53	73,51962	50,89207	5137,444	-25,091	5137,444
		3750	2344,9	-29,94	25,53	73,51962	50,89207	7920,446	2747,934	2747,934
BP20	3000	150	-9673,2	-1208,99	1033,9	73,51962	50,89207	-5869,037	-7629,878	-3669,037
		1750	-4201,6	-584,95	1033,9	73,51962	50,89207	1161,091	-399,750	1161,091
		3000	1269,6	639,01	1033,9	73,51962	50,89207	8191,215	6430,379	6430,379
BP21	4300	150	-3977,6	-1711,68	17,16	73,51962	50,89207	-6194,640	-10836,641	-6194,640
		2250	-946,01	-37,82	17,16	73,51962	50,89207	3660,198	-981,803	3660,198
		4300	6745,35	1636,32	17,16	73,51962	50,89207	13515,036	8872,036	8872,036
BP22	4200	150	-7527,7	-1670,38	-591,83	73,51962	50,89207	-5364,163	-12564,132	-5364,163
		2250	-578,85	3,42	-591,83	73,51962	50,89207	4109,840	-3090,129	4109,840
		4200	6769,98	1677,42	-591,83	73,51962	50,89207	13583,842	6383,874	6383,874
BP23	4200	150	-7943,4	-1666,37	-603,11	73,51962	50,89207	-5375,125	-12622,360	-5375,125
		2250	-593,53	7,63	-603,11	73,51962	50,89207	4098,878	-2142,257	4098,878
		4200	6755,35	1681,63	-603,11	73,51962	50,89207	13572,861	6385,746	6385,746
BP24	4200	150	-3115,3	-1714,4	17,16	73,51962	50,89207	-6227,123	-10872,378	-6227,123
		2250	-1002,8	-40,4	17,16	73,51962	50,89207	3617,705	-1025,340	3617,705
		4200	6707,2	1633,6	17,16	73,51962	50,89207	13472,542	6380,298	6381,298
BP25	3000	150	-9499,2	-1774,44	1125,34	73,51962	50,89207	-5650,732	-7111,545	-5650,732
		1750	-4028,5	-550,44	1125,34	73,51962	50,89207	1379,375	-81,417	1379,375
		3000	1442,2	673,56	1125,34	73,51962	50,89207	8405,503	6948,711	6948,711
BP26	830	0	-25167	-1962,94	6073,95	73,51962	50,89207	-5192,382	-2975,353	-2975,353
		425	-23715	-1637,82	6073,95	73,51962	50,89207	-3337,910	-1110,386	-1110,386
		830	-21716	-1162,44	6073,95	73,51962	50,89207	-661,738	1549,737	-661,738
BP27	830	0	-38176	-4597,69	-5801,55	73,51962	50,89207	-21619,110	-69278,653	-21619,110
		425	-36724	-4372,57	-5801,55	73,51962	50,89207	-19753,638	-67413,212	-19753,638
		830	-34725	-3738,19	-5801,55	73,51962	50,89207	-17093,315	-64793,091	-17093,315
BP28	3200	150	-12478	-2471,72	-1178,9	73,51962	50,89207	-6310,369	-20646,676	-6310,369
		1750	-7006,9	-1247,72	-1178,9	73,51962	50,89207	-2420,141	-13612,742	-2420,141
		3200	-1533,6	-23,72	-1178,9	73,51962	50,89207	4549,987	-6583,614	4549,987
BP29	4200	150	-11930	-1484,12	62,94	73,51962	50,89207	-9371,336	-14249,657	-9371,336
		2250	161,29	189,28	62,94	73,51962	50,89207	5032,936	104,486	104,486
		4200	12733,2	1863,82	-62,94	73,51962	50,89207	19537,059	14558,639	14558,639
BP3	1750	0	5018,3	29,51	-26,3	73,51962	50,89207	6080,774	-3343,461	6080,774
		875	-3776,4	39,51	-26,3	73,51962	50,89207	7379,519	-4044,716	7379,519
		1750	-2539,5	29,51	-26,3	73,51962	50,89207	8678,264	-2745,971	8678,264
BP30	4200	150	-13234	-1856,32	600,5	73,51962	50,89207	-11131,393	-13723,365	-11131,393
		2250	-1142,5	-182,52	600,5	73,51962	50,89207	3323,760	1130,737	1130,737
		4200	10949,3	1401,45	600,5	73,51962	50,89207	17776,913	15524,940	15524,940

3F31	4000	150	-1294.7	-1192.14	350.76	73.51963	50.89207	-10779.264	-12263.343	-10758.864
		2250	-851.53	-118.74	394.76	73.51962	50.89207	3695.269	1487.609	1487.609
		4050	11240.3	1552.26	196.76	73.51963	50.89207	18149.442	15941.761	15941.762
3F32	4000	150	-1194.2	-1468.1	-54.55	73.51962	50.89207	-9366.627	-14602.975	-9366.627
		2250	-145.77	205.9	-54.35	73.51963	50.89207	5027.526	145.134	145.134
		4050	12341.8	1579.9	-54.25	73.51962	50.89207	18541.679	14599.337	14599.337
3F33	4000	150	-1244.6	-945.125	-1276.21	73.51962	50.89207	-9466.575	-9012.221	-9466.575
		1750	-8955.1	-1357.93	-1358.21	73.51962	50.89207	-2476.051	-13752.153	-2476.051
		3350	-1493.7	-33.92	-1236.31	73.51962	50.89207	4592.677	-6752.025	4592.677
3F34	4000	0	-397.15	-5113.79	8347.35	73.51962	50.89207	-23630.364	-73162.100	-23630.364
		425	-371.21	4770.66	-6247.15	73.51962	50.89207	-21764.682	-71296.612	-21764.682
		875	-36124	4254.56	8347.35	73.51963	50.89207	19104.580	66756.218	19104.580
3F35	4050	225	-1196.6	-3973.17	-37.42	73.51962	50.89207	-16361.944	-14871.565	-16361.944
		2300	3.23	93.95	37.42	73.51962	50.89207	4276.288	-252.536	4276.288
		4725	10966.1	2566.32	-37.42	73.51962	50.89207	18875.103	14766.927	14766.927
3F36	4050	225	-9201.7	-3337.74	139.14	73.51962	50.89207	-7181.515	-12684.669	-7181.515
		2350	229.67	344.01	-139.14	73.51962	50.89207	5442.402	-24.654	5442.402
		4375	9580.49	2791.76	-139.14	73.51962	50.89207	17874.464	12495.412	12495.412
3F37	775	0	-33364.7	3484.76	-4136.21	73.51962	50.89207	33364.435	-33364.117	-33364.117
		337.5	30205.2	3901.31	4156.23	73.51962	50.89207	81483.530	18465.153	18465.153
		775	31576.01	4442.33	4156.23	73.51962	50.89207	63794.782	20316.412	20316.412
3F38	3175	225	-157119	-4077.66	-558.51	73.51962	50.89207	-14679.870	-3383.757	-14677.870
		1262.5	4934.2	-100.25	-558.51	73.51962	50.89207	75.121	-3400.755	75.121
		3500	7247.95	2982.31	438.01	73.51962	50.89207	16787.452	13321.523	13321.522
3F39	4050	225	-14367	-4267.3	-263.81	73.51962	50.89207	-14553.378	-20759.048	-14553.378
		2750	-321.67	-182.45	263.81	73.51962	50.89207	4170.909	-1521.561	4170.909
		4275	16744.9	4042.45	-263.81	73.51962	50.89207	23143.396	17153.926	17153.926
3F4	1750	0	2761.23	29.51	-26.3	73.51962	50.89207	14244.314	2820.030	2820.030
		975	3490.88	29.51	-26.3	73.51962	50.89207	15542.059	4118.825	4118.825
		1750	3335.26	29.51	-26.3	73.51962	50.89207	16841.804	5417.570	5417.570
3F40	4225	285	-16779	-4574.79	-60.13	73.51962	50.89207	-16703.238	-21255.711	-16703.238
		2265.5	1244.9	-631.75	-60.13	73.51962	50.89207	2319.052	1632.840	2319.052
		4275	11840.1	3541.22	-60.13	73.51962	50.89207	21123.915	17932.040	17932.040
3F41	4025	350	-11558	-4833.58	-74.92	73.51962	50.89207	-18489.775	-21725.471	-18489.775
		2262.5	-1641.3	-631.83	-74.92	73.51962	50.89207	7333.096	2700.600	2733.096
		4275	12153.7	3541.45	-74.92	73.51962	50.89207	21367.975	16134.379	16134.379
3F42	4050	225	-14367	-4353.58	-273.05	73.51962	50.89207	-14756.511	-20331.950	-14756.511
		2250	-100.76	-154.09	-273.05	73.51962	50.89207	4177.976	-1337.503	4177.976
		4275	15343.5	4030.79	-273.05	73.51962	50.89207	23152.465	17116.953	17116.953
3F43	3275	225	-15811	-3983.36	473.57	73.51962	50.89207	-14739.042	-18796.418	-14739.042
		1562.5	-3014.8	-746.57	473.57	73.51962	50.89207	-6.042	-4642.416	-6.042
		3500	1155.44	3016.69	473.57	73.51962	50.89207	16726.265	12668.291	12668.291
3F44	775	0	-2739.8	3098.68	-4530.89	73.51962	50.89207	57466.124	83883.154	13883.154
		387.5	29195.7	3615.67	-4530.89	73.51962	50.89207	59999.150	15410.180	15412.180
		775	30967.4	4083.3	-4530.89	73.51962	50.89207	62350.458	17773.453	17773.453
3F45	4050	335	-5250.6	-2412.42	-279.4	73.51962	50.89207	-7672.671	-13734.519	-7672.671
		2250	-80.34	135.33	-279.4	73.51962	50.89207	4967.544	-1094.604	4967.544
		4275	9221.15	2683.08	-279.4	73.51962	50.89207	17360.610	11336.462	11336.462
3F46	4550	225	-11073	-3656.72	-60.02	73.51962	50.89207	-10518.176	-15121.712	-10518.176
		2500	-110	-138.47	-60.02	73.51962	50.89207	4101.058	-502.478	4101.058
		4775	10852.2	2831.78	-60.02	73.51962	50.89207	28720.282	14116.746	14116.746
3F47	3200	150	-907.91	185.92	-275.05	73.51963	50.89207	5374.131	-2483.300	5534.131
		1750	1423.85	185.92	-275.05	73.51962	50.89207	3608.409	14113.432	7908.919
		3350	3115.61	185.92	-275.05	73.51962	50.89207	10283.327	1261.297	1261.297
3F48	4200	150	-1973.7	10.06	-52.15	73.51963	50.89207	2652.275	-3280.315	2652.275
		2050	994.88	10.06	-52.15	73.51962	50.89207	5769.260	836.157	836.157
		4250	3963.44	10.06	-52.15	73.51962	50.89207	8856.245	3952.145	3952.145
3F49	4200	150	-1781.9	45.61	550.97	73.51962	50.89207	5510.475	1710.438	1710.438
		2250	1776.67	45.61	550.97	73.51962	50.89207	6627.467	4227.462	4227.462
		4350	4745.23	45.61	550.97	73.51962	50.89207	9744.455	7344.456	7344.456
3F5	1750	0	-5225.9	-25.54	25.53	73.51962	50.89207	5790.942	-5415.606	5790.942
		875	-3992	-29.94	25.53	73.51962	50.89207	7089.688	-4116.861	7089.688
		1750	-2756.1	-22.94	25.53	73.51962	50.89207	8328.423	-2513.116	8328.423
3F50	4200	150	-1150.5	44.46	564.19	73.51962	50.89207	3552.741	1203.265	1203.265
		2250	1016.07	44.46	564.19	73.51962	50.89207	6669.729	4225.255	4225.255
		4350	4786.62	44.46	564.19	73.51962	50.89207	9786.717	7442.243	7442.243
3F51	4200	150	-1940.9	14.06	-51.79	73.51962	50.89207	2690.839	-2240.732	2690.839
		2050	1007.63	14.06	-51.79	73.51962	50.89207	5837.847	876.217	876.217
		4250	3996.19	14.06	-51.79	73.51962	50.89207	8934.823	3993.245	3993.245
3F52	3000	150	-977.15	159.24	-752.54	73.51962	50.89207	5828.415	-5935.474	5828.415
		1750	1284.67	159.24	-752.54	73.51962	50.89207	7303.263	-6580.626	7303.263
		3350	3546.37	159.24	-752.54	73.51962	50.89207	10076.117	314.223	314.223
3F53	3200	150	-924.9	591.65	757.05	73.51962	50.89207	7779.392	4771.904	4771.904
		1750	3186.66	591.65	757.05	73.51962	50.89207	10154.446	3146.752	3146.752
		3350	5448.42	591.65	757.05	73.51962	50.89207	12529.294	9221.600	9221.600

8F54	4000	150	-3240,31	-239,49	48,28	73,51962	50,89207	1075,226	-3441,071	1071,236
		2250	-272,28	-209,49	48,28	73,51962	50,89207	4157,214	-324,083	4157,214
		4050	2696,32	329,49	48,28	73,51962	50,89207	7304,202	2792,909	7302,906
8F55	4000	150	611,94	168,79	-583,05	73,51962	50,89207	4248,763	-3935,034	4248,763
		2250	2320,62	168,79	-583,05	73,51962	50,89207	7365,752	151,052	7365,752
		4050	5323,18	168,79	-583,05	73,51962	50,89207	10482,741	3298,941	10482,942
8F56	4000	150	-5200,67	-167,95	582,6	73,51962	50,89207	922,926	-3759,239	922,926
		2250	-2232,1	-167,95	582,6	73,51962	50,89207	2194,062	-72,250	2194,062
		4050	726,5	-167,95	582,6	73,51962	50,89207	3311,059	3444,735	3044,735
8F57	4000	150	-2755,1	347,49	-40,28	73,51962	50,89207	2133,593	-2749,656	2133,593
		2250	261,47	247,49	-40,28	73,51962	50,89207	5250,581	367,332	377,332
		4050	3232,03	347,49	-40,28	73,51962	50,89207	8367,569	1484,320	8484,330
8F58	3200	110	-5378,3	-597,45	802,99	73,51962	50,89207	-87,947	-9651,926	-57,947
		1750	-3117,1	-597,45	802,99	73,51962	50,89207	2286,901	-7277,078	2286,901
		3250	-535,39	-597,45	802,99	73,51962	50,89207	4661,735	-4992,240	4661,735
8F59	1750	0	2544,9	79,44	25,53	73,51962	50,89207	13454,983	2747,934	2747,934
		575	3721,2	-29,94	25,53	73,51962	50,89207	13253,229	4046,679	4046,679
		1750	5012,69	-29,94	25,53	73,51962	50,89207	16521,962	3342,414	3342,414
8F6	775	225	-34888	-3928,47	-3827,27	73,51962	50,89207	-15200,934	-32957,701	-15200,934
		612,5	-33632	-3452,17	-3827,27	73,51962	50,89207	-13606,342	-34389,310	-13606,343
		1000	-33730	-3522,03	-3827,27	73,51962	50,89207	-12517,399	-33299,166	-12517,399
8F5	3275	0	2947,62	794,89	832,17	73,51962	50,89207	11073,281	3632,737	1770,741
		1837,5	4446,64	347,62	832,17	73,51962	50,89207	11073,281	3632,737	8502,737
		3275	10192,5	1650	832,17	73,51962	50,89207	12479,901	15929,487	15929,487
8F9	4050	125	-11490	-1708,94	-6,76	73,51962	50,89207	-8969,878	-13886,836	-8969,775
		2250	-42,25	-51,89	-6,76	73,51962	50,89207	4881,760	-12,260	4881,760
		4275	11580,1	1605,31	-6,76	73,51962	50,89207	18735,328	5816,268	13816,268

1. Balok yang ditinjau
2. Bentang bersih balok
3. Lokasi yang ditinjau
4. V_D = Gaya geser balok akibat beban mati
5. V_L = Gaya geser balok akibat beban hidup
6. V_E = Gaya geser balok akibat beban gempa
7. M_{Nak+} = Momen nominal aktual balok positif (Lampiran Momen Rencana Balok)
8. M_{Nak-} = Momen nominal aktual balok negatif (Lampiran Momen Rencana Balok)
9. $V_{ren} = 1,05 (V_D + V_L) + 0,7 \cdot 1,25 (M_{Nak+} + M_{Nak-} / l_n)$
(Gaya geser rencana balok)
10. $V_{maks} = 1,05 (V_D + V_L + 40\% V_E)$
(Gaya geser maksimum balok)
11. Vterpakai pilih yang terbesar

Lampiran Momen Kolom

ELEMEN	Lantai	t	Ln	LOG	Selaar Sumbu X				Selaar Sumbu Y			
					MD N/mm	ML N/mm	MeXa N/mm	MeXb N/mm	MD N/mm	ML N/mm	MeYa N/mm	MeYb N/mm
1	2	3	4	5	6	7	8	9	10	11	12	13
1K50X50	atas	2700		250	-456826.1	308300.76	157524117	-1.86E+08	-8072907	-2341314	139140048	-1.39E+08
1K50X50	bawah	2700	2100	350	-3104110	-1588752	-1555168	41555188	18244822	5360555	-51217017	51217017
1K50X50	atas	2700		250	-462008.1	-471322.2	153506862	-1.64E+08	7555238.4	2809642.8	137523559	-1.38E+08
1K50X50	bawah	2700	2100	350	-4017835	-124630.5	-34095510	34095510	-21270549	-6170173	-43092682	43092682
1K50X50	atas	3300		350	7850543.5	661138.16	138882600	-1.36E+08	34501364	11393232	125829205	-1.26E+08
1K50X50	bawah	3300	2600	250	-15272251	-1874428	-2.09E+08	208758300	-20734317	-4558282	-1.59E+08	158673016
1K50X50	atas	4000		350	-15430572	-4947598	-2.62E+08	282385270	88254087	11829151	205944902	-2.06E+08
1K50X50	bawah	4000	3300	350	15132751	3019372.5	284887756	-2.65E+08	-60982755	-13802228	-2.1E+08	205873270
1K50X50	atas	4000		350	-17375570	-6845137	-2.27E+08	227351304	57683686	8501459.5	87876127	-87876127
1K50X50	bawah	4000	3300	350	17370572	6693027.2	222490656	-2.27E+08	-51573470	-3445328	-86528030	86528030
1K50X50	atas	3300		350	-3519155	-124407.1	-81052127	81052127	-31482117	-67822744	50629740	-50629740
1K50X50	bawah	3300	2600	250	-2809072.2	1335922.2	110667632	-1.19E+08	9542708.2	3075024	-1.1E+08	195059430
1K50X50	atas	4000		350	-2617871.2	349302.61	138215952	-1.38E+08	17007196	5447378.7	138045486	-1.38E+08
1K50X50	bawah	4000	3300	350	-5320960	-2384216	-1.63E+08	162801636	-14327882	-4530805	-1.58E+08	150384545
1K50X50	atas	1000		250	-26973981	-7141541.9	-1.57E+08	167250849	14751059	4554432.9	81306219	-81306219
1K50X50	bawah	1000	400	350	27952294	7739704.8	-1.16E+08	15418957	15436411	9105395.7	58088321	-58088321
1K50X50	atas	3000		350	14338138	5378147.8	-1.05E+08	105345149	13457809	5331453.8	112507242	-1.12E+08
1K50X50	bawah	3000	2400	2750	-29476863	-8524235	242855353	-2.43E+08	-31018140	-11455708	-1.7E+08	169886482
1K50X50	atas	2700		250	-2314005	-317886.7	157255534	-1.57E+08	8229485	-2831403	140000045	-1.4E+08
1K50X50	bawah	2700	2100	2350	-2826172.6	1815448	-40678327	40678327	15859904	5642711.8	-51982582	51982582
1K50X50	atas	2700		250	-4799934	-811027.4	163333705	-1.63E+08	7008335.9	2588795.1	137951652	-1.38E+08
1K50X50	bawah	2700	2100	2350	5080845.7	4272258.33	-33985569	33985569	-20700820	-7972012	-42838344	42838344
1K50X50	atas	3300		350	-12323115	-1703018	139172925	-1.39E+08	33444602	11177194	126151398	-1.26E+08
1K50X50	bawah	3300	2600	2350	21956485	8446053.5	2.09E+08	206887416	-20281091	-4506515	-1.59E+08	159454579
1K50X50	atas	4000		350	-26524397	7525785.4	-2.82E+08	282423730	88147514	11304585	207184179	-2.07E+08
1K50X50	bawah	4000	3300	3550	-26204148	-6532375	284513874	-2.85E+08	-80304537	-13780020	-2.11E+08	211138047
1K50X50	atas	4000		350	-26407232	8458058.2	-2.27E+08	227372127	50176468	8136487.1	87948031	-87948031
1K50X50	bawah	4000	3300	350	-25033754	-3414193	222511054	-2.23E+08	-50383170	-9144677	-85987390	85987390
1K50X50	atas	3300		350	4776468	467093.3	-80901661	80902661	-24584212	-6781420	81316665	-81316665
1K50X50	bawah	3300	2600	2950	-4728642	-1713857	116455135	-1.16E+08	9354750.9	2885676.4	-1.1E+08	110432324
1K50X50	atas	4000		350	8334330.3	2779294.6	-1.68E+08	152773356	1361481.8	4418821.4	159071260	-1.59E+08
1K50X50	bawah	4000	3300	350	-4762397	-771970.1	132245526	-1.32E+08	-16773310	-8368582	-1.39E+08	136642178
1K50X50	atas	1000		250	-21606740	-6059263	-1.67E+08	167344593	15816013	4636573.8	81754265	-81754265
1K50X50	bawah	1000	400	350	-25363575	-7315774	-1.16E+08	-15711108	16254306	5886159.4	58369386	-58369386
1K50X50	atas	3000		250	-14880732	-5443824	-1.05E+08	105159411	11228151	4829474.5	11280151	-1.13E+08
1K50X50	bawah	3000	2400	2350	-28458418	8525374.7	242617581	-2.43E+08	-28070998	-10788609	-1.7E+08	170089188
KB50X45	atas	2700		250	-8346206	-2009713	106026495	-1.06E+08	-5074855	-1988881	111775883	-1.12E+08
KB50X45	bawah	2700	2100	2350	15415616	3522583.8	-11606724	11606724	16894744	2998467.5	-53729928	53729928
KB50X45	atas	2700		250	-8887044	-1553255	111402407	-1.11E+08	3587171.1	2471240.5	113003883	-1.13E+08
KB50X45	bawah	2700	2100	2350	8377878.3	2513314.8	-19860727	19860727	-18083925	-3583137	-37194668	37194668
KB50X45	atas	3300		350	16742478	3965285.8	-54309751	54309751	-10941630	-2151421	82754136	-82754136
KB50X45	bawah	3300	2600	2350	-16853396	-3714004	77558627	-77558627	14672368	2553357.1	-95987492	95987492
KB50X45	atas	3300		350	11365813	3321327.1	-48333739	48333739	8946103.9	2578844.8	90495270	-90495270
KB50X45	bawah	3300	2600	2950	-10179172	-2937314	56805499	-56805499	-18015124	-4118392	-1.01E+08	101264897
KB50X45	atas	4000		350	22727388	4693293.8	-84354058	84354058	-10172483	-1488595	111768174	-1.12E+08
KB50X45	bawah	4000	3300	350	-20749603	-4567649	77165327	-77165327	5146798.1	539926.2	-1.14E+08	114317931
KB50X45	atas	4000		350	-14548813	-4178686	80936754	-80936754	14410131	4007151.8	129114585	-1.29E+08
KB50X45	bawah	4000	3300	350	13875310	3841327	77968833	-77968833	-9642586	-3522266	-1.28E+08	128288900
KB50X45	atas	2700		250	-8095743	-1855382	10584213	-1.05E+08	-1870874	-357784.3	114371150	-1.14E+08
KB50X45	bawah	2700	2100	2350	13307238	3711901.7	-13482572	13482572	8997191.1	2594444	-55839713	55839713
KB50X45	atas	2700		250	-51207231	-1840155	124251898	-1.24E+08	8302083.1	2754244	114384614	-1.14E+08
KB50X45	bawah	2700	2100	2350	5816477.9	3019300.8	-43393760	43393760	-14833280	-4985649	-55740449	55740449
KB50X45	atas	3300		350	11122799	3900368.8	-92396413	92396413	24193848	5473490.3	92122761	-92122761
KB50X45	bawah	3300	2600	2950	-9129738	-3638704	109305894	-1.09E+08	-20799967	-8530140	-1.05E+08	104901795
KB50X45	atas	4000		350	14639201	5248446.3	-1.23E+08	123374153	15047350	3432494.4	118177368	-1.18E+08
KB50X45	bawah	4000	3300	350	-13473587	-4600153	120387758	-1.2E+08	-24553950	-6644136	-1.21E+08	121263415
KB50X45	atas	3300		350	-22068581	4811539.1	-54505256	54505256	-15800946	-3408962	93651125	-93651125
KB50X45	bawah	3300	2600	2950	-18537939	-4330738	74578842	-74578842	10942630	3543704	-1.08E+08	106652879
KB50X45	atas	4000		350	-11908691	4606147.1	-77001798	77001798	-18536353	-1988569	132831280	-1.33E+08
KB50X45	bawah	4000	3300	350	-11730908	-5009860	77428182	-77428182	12989978	1139372.2	-1.27E+08	12722880
KB50X45	atas	2700		250	-2053294	-1812723	110445674	-1.1E+08	-41085.96	-233666.9	126486840	-1.26E+08
KB50X45	bawah	2700	2100	2350	335757.18	2590158.5	-21933873	21933873	5340384.9	2392010.5	-85420491	85420491
KB50X45	atas	3300		350	-2882458.4	8128556.7	-70423269	70423269	-3973606	-3281742	138072252	-1.38E+08
KB50X45	bawah	3300	2600	2350	-456501.8	-2722940	90989494	-90989494	6047901.7	2420460.6	-1.44E+08	144453724
KB50X45	atas	4000		350	-5133419	3622500.9	-97439939	97439939	419343.57	-794678.8	187541524	-1.88E+08
KB50X45	bawah	4000	3300	350	-2929823	-3722363	92103762	-92103762	1121629	539315.58	-1.57E+08	166759041
KB50X45	atas	2700		350	5045672.2	1374744.3	-43062323	43062323	-83423086	-23759243	38454658	-38454658
KB50X45	bawah	2700	2100	2450	-3303343	-843650	133230912	-1.33E+08	24370334	9531507.1	-1.09E+08	109922732
KB50X45	atas	4000		350	9187852.8	2260679.7	-1.26E+08	127896808	67356685	17727471	94573851	-94573851
KB50X45	bawah	4000	3300	350	-6171675	-1326063	124593385	-1.25E+08	-75297124	-26872512	-1.03E+08	108180300
KB50X45	atas	3300		350	-2309401.2	1688152.1	-1.08E+08	108329783	-78057350	-29724163	780566231	-780566231
KB50X45	bawah	3300	2600	2950	-3661680	-1480252	119354514	-1.19E+08	74731001	28172503	-86403710	86403710

KB50X45	atas	4000	350	13660.64	1887522.1	-1.25E+08	124524286	804665245	-23253987	123192183	-1.13E+08
KB50X45	bawah	4000	3500	-11042243	-2116485	127050671	-1.27E+08	65940895	22421928	-1.16E+08	115942215
KB50X45	atas	2700	350	2491037.5	217315.82	-52723045	52723045	62940726	23924014	36734494	-36734494
KB50X45	bawah	2700	2100	2450	-3140403	-820521.9	125444132	-1.25E+08	-27807950	-36918638	-1.09E+08
KB50X45	atas	3300	350	-3049033	-251571.5	108198435	-1.09E+08	74414746	27234842	98312012	-98312012
KB50X45	bawah	3300	2600	2950	2855119.5	313651.74	-95119000	96319080	-75137876	-28018714	-79280495
KB50X45	atas	2700	350	-1360965	-313332.3	122943105	-1.23E+08	-27530114	-10605507	109103067	-1.09E+08
KB50X45	bawah	2700	2100	2350	693084589	13383.29	47490312	47490312	74555401	27851541	-25101664
KB50X45	atas	3300	350	1303280.2	-34876.68	99132745	99132745	-87357446	-33028215	74061632	-74061632
KB50X45	bawah	3300	2600	2950	521547.5	-50238.77	115778536	-1.15E+08	85018254	31891337	-33767042
KB50X45	atas	4000	350	135554.7	260491.1	-1.37E+08	13738253	84394736	33092609	109183158	-1E+08
KB50X45	bawah	4000	3300	3650	-3145171	-411595.3	128707892	-1.29E+08	77189636	26162204	-37648350
KB50X45	atas	2700	350	-2023037	-53357.8	121537055	-1.28E+08	34215802	12228858	103454752	-1.09E+08
KB50X45	bawah	2700	2100	2350	245518.85	44247.08	-52581912	52581912	-75045240	-27575815	-26757401
KB50X45	atas	3300	350	-283967.7	-115978	108271275	-1.08E+08	90819785	33374981	94459857	-94459857
KB50X45	bawah	3300	2600	2950	1091240.8	-56650.65	-93677585	93677585	-88284890	-33735324	-74563423
KB50X45	atas	4000	350	-469705.1	-310792.2	-1.46E+08	125410029	83775038	23645587	103202888	-1.03E+08
KB50X45	bawah	4000	3300	3650	-1142402	-75325.73	132810030	-1.33E+08	88425500	30105267	-30075683
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KB50X45	bawah	2700	2100	2350	-2542735	-4064462	-49481291	49481291	51036793	24584138	-26725223
KB50X45	atas	3300	350	-3745715	-1605732	-1.61E+08	163199558	-87691635	-37366795	75076496	-75076496
KB50X45	bawah	3300	2600	2950	3448457.5	1385157.9	112224234	-1.12E+08	74265250	26328430	-93191311
KB50X45	atas	4000	350	-2379823	-1543454	-1.45E+08	140346505	-73043627	-24714932	98045347	-98045347
KB50X45	bawah	4000	3300	3650	1241837.8	1378581.1	134341790	-1.34E+08	91247778	-33339098	-94359310
KB50X45	atas	2700	350	-2817720	-437804.9	132206035	-1.32E+08	32317425	11735180	118956487	-1.19E+08
KB50X45	bawah	2700	2100	2350	2687425.1	36106.36	-89021009	89021009	-59006825	-23501757	-40238750
KB50X45	atas	3300	350	-3621165	-45383.8	107354518	-1.07E+08	68074217	29391393	107923105	-1.08E+08
KB50X45	bawah	3300	2600	2950	3712413.1	-87335.51	-84210101	84210101	-1.05E+08	26621345	-32270111
KB50X45	atas	4000	350	-4043546	-1318152	-1.31E+08	120073840	26507110	28500744	122483950	-1.22E+08
KB50X45	bawah	4000	3300	3650	-542383.5	804515.49	116707057	-1.17E+08	-1.05E+08	26866838	-1.14E+08
KB50X45	atas	2700	350	-2227148	-552627.2	123752982	-1.24E+08	-18905306	-73888870	115235457	-1.15E+08
KB50X45	bawah	2700	2100	2350	3351531.2	1245896.7	-49533142	49533142	51618150	24533300	-29035090
KB50X45	atas	3300	350	5478235	2109942.8	-1.03E+08	103213183	-97675222	-27288027	75775862	-75775862
KB50X45	bawah	3300	2600	2950	-5423588	1889291	118304957	-1.18E+08	74852278	26211347	-94010514
KB50X45	atas	4000	350	4757112.5	2056367.9	-1.45E+08	140333940	-73044396	24951175	93944814	-93944814
KB50X45	bawah	4000	3300	3650	-3547713	-1824663	134314620	-1.34E+08	81566016	-22126047	-95248384
KB50X45	atas	2700	350	-1333049	-602934.7	131874555	-1.32E+08	32134062	11394863	120088751	-1.2E+08
KB50X45	bawah	2700	2100	2350	-989438	455140.63	-58707220	58707220	-58705524	-23520587	-40532464
KB50X45	atas	3300	350	243840.09	-819100.1	107749130	-1.08E+08	87918185	30082827	103929293	-1.03E+08
KB50X45	bawah	3300	2600	2950	-42410.22	959221.73	-69512010	69512010	-1.05E+08	-28103507	-93147653
KB50X45	atas	4000	350	8516624.6	2882719.5	-1.2E+08	120109256	26848701	123679365	1.23E+08	1.23E+08
KB50X45	bawah	4000	3300	3650	-4110255	-1850536	116573552	-1.17E+08	-1.05E+08	20133420	-1.15E+08
KB50X45	atas	2700	350	238468.58	-634937.5	84015401	-84015401	-7148868	-1632736	74512973	-74512973
KB50X45	bawah	2700	2100	2350	-2037309	1588654.1	-3095506	3095505.7	5892271.5	431532.23	-7057673
KB50X45	atas	4000	350	4736604.9	1454180.5	-1.26E+08	126423714	82071068	23945863	104320594	-1.05E+08
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KB50X45	atas	4000	350	8878111.4	2131475.3	-20609854	20609854	31911270	-33589328	18055523	-18055523
KB50X45	bawah	4000	3400	3650	-5978927	-1982700	18433726	-18433726	-65297901	-18152907	-21532258
KB50X45	atas	2700	350	-600620.4	-101333.8	122551133	-1.25E+08	-26501855	-10410978	110944243	-1.11E+08
KB50X45	bawah	2700	2100	2350	117314.74	-31156.95	-47494402	47494402	73592953	27812701	-26518810
KB50X45	atas	3300	350	451507.94	373232.62	-99122460	99122460	-90288135	-32888111	75218242	-75218242
KB50X45	bawah	3300	2600	2950	-1501450	-332598.4	115757201	-1.15E+08	65378368	31693879	-95264903
KB50X45	atas	4000	350	1845048.5	229674.25	-1.37E+08	127385772	-92295178	-27307090	101716740	-1.02E+08
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KB50X45	atas	4000	350	1339153.4	1234739.5	-32921534	-32921534	-57019351	-16686102	20323739	-20323739
KB50X45	bawah	4000	3400	3750	657553.19	1165340.3	-27818754	27818754	55437473	13701293	-12938955
KB50X45	atas	2700	350	-2103235	-466231.6	126971144	-1.27E+08	34540178	12428975	111218369	-1.11E+08
KB50X45	bawah	2700	2100	2350	1470656.5	314858.84	-52013390	52013390	-74423837	-27626101	-27193094
KB50X45	atas	3300	350	-2523410	-671162.6	108892670	-1.07E+08	91668907	33570737	95974439	-95974439
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KB50X45	atas	2700	350	1651990.4	428236.44	123248321	-1.23E+08	24403631	-3935744	111730681	-1.12E+08
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KB50X45	atas	690	350	-19522300	-2187443	-14454876	14454876	-2201090	-9296157	19362775	-19362775
KB50X45	bawah	690	240	400	-14947341	-2207274	-11152317	11152317	-14712408	-10392414	-14655315
KB50X45	atas	4000	350	-16020330	-1425959	-1.24E+08	124483741	-64020137	-22900192	126376213	-1.26E+08
KB50X45	bawah	4000	3300	3650	8753504.8	1729152.7	127029562	-1.27E+08	65553162	12792902	-1.19E+08
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KB50X45	atas	2700	350	-1013905	-368144.2	125608824	-1.26E+08	25193576	10118358	111967745	-1.12E+08
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KB50X45	atas	2700	350	4991221.8	1430078.3	108703174	-1.08E+08	-1595951	-204147.3	119295540	-1.19E+08
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KB50X45	atas	3310	350	2847607.7	-8495160	-14469341	14469341	-38659188	-5162095	17648603	-17648603
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KB50X45	atas	4000	350	-153903.9	-1073103	-1.22E+08	121627309	2150105.6	2787.33	119944001	-1.2E+08	
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KB50X45	atas	4300	350	-14453392	-4351413	-77029236	77029236	-16290950	-1099543	139348113	-1.39E+08	
KB50X45	bawah	4000	2500	3650	10001062	4807367.5	-77406094	-77406094	10295315	-9539106	-1.34E+08	133906446
KB50X45	atas	4000	350	-11474410	-5243422	-49697542	49697542	-3417561	2090425.5	93277348	-83277346	
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KB50X45	bawah	3300	2600	2950	-1852215	2139613.7	91123321	-91123321	7114310.7	251270.5	-1.5E+08	150136491
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KB50X45	atas	4000	350	-3140807	-4585372	66599346	66599346	-770514.3	1743933.5	144211618	-1.44E+08	
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KB50X45	atas	5300	250	-11135152	-5933595	-45547537	45547537	-3947017	265475.59	10993493	-10993493	
KB50X45	bawah	5300	240	490	-3709597	-5250707	-2702476	2702475.8	-4020419	167023.42	7415854.8	-7415855
KB50X45	atas	3300	350	-19272663	-4010534	-55076141	55076141	-13220084	-2338848	93108580	-93108580	
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KB50X45	atas	3310	200	-21107122	-2879335	-9694035	9694035	-28704164	946775.58	8891866.5	-8891867	
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3KB45X45	atas	3300	250	20813044	7002168.81	-42488525	42488525	-21047358	-6234474	22605705	-22605705	
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3KB45X45	atas	3300	250	-18937779	-6843625	-42485694	42485694	-21241821	46260432	23725904	-23725904	
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3KB45X45	atas	5000	250	-7665094	-2608535	-1.17E+08	-117110518	17730136	4720582.1	101515206	-1.02E+08	
3KB45X45	bawah	5000	4500	4750	14728931	5493261.3	62016528	-62016528	-12716790	-2889667	-56180652	56180652
3KB45X45	atas	4000	250	-26774982	-10335355	-34323372	34323372	3802967.7	-3335586	47660267	-47660267	
3KB45X45	bawah	4000	3500	3750	13615085	4694054.3	58956816	-58956816	-14103620	-3163382	-50645191	50645191
3KB45X45	atas	2700	250	-1000204	-187993.9	-12064145	-1.12E+08	-57707922	-17349106	60722311	-60722311	
3KB45X45	bawah	2700	2100	2350	397304.18	71202.45	-45001219	45001219	76339515	35943542	-35943542	
3KB45X45	atas	3000	350	1389780.7	257292.29	-1.58E+08	155754524	-15879739	-23468351	74013646	-74013646	
3KB45X45	bawah	3000	2900	2950	-1121079	-205164.3	127775609	-1.28E+08	83299347	27042514	-60101861	60101861
3KB45X45	atas	2700	350	796495.35	195183.7	-60233445	60233445	52781456	30197685	30086427	-30086427	
3KB45X45	bawah	2700	2100	2450	-1933144	-456038.1	120124579	-1.2E+08	4825338.6	-1552756	-79412294	79412294
3KB45X45	atas	3300	350	-2047247	-466549.5	-124934240	124934240	-1.2E+08	31334290	56151029	-56151029	
3KB45X45	bawah	3300	2600	2950	2907817.7	673533.66	-1.76E+08	175746779	20137771	2036973.7	-74916405	74916405
4KB30X30	atas	2700	200	-1359231	-390052.5	-20031011	-20031011	458937.63	143485.35	18447088	-18447088	
4KB30X30	bawah	2700	2300	2500	454821.55	127746.21	5936753.5	-5936754	-411159.7	87497.43	-11968084	11968084
4KB30X30	atas	3300	200	-57224.86	-20625.34	7191491.8	-7191492	455913.95	114815.12	19128391	-19128391	
4KB30X30	bawah	3300	2900	3100	3792769.7	1709961	-16546612	16546612	168560.62	110205.84	-17763867	17763867
4KB30X30	atas	4000	250	-1456451	1149453.2	-25023258	25023258	6511008.5	181220.36	25756239	-25756239	
4KB30X30	bawah	4000	3550	3600	-3245661	-1629044	22489821	-22489821	-4230763	-207594.5	-23456566	23456566
4KB30X30	atas	2700	200	-96341.05	-31656.98	5156552.8	-5156553	731797.12	214792.81	11794415	-11794415	
4KB30X30	bawah	2700	2300	2500	882339.34	274344.06	20205841	-20205841	-407273.9	-103942.6	-16608417	16608417
4KB30X30	atas	3300	200	-232825	-70059.63	7858901.3	-7858901	122124.19	166833.24	21010557	-21010557	
4KB30X30	bawah	3300	2900	3100	-3430265	-1038992	17034691	-17034691	1344613.3	227760.23	-18633653	18633653
4KB30X30	atas	4000	250	2447903.5	-1066150	-28199934	28199934	6021455.3	-541679.2	27229889	-27229889	
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4KB30X30	atas	2700	200	-1205487	-332413.5	20312985	-20312985	479419.17	132164.62	19073346	-19073346	
4KB30X30	bawah	2700	2300	2500	18273.41	16878.43	5154211.1	-5154211	-730821.3	-222070.6	-12065478	12065478
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4KB30X30	bawah	3300	2900	3100	3711020.2	1091794.4	-17052023	17052023	1013682.2	225681.77	-19013456	19013456
4KB30X30	atas	4000	250	-2952053	1136675.4	-28160588	28160588	6016057	-889993.7	27308155	-27308155	
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4HB30X30	bawar	3300	2900	3100	-3522899	-1036750	-18863547	18266347	21525926	11342821	-17688701	17366782
4HB30X30	atas	4000		250	1375385.3	-1040207	24330479	24330479	8862516.6	26733927	27056770	-27056770
4HB30X30	bawar	4000	3500	3800	2952291.3	1583076.1	22458346	22458346	-4632288	-329649.8	24856291	24558281
6HK30X50	atas	2700		250	867823.6	-288728.6	80309327	-80309327	-1329178	-771122.7	44578430	-44578430
6HK30X50	bawar	2700	2100	2350	1371132.3	231020.38	2673405.7	-2673405	3807805.8	1516583.6	-42371248	42371248
6HK30X50	atas	3300		250	7583975	-134958.6	28455582	28455582	61243.04	138482.66	60937097	-60937097
6HK30X50	bawar	3300	2600	2850	930022.66	2655319	52042691	-52042691	371717.74	71098.78	63961376	63001376
6HK30X50	atas	4000		350	-8806643	-4615837	88213107	88213107	11414737	3766748.5	63665548	-63665548
6HK30X50	bawar	4000	3300	3550	8513205.4	1772134	54324577	-54324577	-11313211	-3630764	-84363147	84363147
6HK30X50	atas	2700		250	-1071211	-149229.7	81804412	-81804412	-1394412	-670227.3	15018079	-15018079
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6HK30X50	atas	4000		350	10684193	5044687.2	98368342	98368342	11201389	3741530.9	63971274	63971274
6HK30X50	bawar	4000	3300	3550	-8295267	-1955307	64162678	-64162678	-11114121	-3807340	-84883002	84883002
K30X25	atas	2700		250	233332.2	492078.7	-19094282	19094282	1529558.8	823058.55	15295208	-15295208
K30X25	bawar	2700	2300	2500	1308438	233078.7	15553357	-15553357	524283.5	-253082.7	15435229	15435229
K30X25	atas	3300		250	4361561.5	1031124.2	-11783715	11783715	2823271.6	513827.3	14492535	-14492535
K30X25	bawar	3300	2900	3100	-3745855	-844150.6	17374062	-17374062	-26979077	437739.31	-15867936	15867936
K30X25	atas	4000		250	2643944	863355.33	22256029	22256029	2850593.6	671094.53	21547377	-21547377
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K30X25	bawar	2700	1200	2450	-431659.2	-165054.1	18551598	-18551598	-3335821	233065	-14461041	14461041
K30X25	atas	2700		250	-993088.8	-16393.23	15210738	15210738	1933715.8	145577.34	9848528.8	-9848528.8
K30X25	bawar	2700	3300	2500	161979.03	-59540.36	15750067	-15750067	-11212671	-178667	-15118091	15118091
K30X25	atas	3300		250	1153446.7	467362.69	30187702	30187702	-694190.5	252189.64	13264290	-13264290
K30X25	bawar	3300	2800	3050	-771056.1	-352406.7	23375121	-23375121	661304.6	-305133.2	14795066	-14795066
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K30X25	bawar	4000	3550	3800	-1779577	-538115.4	1563641	-1563641	-3967302	2133366	-21842303	21842303
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K30X25	bawar	3300	2900	3100	-3815245	-1303796	18494171	-18494171	-2930712	-457699.5	-20920396	20920396
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K30X25	bawar	4000	3550	3800	1083077.3	381801.1	-15712705	15712705	-3795711	-1158608	-21855025	21855025
K30X25	atas	2700		250	2452695.8	946373.28	-5197057	5197055.5	2178158.3	389678.34	11368570	-11368570
K30X25	bawar	2700	2300	2500	-1110962	-410665.3	13298945	-13298945	-1214318	-239407.9	-18366556	18366556
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K30X25	atas	2700		250	-3176930	-1311153	-7513793	7513793	1317495.4	313364.05	10722571	-10722571
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K50X25	atas	4000		250	-7029765	-2616870	-17173937	-17173937	2402346.3	360564.49	-22617163	-22617163
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K50X50	bawah	2810	2410	2610	8073605.4	-7685865	-13537317	13537317	15406469	3700082	-22636697	22636697
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KB30X30	atas	4000		250	-3115901	-1544307	-15618952	15618952	-2044604	-1579562	14430226	-14430226
KB30X30	bawah	4000	3500	3750	41460739	15410128	16045593	-16045593	34991745	41231234	-13450132	13450132
KB30X30	atas	1200		250	-11010024	-1330735	82276656	-82276656	-14759626	-2406355	-4848432	4848432
KB30X30	bawah	1200	750	1000	-3224675	5533625	-11640511	16405108	16975327	-7067808	-1629362	1629362
KB30X30	atas	1200		200	-5517322	-1102134	-1188487	11884875	18654643	-5305227	-1563846	1563846
KB30X30	bawah	1200	750	950	-13617975	-2040813	12987033	-1298704	-22726527	-2066699	5232028	-5232028
KB30X30	atas	1200		250	35268968	13733533	-2278550	22785495	-26827372	13456541	-8035444	8035444
KB30X30	bawah	1200	750	1000	-2665774	-8092405	-2742721	27427206	-2797004	-304226	-5493463	5493462
KB30X30	atas	1200		200	-2990911	-4101097	-1954100	19540999	81448874	14359461	55627894	-5562789
KB30X30	bawah	1200	750	950	25065054	17078933	-1156550	11565513	-17297429	13050594	-5654833	5654833
KB30X30	atas	1200		200	-3761674	-1093862	-1987297	19872987	-4006804	-3801585	55720993	-5572099
KB30X30	bawah	1200	750	950	23468104	73152	-2739450	27394793	24580420	25259393	91738316	-9173832
KB30X30	atas	1300		200	-2641974	5485087	-1844157	18441563	51867217	19310724	60705643	-6070564
KB30X30	bawah	1200	750	950	1539958	-1857813	-8815584	88155837	-24775331	-2351495	37087857	-3708786
KB30X30	atas	1200		200	34205934	4395357	-2209746	2209746	-5764357	-8527255	-812123	81212302
KB30X30	bawah	1200	750	950	48039583	13771048	-2979099	29790993	11435552	94590402	16249254	-1624926
KB30X30	atas	1200		200	4384125	1559181	-1046752	1046752	-5475395	-5397958	71629618	-7162962
KB30X30	bawah	1200	750	950	64512363	44838625	-3059733	30597332	87790096	10717687	20666596	-206666
KB30X30	atas	1200		200	4073065	-1942275	-1107434	11074337	87811282	68049976	22610154	-2261016
KB30X30	bawah	1200	750	950	98523522	18000301	-3218137	32181356	-8200942	-1485920	-4953731	49537307
KB30X30	atas	1200		200	30518615	-4458481	-2642889	2642888	66622057	66752187	359363173	-35936317
KB30X30	bawah	1200	750	950	-2451810	-9969927	-3575678	35756783	-6787961	-1106333	38795644	-3879564
KB30X30	atas	1200		200	-34083475	-235758	2196134	-21961335	-6932025	-657765	-26621894	66821891
KB30X30	bawah	1200	750	950	-4876175	-1765035	-2936649	29366494	11543347	96102623	17471163	-1747116
KB30X30	atas	1200		250	-9430746	-4459045	-3042643	3042642	-6850973	-1961253	-3441103	34411027
KB30X30	bawah	1200	750	1000	-4362861	-3514115	-1049975	10499756	87730495	55019451	-5771026	57710264
KB30X30	atas	1200		200	-4588669	11964655	-8043394	80443343	10203955	10558215	32503072	-3250307
KB30X30	bawah	1200	750	950	-7532768	-6631593	-1710469	17104666	-6508910	-2009824	-8515458	85154584
KB30X30	atas	1200		200	-38044313	6015131	-2859403	28594032	64347877	79435191	-8305054	8305054
KB30X30	bawah	1200	750	950	25053227	12550132	-4398235	43982347	-7872061	87699416	85304725	-8530472
KB30X30	atas	1200		250	-2662418	-1589595	-2798477	27984773	-23436701	8836515	-9303720	9303720
KB30X30	bawah	1200	750	1000	38477135	10933462	-2073056	20730561	31282355	38574427	-5719378	5719378
KB30X30	atas	1200		200	25302643	-8433751	-1735755	17357559	4846551	10614952	62065298	-6206530
KB30X30	bawah	1200	750	950	-1365222	2436473	-1189152	11891515	-2313417	-3561715	37554556	-3755456
KB30X30	atas	1200		250	-3131729	-11479421	-3291168	22911678	-25681212	-3590395	-8249662	82496623
KB30X30	bawah	1200	750	1000	25630512	28969028	-2747150	27471501	-1018477	-4042214	-5737515	57375153
KB30X30	atas	1200		200	29485427	39260707	-1761653	17616533	78885847	15765573	58090983	-5809098
KB30X30	bawah	1200	750	950	-2378095	1772103	-1352965	13529647	-15581575	-1271259	57933158	-5793317
KB30X30	atas	1200		250	11507164	13768958	63950115	-6395012	-24884076	-2365829	-5134285	51342854
KB30X30	bawah	1200	750	1000	28847807	51515329	-1641433	16414334	15952320	-7423225	-1649427	16494272
KB30X30	atas	1200		300	54344721	11175382	-1077096	10770965	19084344	-3469354	16066183	-1606619
KB30X30	bawah	1200	750	950	13584222	20702017	1024242	-1024243	-22322460	-1663689	75595386	-7559539
KB30X30	atas	4000		250	86202631	97212184	-22210576	22210578	26009374	-2199345	23117618	-23117618
KB30X30	bawah	4000	3500	3750	27918312	-8911572	22842078	-22842076	-7164143	5513585	-23554446	23554446
KB30X30	atas	4000		250	32752942	15763778	-18543973	18543973	16788966	-3134385	15454627	-15454627
KB30X30	bawah	4000	3500	3750	-4263308	-1538414	-16014232	16014232	-1258500	8572235	-14191980	14191980
KB30X30	atas	4000		250	-1733762	-1019946	-20505433	20505433	54153645	73501459	-22672951	22672951
KB30X30	bawah	4000	3500	3750	-2386741	6563256	-19370953	19370953	-10511516	-8304793	-22979096	22979096
KB30X30	atas	4000		250	-2237365	-793685	-16848207	16848207	58884604	82446249	14245635	-14245635
KB30X30	bawah	4000	3500	3750	30239958	72252095	-14995090	14995090	-4836210	-6575347	-13349234	13349234
KB30X50	atas	1000		250	17976341	65504843	-11E+08	119458124	4277184	13277033	22079067	-22079067
KB30X50	bawah	1000	400	650	22498891	87093147	-76590470	76590470	-7079151	-2575463	-18400980	18400980
KB30X50	atas	3000		350	16648215	5772687	-54716612	54716612	13218513	48601606	50555820	-50555820
KB30X50	bawah	3000	2400	2750	-29315618	-3903137	140144580	-14E+08	-12606669	-4549124	-52236396	52236396
KB30X50	atas	1000		250	99237056	20889906	-32281014	32281014	95910428	34001018	43051182	-43051182
KB30X50	bawah	1000	400	650	83014617	19244662	-21849810	21849810	-8105050	-3644630	-30145203	30146203

6K30X50	atas	3000		350	-17532625	-9497311	-34114530	34114530	16586931	6134524	-40444206	-40444206
6K30X50	bawah	3000	2400	2750	-64032116	-9012338	23629435	-23629435	-15525199	-5816762	-30066700	30066700
6K30X50	atas	3310		200	16586014	26108278	-15101862	15101862	-4359375	84280941	15572487	-15572487
6K30X50	bawah	3310	2760	2960	12407517	57151175	36285063	-36285063	-19307181	-1589061	-22813248	22813248
6K30X50	atas	690		250	-4161552	-445275	-6788512	6788512	2965108,6	1724426,7	18831099	-18831099
6K30X50	bawah	690	240	430	-3489572	-2727991	-5053469	5053469	1339047	1418931,2	8868125	-8868125
6K30X50	atas	1000		250	-17443582	-6722604	-114E+06	110253726	4677979,5	1429971,2	22230258	-22230258
6K30X50	bawah	1000	400	650	-1212574	-8481376	-78677489	76677489	-7285569	2832218	-19537104	19537104
6K30X50	atas	3000		250	-16232346	570998,8	54745366	54745366	12434081	4855465,6	50665623	-50665623
6K30X50	bawah	3000	2400	2750	24258395	2791576,4	140177331	-1,4E+06	-11738428	-4354950	-52319253	52319253
6K30X50	atas	1000		250	-29138393	-30540947	-32111742	32111742	9496173,5	3395485,5	32938343	-32938343
6K30X50	bawah	1000	400	650	-61898121	-19000318	-21807409	21807409	-6971890	-3616948	-30240886	30240886
6K30X50	atas	3000		250	16215833	8803077,1	-24354405	24354405	15275691	6073049,2	40554315	-40554315
6K30X50	bawah	3000	2400	2750	63465351	8838861,8	29849105	-29849105	-53649105	-5255367	-32614320	32614320
6K30X50	atas	3310		200	-18422158	-2705283	-11863631	11863631	11848021	916250,31	15788188	-15788188
6K30X50	bawah	3310	2760	2960	-10946373	-5461443	3609893,5	-3609893	354721,4	-1710768	-23270163	23270163
6K30X50	atas	690		250	4583666,3	5043592,4	-6953214	6953213,7	2307257	1710090,9	19455612	-19455612
6K30X50	bawah	690	240	400	3655237,6	336284,60	-8982787	8982787,3	1444214	1374565,6	8490511,8	-8490511,8
K30X25	atas	4000		250	3386993,8	370615,86	-14283336	14283336	2836640,1	73869,18	18423012	-18423012
K30X25	bawah	4000	3500	3750	-3006165	-753150,2	13536916	-13536916	-2794805	-714613,1	-16354130	16354130
K30X25	atas	4000		250	4040360,6	1058044	-8873361	8873361,9	3227200,1	666440,94	11386769	-11386769
K30X25	bawah	4000	3500	3750	-37366458	-587343	8041516,4	-8041516	-2960879	-856365	-11028936	11028936
K30X25	atas	4000		250	3126085,9	1071522,5	-2749514	2749514,4	1747106,7	539829,61	4051880,5	-4051880,5
K30X25	bawah	4000	3500	3750	-3421269	-989621,6	2183680,6	-2183681	-2125875	-467845,8	-3434766	3434766,1
K30X25	atas	3900		250	2319717,4	833492,62	-9007420	9007420,3	2080323,9	648195,04	24346436	-24346436
K30X25	bawah	3900	2800	2950	-2171022	-786890,7	8451632,6	-8451633	-2780512	-757282,1	-24433580	24433580
K30X25	atas	4000		250	5677009,6	2270318	-12118629	12118629	3096917,8	46389,29	9957960,2	-9957960,2
K30X25	bawah	4000	3500	3750	-5552643	-2156327	11819223	-11819223	-2771883	97591,51	-9286834	9286833,7
K30X25	atas	3310		200	2308138,5	952419,43	-8818363	8818362,6	12523440	148175,6	4328633,6	-4328633,6
K30X25	bawah	3310	2850	3000	-2193568	-609681,1	2719668,7	-2719669	-4125027	-255791	-2586626	2586626,9
K30X25	atas	4000		250	6888439,2	2257571,5	-8479224	8479224,3	-1213515	-266006,2	1370111,1	-1370111,1
K30X25	bawah	4000	3500	3750	-5912933	-3183813	4725254,9	-4725255	-992626,2	38049,26	-2011541	2011540,8
K30X25	atas	4000		250	2363544	804543,72	-2424890	2424890,0	405677,87	376204,66	15374238	-15374238
K30X25	bawah	4000	3500	3750	-22077191	-839840,4	24692233	-24692233	-492125,5	-432439,3	-14914263	14914263
K30X25	atas	4000		250	5400063,8	2132833,3	-16819366	16819366	2149364,5	174684,03	16129356	-16129356
K30X25	bawah	4000	3500	3750	-52187001	-2087575	18578900	-18578900	-2277892	-222943	-15854819	15854819
K30X25	atas	4000		250	2138469,5	883934,93	-15832218	15832218	-155417,9	248378,62	9401116,1	-9401116,1
K30X25	bawah	4000	3500	3750	-2049536	-857494,7	16343980	-16343980	-386451	-238025,4	-8701035	8701034,8
K30X25	atas	4000		250	-2664018	-1031384	-17287785	17287785	8950889,2	1822603,2	18101758	-18101758
K30X25	bawah	4000	3500	3750	2630434,1	1043909,5	16898560	-16898560	-1675376	-1575990	-18254186	18254186
K30X25	atas	4000		250	-2010505	-294370,8	-12021093	12021093	6174115,7	1402238,7	10911480	-10911480
K30X25	bawah	4000	3500	3750	2673816,5	1032317	-11101185	11101185	-6503758	-1620992	-10739672	10739672
K30X25	atas	4000		250	-6038737	-1627885	6441069	-6441069	5810664,4	11119204	5588461	-5588461
K30X25	bawah	4000	3500	3750	4566659,9	1324040,7	-5596914	5596914	-4437026	-483482,5	-14762306	14762306,4
K30X25	atas	4000		250	-328773	-164730,1	-23012035	23012035	5739786,8	69881,07	11063567	-11063567
K30X25	bawah	4000	3500	3750	319753,18	163006,93	23129468	-23129468	-5790151	-979793,9	-11302849	11302849
K30X25	atas	4000		250	181445,56	-36949,28	-15289272	15289272	7173057,5	1195302,9	9426865,5	-9426865,5
K30X25	bawah	4000	3500	3750	191775,34	131735,17	15412666	-15412666	-7019810	-1227672	-5439645	5439645,4
K30X25	atas	4000		250	5754448,6	1185115	-6600096	6600095,9	636152,56	-498070,9	2820853,5	-2820853,5
K30X25	bawah	4000	3500	3750	-2608119	-493725,4	7024410	-7024410	-895113,7	517934,38	-3021908	3021907,5
K30X25	atas	4000		250	1264812,8	406010,07	-23022490	23022490	5519265,1	812037,32	11104840	-11104840
K30X25	bawah	4000	3500	3750	-1255943	-404823,4	23139918	-23139918	-5558556	-934718,6	-11345491	11345491
K30X25	atas	4000		250	211629,03	142189,55	-15267702	15267702	103979,8	1172064	-9442470	9442470
K30X25	bawah	4000	3500	3750	-691032,2	-237574,4	15410136	-15410136	-6096816	-1204095	-9462366	9462366,2
K30X25	atas	4000		250	-506364	-1149491	6577214	-6577213,5	679861,34	-375409,1	-3332842,5	3332842,5
K30X25	bawah	4000	3500	3750	2457189,8	451947,71	7015455,1	-7015455	-317806	422647,79	-3392251	3392251,3
K30X25	atas	4000		250	3260787,5	1201600,6	-17309402	17309402	8543506	1562927,8	18284012	-18284012
K30X25	bawah	4000	3500	3750	-3283225	-1202310	16707494	-16707494	-645524	-1617145	-18440947	18440947
K30X25	atas	4000		250	3283226,3	1053293,6	-12018662	12018662	6236797,3	1449367,1	10825853	-10825853
K30X25	bawah	4000	3500	3750	-3943248	-1082285	11092997	-11092997	-8207739	-1571629	-10857311	10857311
K30X25	atas	4000		250	2121565,3	1858286,6	-6442442	6442442,5	5970947,2	1152043,6	5742562,2	-5742562,2
K30X25	bawah	4000	3500	3750	-4761095	-1341479	5600874	-5600874	-5062331	-531907,2	-4920802	4920802,2
K30X25	atas	4000		250	-9788166	-3507905	-11511986	11511986	2648319	259863,34	19240795	-19240795
K30X25	bawah	4000	3500	3750	10056544	3600029,9	9849207,7	-9849208	-2638146	-309187,2	-19160602	19160602
K30X25	atas	4000		250	-10187283	-3822744	-8144311	8144311,1	2739853,3	50209,37	11975209	-11975209
K30X25	bawah	4000	3500	3750	10128860	3578279,3	6573045	-6573045	-2606009	-181696,5	-11595137	11595137
K30X25	atas	4000		250	-2738596	-4456240	-3754170	3754170,2	2051503,4	64471,82	4443829,6	-4443829,6
K30X25	bawah	4000	3500	3750	11195400	3812891,8	2539362,8	-2539363	-2118677	-41718,16	-3793676	3793676,6

Keterangan Momen Kolom

1. Kolom yang ditinjau
2. Letak yang ditinjau
3. l = Panjang kolom
4. ln = panjang bersih kolom
5. Lokasi yang ditinjau
6. MD = Momen pada kolom akibat beban mati sejajar sb - y
7. ML = Momen pada kolom akibat beban hidup sejajar sb - y
8. Mexk = Momen pada kolom akibat beban gempa kanan sejajar sb - x
9. Meyk = Momen pada kolom akibat beban gempa kiri sejajar sb - y
10. MD = Momen pada kolom akibat beban mati sejajar sb - y
11. ML = Momen pada kolom akibat beban hidup sejajar sb - y
12. Mexk = Momen pada kolom akibat beban gempa kanan sejajar sb - x
13. Meyk = Momen pada kolom akibat beban gempa kiri sejajar sb - y

Lampiran Gaya Abial Kalem

FRAME	ELEMEN	ND	NL	Nex	Ney
1	2	3	4	5	6
K1H1	1K50X50	-1165227	-176396.7	30990.37	212499.77
	1K50X50	-1152856	-176396.7	30990.37	212499.77
K1H10	1K50X50	-133949.2	-9016.01	-6596.1	438.96
	1K50X50	-135951.8	-9016.01	-6596.1	438.96
K1H11	1K50X50	-1031831	-192725.9	209346.7	91400.26
	1K50X50	-1020962	-192725.9	209346.7	91400.26
K1H12	1K50X50	-834501.1	-138232	207709.9	110341.76
	1K50X50	-819167	-138232	207709.9	110341.76
K1H13	1K50X50	-653141.1	-81819.38	117899.4	11224.04
	1K50X50	-672578.1	-81819.38	117899.4	11224.04
K1H14	1K50X50	-540366	-73172.19	63966.33	-42571.43
	1K50X50	-560726.1	-73172.19	63966.33	-42571.43
K1H15	1K50X50	-420638.3	-60079.28	11600.53	-36891.12
	1K50X50	-44073.5	-60079.28	11600.53	-36891.12
K1H16	1K50X50	-197276.1	-21450.76	-1592.65	-10761.43
	1K50X50	-217301.1	-21450.76	-1592.65	-10761.43
K1H2	1K50X50	-1022812	-157923.1	26421.49	171470.49
	1K50X50	-1038126	-157923.1	26421.49	171470.49
K1H3	1K50X50	-863520.3	-131701.2	38025.68	113096.67
	1K50X50	-864063.3	-131701.2	38025.68	113096.67
K1H4	1K50X50	-795096.5	-119891.9	89963.3	86542.55
	1K50X50	-797453.5	-119891.9	89963.3	86542.55
K1H5	1K50X50	-559520	-77466.07	-53226.15	61130.99
	1K50X50	-572666.1	-77466.07	-53226.15	61130.99
K1H6	1K50X50	-483179.2	-62212.95	-1902.45	17436.66
	1K50X50	-491636.2	-62212.95	-1902.45	17436.66
K1H7	1K50X50	-306494.9	-21357.96	-26396.56	19199.13
	1K50X50	-320630.9	-21357.96	-26396.56	19199.13
K1H8	1K50X50	-235737.1	-10081.74	4952.86	-8360.19
	1K50X50	-238682.1	-10081.74	4952.86	-8360.19
K1H9	1K50X50	-165466.6	-9175.18	-1599.77	4258.7
	1K50X50	-179661.5	-9175.18	-1599.77	4258.7
K1J1	1K50X50	-1163789	-176831.3	-30825.89	213926.94
	1K50X50	-1151420	-176831.3	-30825.89	213926.94
K1J10	1K50X50	-133805	-8918.05	6583.72	731.92
	1K50X50	-135807.7	-8918.06	6583.72	731.92
K1J11	1K50X50	-1030535	-192412.6	-206042.8	94222.19
	1K50X50	-1018169	-192412.6	-206042.8	94222.19
K1J12	1K50X50	-937716.1	-198272.4	-207818.5	112436.97
	1K50X50	-917402.1	-198272.4	-207818.5	112436.97
K1J13	1K50X50	-655128.1	-62639.03	-119099.2	12747.6
	1K50X50	-674565.1	-62639.03	-119099.2	12747.6
K1J14	1K50X50	-541981.2	-73762.7	-54166.24	-41192.35
	1K50X50	-561418.2	-73762.7	-54166.24	-41192.35
K1J15	1K50X50	-421640.7	-60165.63	-11998.6	-34845.9
	1K50X50	-440977.7	-60165.63	-11998.6	-34845.9
K1J16	1K50X50	-193893.2	-20635.48	1057.59	-6541.09
	1K50X50	-213919.2	-20635.49	1057.59	-6541.09
K1J2	1K50X50	-1022691	-167976.6	-26309.22	171305.99
	1K50X50	-1038006	-167976.6	-26309.22	171305.99
K1J3	1K50X50	-863867.8	-131702.6	-37956.35	112545.47
	1K50X50	-883304.8	-131702.6	-37956.35	112545.47
K1J4	1K50X50	-794465.6	-119778.4	-89929.68	65462.24
	1K50X50	-796821.6	-119778.4	-89929.68	65462.24
K1J5	1K50X50	-559999.6	-77521.06	63240.03	61772.57
	1K50X50	-574125.6	-77521.06	63240.03	61772.57
K1J6	1K50X50	-490271.5	-66052.52	1867.38	17827.9
	1K50X50	-492627.5	-66052.52	1867.38	17827.9
K1J7	1K50X50	-307914.1	-21209.67	26366.94	19784.39
	1K50X50	-322050.1	-21209.67	26366.94	19784.39

K1J8	KB50X50	-235337.3	-8983.76	-4976.13	-6098.6
	KB50X50	-235337.3	-8983.76	-4976.13	-6098.6
K1J9	KB50X50	-195147.4	9041.54	1551.45	4723.83
	KB50X50	-179357.3	9041.54	1551.45	4723.83
K2A1	KB50X45	-650671.6	-66310.51	241939.3	358121.26
	KB50X45	-639539.5	-66310.51	241939.3	358121.26
K2A10	KB50X45	-214610.1	-21578.89	31366.35	-443.66
	KB50X45	-232103.4	-21578.89	31366.35	-443.66
K2A11	KB50X45	-62258.03	1932.82	3668.41	4201.49
	KB50X45	-76888.79	1932.82	3668.41	4201.49
K2A12	KB50X45	-72743.73	-3650.27	6940.04	7795.46
	KB50X45	-87874.48	-3650.27	6940.04	7795.46
K2A13	KB50X45	-21308.99	-3350.25	1350.73	7197.84
	KB50X45	-22581.23	-3350.25	1350.73	7197.84
K2A3	KB50X45	-770821.5	-66057.52	302447.7	-179221.26
	KB50X45	-753491.4	-66057.52	302447.7	-179221.26
K2A3	KB50X45	-560268.3	-63058.22	189989.7	275556.74
	KB50X45	-544052.5	-63058.22	189989.7	275556.74
K2A4	KB50X45	-596892	-74545.13	222432.7	-126674.16
	KB50X45	-610674.6	-74545.13	222432.7	-126674.16
K2A5	KB50X45	-423052.5	-40258.98	131144.3	178956.78
	KB50X45	-440525.8	-40258.98	131144.3	178956.78
K2A6	KB50X45	-495210.3	-59215.21	153941.2	-61503.53
	KB50X45	-512704.2	-59215.21	153941.2	-61503.53
K2A7	KB50X45	-297109.9	-25973.18	70846.17	93977.42
	KB50X45	-314803.2	-25973.18	70846.17	93977.42
K2A8	KB50X45	-354359.3	-40218.75	81469.79	-24549.75
	KB50X45	-371892.6	-40218.75	81469.79	-24549.75
K2A9	KB50X45	176650.9	-11521.39	27290.27	33644.49
	KB50X45	194144.2	-11521.39	27290.27	33644.49
K2C1	KB50X45	-695158.7	-64423.26	164691.7	149427.66
	KB50X45	-684024.7	-64423.26	164691.7	149427.66
K2C10	KB50X45	-308396.5	-55092.87	-2044.62	9982.56
	KB50X45	-325889.8	-55092.87	-2044.62	9982.56
K2C11	KB50X45	-117452.8	-19071.73	-1153.34	7681.89
	KB50X45	-132083.4	-19071.73	-1153.34	7681.89
K2C12	KB50X45	-1130992	-262125.6	-63232.49	-193117.36
	KB50X45	-1119860	-262125.6	-63232.49	-193117.36
K2C13	KB50X45	-894775	-222676.1	-71141.17	-160619.54
	KB50X45	-1009556	-222676.1	-71141.17	-160619.54
K2C14	KB50X45	-811457.4	-162826.3	-55635.54	-114255.39
	KB50X45	-828950.7	-162826.3	-55635.54	-114255.39
K2C15	KB50X45	-590428.6	-131317.2	-33441.53	-55056.64
	KB50X45	-607922	-131317.2	-33441.53	-55056.64
K2C16	KB50X45	-561276.5	-79537.38	-15645.99	-14760.93
	KB50X45	-578771.8	-79537.38	-15645.99	-14760.93
K2C17	KB50X45	-143339.3	-29160.94	-2475.14	3704.2
	KB50X45	-157969.1	-29160.94	-2475.14	3704.2
K2C18	KB50X45	-49365.34	-11537.39	-788.4	4312.87
	KB50X45	-50627.88	-11537.39	-788.4	4312.87
K2C2	KB50X45	-489052.3	-70740.69	113924.6	113307.06
	KB50X45	-502834.9	-70740.69	113924.6	113307.06
K2C3	KB50X45	-358472.9	-53618.21	50721.69	67910.42
	KB50X45	-375966.2	-53618.21	50721.69	67910.42
K2C4	KB50X45	-136102.1	-33964.74	31950.55	40472.83
	KB50X45	-213595.4	-33964.74	31950.55	40472.83
K2C5	KB50X45	-91604.36	-14559.01	10166.88	19048.77
	KB50X45	-109097.7	-14559.01	10166.88	19048.77
K2C6	KB50X45	-1176269	-241844.9	-131424.6	17990.46
	KB50X45	-1167157	-241844.9	-131424.6	17990.46
K2C7	KB50X45	-979983.6	-192197.2	-97212.7	18015.93
	KB50X45	-993766.1	-192197.2	-97212.7	18015.93
K2C8	KB50X45	-747615	-143557.1	-54122.83	18437.34
	KB50X45	-764508.3	-143557.1	-54122.83	18437.34

K2C9	KB50X45	-497449.3	-53372.75	-20299.57	12589.56
	KB50X45	-514842.8	-50372.75	-20299.57	12589.56
K2D1	KB50X45	-1202955	-271121.3	-4725.47	-13081.29
	KB50X45	-1214090	-271121.3	-4725.47	-13081.29
K2D10	KB50X45	-1141383	-196430.5	-33227.57	-102914.68
	KB50X45	-1153875	-196430.5	-33227.57	-102914.68
K2D11	KB50X45	-806863.4	-210739.2	-17340.76	-61854.87
	KB50X45	-820455.7	-210739.2	-17340.76	-61854.87
K2D12	KB50X45	-579242.1	-125411.1	-13006.29	-30276.37
	KB50X45	-538735.7	-125411.1	-13006.29	-30276.37
K2C2	KB50X45	-360259.1	-215009.7	7521.14	-10589.71
	KB50X45	-391091.7	-215009.7	7521.14	-10589.71
K2D25	KB50X45	-216152.4	-45047.67	-7934.16	-8843.52
	KB50X45	-230783.1	-45047.67	-7934.16	-8843.52
K2D27	KB50X45	-138141.4	-23020.21	-2543.71	-5225.12
	KB50X45	-160413.8	-25805.21	-2543.71	-5225.12
K2D3	KB50X45	-754845.3	-160500.1	33657.26	-10072.36
	KB50X45	-772541.6	-160500.1	33657.26	-10072.36
K2D4	KB50X45	-515480	-106510.7	10826.37	5065.6
	KB50X45	-532973.3	-106510.7	10826.37	5065.6
K2D5	KB50X45	-311970	-53823.38	6651.15	13950.09
	KB50X45	-329463.3	-55835.38	6651.15	13950.09
K2D6	KB50X45	-105324	-12507.8	7126.33	7537.94
	KB50X45	-120954.7	-12507.8	7126.33	7537.94
K2D7	KB50X45	-55931.7	-9084.55	5345.44	5365.19
	KB50X45	-67203.94	-9084.55	5345.44	5365.19
K2D8	KB50X45	-1572490	-418506.1	-31907.06	-113546.59
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K2D9	KB50X45	-1380984	-258511.9	28341.53	-114204.52
	KB50X45	-1367201	-354511.9	-28341.53	-114204.52
K2F1	KB50X45	-1309719	-355219.5	-4691.52	156702.64
	KB50X45	-1316567	-355219.5	-4691.52	156702.64
K2F10	KB50X45	-831275.9	-19927.1	2259.72	-39494.04
	KB50X45	-848769.2	-19927.1	2259.72	-39494.04
K2F11	KB50X45	-494094.1	-110891.8	-512.71	-14723.25
	KB50X45	-511587.4	-110891.8	-512.71	-14723.25
K2F12	KB50X45	-151699.5	-21413.91	-1296.35	342.42
	KB50X45	-168723	-21413.91	-1296.35	342.42
K2F2	KB50X45	-1097785	-238083.2	-5356.13	125041.08
	KB50X45	-1111567	-239083.2	-5356.13	125041.08
K2F3	KB50X45	-872319.7	-171058.9	-7360.67	84240.26
	KB50X45	-889813	-171058.9	-7360.67	84240.26
K2F4	KB50X45	-608363.2	-116704	-4364.68	47095.4
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K2F5	KB50X45	-554012.9	-62229.22	-1503.17	18565.25
	KB50X45	-571905.2	-62229.22	-1503.17	18565.25
K2F6	KB50X45	-114484.7	-8180.02	-1478.05	2299.63
	KB50X45	-96481.33	-8180.02	-1478.05	2299.63
K2F7	KB50X45	-1582062	-402003.7	5333.9	-146583.77
	KB50X45	-1580950	-402003.7	5333.9	-146583.77
K2F8	KB50X45	-1413409	-345059.4	7059.37	-114097.99
	KB50X45	-1399627	-345059.4	7059.37	-114097.99
K2F9	KB50X45	-1173135	-287959.5	6684.66	-72230.97
	KB50X45	-1190628	-287959.5	6684.66	-72230.97
K2G1	KB50X45	-1250965	-255083.5	58567.2	166935.02
	KB50X45	-1239933	-255083.5	58567.2	166935.02
K2G10	KB50X45	-660684.1	-155077.6	6098.8	-2559.29
	KB50X45	-678177.4	-155077.6	6098.8	-2559.29
K2G11	KB50X45	-407609.7	-84218.05	6173.05	-1359.76
	KB50X45	-425103	-84218.05	6173.05	-1359.76
K2G12	KB50X45	-107466.4	-10973.03	2825.26	6137.32
	KB50X45	-125489.5	-10973.03	2825.26	6137.32
K2G2	KB50X45	-1032259	-213200.5	51065.25	132603.05
	KB50X45	-1048036	-213200.5	51065.25	132603.05

K2G3	KB50X45	-750179,6	-162456,7	37964,44	89178,5
	KB50X45	-757673,1	-162456,7	37964,44	89178,5
K2G4	KB50X45	-663321,9	-111241,7	31270,74	50729,6
	KB50X45	-663315,2	-111241,7	31270,74	50729,6
K2G5	KB50X45	-350543,9	-60616,49	6569,39	21685,83
	KB50X45	-368037,2	-60616,49	6569,39	21685,83
K2G6	KB50X45	-91171,95	-7947,71	-296,29	2943,91
	KB50X45	-109196,3	-7947,71	-296,29	2943,91
K2G7	KB50X45	-1439073	-353075,3	293,38	-6646,9
	KB50X45	-1436841	-353075,3	293,38	-6646,9
K2G8	KB50X45	-1209331	-290617,4	-12016,83	-4046,48
	KB50X45	-1196149	-290617,4	-12016,83	-4046,48
K2G9	KB50X45	-918077,8	-227113,8	-1134,91	3074,06
	KB50X45	-933571,1	-227113,8	-1134,91	3074,06
K2K1	KB50X45	-1232112	-274500,9	-59941,06	160542,4
	KB50X45	-1210990	-264538,6	58841,86	168542,4
K2K10	KB50X45	-630629,6	-154971,6	-5938,46	-2260,66
	KB50X45	-646122,9	-154971,6	-5938,46	-2260,66
K2K11	KB50X45	-374064,4	-84066,72	-5995,42	-991,88
	KB50X45	-391557,7	-84066,72	-5995,42	-991,88
K2K12	KB50X45	-109504,7	-10913,96	-2670,62	6402,64
	KB50X45	-127526,1	-10913,96	-2670,62	6402,64
K2K2	KB50X45	-1003470	-212967,8	-50946,24	133950,26
	KB50X45	-1017253	-212967,8	-50946,24	133950,26
K2K3	KB50X45	-750636	-162120,8	-37680,27	90069,73
	KB50X45	-768329,3	-162120,8	-37680,27	90069,73
K2K4	KB50X45	-635608,3	-111000,7	-31198,06	61267,46
	KB50X45	-663301,6	-111000,7	-31198,06	61267,46
K2K5	KB50X45	-320270,8	-60459,53	-8513,02	22103,49
	KB50X45	-337764,1	-60459,53	-8513,02	22103,49
K2K6	KB50X45	-91346,47	-7956,43	-251,78	3002,06
	KB50X45	-109368,9	-7956,43	-251,78	3002,06
K2K7	KB50X45	-1412356	-352970,6	-125,69	-6551,28
	KB50X45	-1401223	-352970,6	-125,69	-6551,28
K2K8	KB50X45	-1184312	-289566,6	12213,74	-4006,09
	KB50X45	-1170529	-289566,6	12213,74	-4006,09
K2K9	KB50X45	-888372,5	-227128	1306,06	3304,51
	KB50X45	-905866,8	-227128	1306,06	3304,51
K2L1	KB50X45	-589368,7	-57396,69	-99660,13	155661,42
	KB50X45	-586672,7	-57396,69	-99660,13	155661,42
K2L10	KB50X45	-1137616	-267950,1	-7449,48	-73206,07
	KB50X45	-1155111	-267950,1	-7449,48	-73206,07
K2L11	KB50X45	-798914,8	-199451,2	-2901,04	-40210,97
	KB50X45	-816308,1	-199451,2	-2901,04	-40210,97
K2L12	KB50X45	-461601,3	-111196	-78,03	-15102,25
	KB50X45	-470094,6	-111196	-78,03	-15102,25
K2L13	KB50X45	-151901,2	-21280,25	1199,99	389,27
	KB50X45	-169924,6	-21280,25	1199,99	389,27
K2L2	KB50X45	-1296366	-265246,4	4681,22	158933,3
	KB50X45	-1267264	-265246,4	4681,22	158933,3
K2L3	KB50X45	-1066564	-228163,3	5276,87	126790,12
	KB50X45	-1080346	-228163,3	5276,87	126790,12
K2L4	KB50X45	-838877,6	-171264,9	7245,11	85371,61
	KB50X45	-856470,9	-171264,9	7245,11	85371,61
K2L5	KB50X45	-578450,2	-117012	4133,49	47574,24
	KB50X45	-595943,5	-117012	4133,49	47574,24
K2L6	KB50X45	-324313	-62682,79	1252,39	18346,99
	KB50X45	-341806,3	-62682,79	1252,39	18346,99
K2L7	KB50X45	-114236,6	-6091,26	1457,06	2469,89
	KB50X45	-96212,23	-6091,26	1457,06	2469,89
K2L8	KB50X45	-1576346	-403219,6	6104,69	-146764,03
	KB50X45	-1667213	-403219,6	6104,69	-146764,03
K2L9	KB50X45	-1399023	-345160,8	-7810,67	-115757,07
	KB50X45	-1386840	-345160,8	-7810,67	-115757,07

K2N1	KB50X45	-1177280	-271505,8	5609,84	-18501,97
	KB50X45	-1186145	-271505,8	5609,84	-18501,97
K2N10	KB50X45	-1121055	-301665,3	17887,7	-107737,04
	KB50X45	-1138558	-301665,3	17887,7	-107737,04
K2N11	KB50X45	-820808,2	-214739,7	13391,94	-64415,4
	KB50X45	-838301,5	-214739,7	13391,94	-64415,4
K2N12	KB50X45	-519395,7	-127886,6	10423,27	-30659,5
	KB50X45	-536890	-127886,6	10423,27	-30659,5
K2N13	KB50X45	-231921,0	-47319,74	6624,85	-11458,02
	KB50X45	-238552,5	-47319,74	6624,85	-11458,02
K2N14	KB50X45	-183706,0	-27539,16	3320,88	-7354,77
	KB50X45	-191979,17	-27539,16	3320,88	-7354,77
K2N2	KB50X45	-942726,6	-215410,2	-6626,39	-14166,24
	KB50X45	-966509,2	-215410,2	-6626,39	-14166,24
K2N3	KB50X45	-715332,5	-180641,7	-22724,3	-14043,32
	KB50X45	-732785,8	-180641,7	-22724,3	-14043,32
K2N4	KB50X45	-521387,1	-107242,1	-9799,43	-3846,12
	KB50X45	-538450,4	-107242,1	-9799,43	-3846,12
K2N5	KB50X45	-316298,5	-54624,86	-5539,5	-9068,51
	KB50X45	-333791,8	-54624,86	-5539,5	-9068,51
K2N6	KB50X45	-105137,5	-12099,33	-6981,17	-8215,73
	KB50X45	-119768,3	-12099,33	-6981,17	-8215,73
K2N7	KB50X45	-85061,88	-8903,89	-8211,88	-5781,4
	KB50X45	-86334,1	-8903,89	-8211,88	-5781,4
K2N8	KB50X45	-1667980	-423474	26792,47	-118405,3
	KB50X45	-1548848	-423474	26792,47	-118405,3
K2N9	KB50X45	-1366845	-361736,4	23077,85	-119350,17
	KB50X45	-1363062	-361736,4	23077,85	-119350,17
K2O1	KB50X45	587983,2	81880,84	154255,5	156174,29
	KB50X45	576851,1	81880,84	154255,5	156174,29
K2O10	KB50X45	-316513,9	-54541,15	1174,56	7995,88
	KB50X45	-334007,2	-54541,15	1174,56	7995,88
K2O11	KB50X45	-116488,1	-18098,17	870,42	7908,97
	KB50X45	-131096,8	-18098,17	870,42	7908,97
K2O12	KB50X45	-129087,6	-322089,8	24462,07	-265091,43
	KB50X45	-1302007	-322089,8	24462,07	-265091,43
K2O13	KB50X45	-1151495	-275426,3	24293,42	-226826,44
	KB50X45	-1165278	-275426,3	24293,42	-226826,44
K2O14	KB50X45	-948914,9	-229503,3	22293,12	-170395,01
	KB50X45	-965408,2	-229503,3	22293,12	-170395,01
K2O15	KB50X45	-888750,8	-163678,7	10003,34	-89315,15
	KB50X45	-706243,9	-163678,7	10003,34	-89315,15
K2O16	KB50X45	-425710,4	-98353,21	1754,61	-32407,06
	KB50X45	-443203,7	-98353,21	1754,61	-32407,06
K2O17	KB50X45	-177213,4	-32766,4	-2950,01	-3213,29
	KB50X45	-171944,1	-32766,4	-2950,01	-3213,29
K2O18	KB50X45	-60171,19	-15818,6	-23,63	2562,39
	KB50X45	-61443,43	-15818,6	-23,63	2562,39
K2O2	KB50X45	-483182,8	-68626,01	-113766	118787,93
	KB50X45	-496955,4	-68626,01	-113766	118787,93
K2O3	KB50X45	-365481,6	-52021,12	-50772,43	71442,23
	KB50X45	-372974,8	-52021,12	-50772,43	71442,23
K2O4	KB50X45	-194710,8	-32853,78	-32200,09	42873,44
	KB50X45	-212204,1	-32853,78	-32200,09	42873,44
K2O5	KB50X45	-92333,18	-13979,66	-10639,28	20369,76
	KB50X45	-109726,5	-13979,66	-10639,28	20369,76
K2O6	KB50X45	-1190639	-244036	125937,1	14522,75
	KB50X45	-1179507	-244036	125937,1	14522,75
K2O7	KB50X45	-989892	-133524,9	92323,92	15191,04
	KB50X45	-1003675	-133524,9	92323,92	15191,04
K2O8	KB50X45	-751115,5	-143072,7	50200,6	17216,81
	KB50X45	-766809,8	-143072,7	50200,6	17216,81
K2O9	KB50X45	-507075,5	-93239,48	20636,54	10513,96
	KB50X45	-525169,8	-93239,48	20636,54	10513,96

K2P1	KB50X45	-629938	-63963,06	-240821,8	566512,71
	KB50X45	-618665,9	-63963,06	-240821,8	566512,71
K2P10	KB50X45	-568567,1	-57781,7	-82211,33	-50607,88
	KB50X45	-568563,4	-57781,7	-82211,33	-50607,88
K2P11	KB50X45	-223995,8	-31054,2	-25865,48	-14979,8
	KB50X45	-341489,1	-31054,2	-25865,48	-14979,8
K2P12	KB50X45	-42799,82	-4051,26	-6908,25	2837,06
	KB50X45	-107420,6	-4051,26	-6908,25	2837,06
K2P13	KB50X45	-19805,36	-3603,26	-1108,52	7364,28
	KB50X45	-26777,58	-3603,26	-1108,52	7364,28
K2P2	KB50X45	-526651,8	50574,41	-132832,1	265472,99
	KB50X45	-540134,1	-80377,41	193813,1	205173,99
K2P3	KB50X45	-409010,4	-36833,81	-129528,6	185969,98
	KB50X45	-426603,7	-36833,81	-129528,6	185969,98
K2P4	KB50X45	-304120,0	-23090,66	-69498,1	50012,53
	KB50X45	-301619,1	-23396,66	-69498,1	98012,98
K2P5	KB50X45	-165390,6	-9904,98	35446,28	34947,89
	KB50X45	-182683,8	-9504,98	-6446,28	34947,88
K2P6	KB50X45	-82201,8	-2520,98	-3618,55	4077,87
	KB50X45	-76632,38	-2520,98	-3618,55	4077,87
K2P7	KB50X45	-763391,8	-134639,4	-215151,4	-227549,17
	KB50X45	-752259,4	-134639,4	-215151,4	-227548,17
K2P8	KB50X45	-857176,7	-109775,2	-169859,8	-170400,79
	KB50X45	-670989,3	-109775,2	-169859,8	-170400,79
K2P9	3KB45X45	-519185,3	-83939,11	-113378,2	-98624,38
	3KB45X45	-530678,8	-83939,11	-113378,2	-99524,38
K3A1	3KB45X45	-600691,9	-57600,49	98610,18	156346,87
	3KB45X45	-590195,9	-57600,49	98610,18	156346,87
K3A10	3KB45X45	-276098,9	-19700,57	22387,03	45702,55
	3KB45X45	-292795	-19700,57	22387,03	45702,55
K3A11	3KB45X45	-106264,5	990,07	-9633,13	17220,95
	3KB45X45	-120835,8	990,07	-9633,13	17220,95
K3A12	3KB45X45	-31309,66	53,9	-3401,03	4448,09
	3KB45X45	-19811,69	53,9	-3401,03	4448,09
K3A2	3KB45X45	-561830,6	-57635,8	76274,57	137585,49
	3KB45X45	-554989,1	-57635,8	76274,57	137585,49
K3A3	3KB45X45	-472372,2	-39377,09	44603,94	109293,96
	3KB45X45	-493841,2	-39377,09	44603,94	109293,96
K3A4	3KB45X45	-276114,2	-19687,53	22375,27	45675,94
	3KB45X45	-292812,4	-19687,53	22375,27	45675,94
K3A5	3KB45X45	-106461,8	943,68	9606,41	17091,03
	3KB45X45	-121013,1	943,68	9606,41	17091,03
K3A6	3KB45X45	-19901,03	30,95	3389,33	4398,87
	3KB45X45	-31396,9	30,95	3389,33	4398,87
K3A8	3KB45X45	-550610,8	-57496,68	-76237,81	137104,59
	3KB45X45	-552083,1	-57496,68	-76237,81	137104,59
K3A9	3KB45X45	-472079,8	-39356,57	-44584,16	109073,4
	3KB45X45	-493548,8	-39356,57	-44584,16	109073,4
K3I1	3KB45X45	-461205	-111824,9	406,83	20831,48
	3KB45X45	-461186,2	-111824,9	406,83	20831,48
K3I2	3KB45X45	-254432,3	-71732,72	-2,17	-576,67
	3KB45X45	-266836,7	-71732,72	-2,17	-576,67
K3I3	3KB45X45	-459532,4	-115818,2	92,68	-682,71
	3KB45X45	-469651,3	-115818,2	92,68	-682,71
K3I4	3KB45X45	-300467,9	-57926,83	63,1	22805,61
	3KB45X45	-289063,6	-57926,83	63,1	22805,61
K4C1	4KB30X30	-239685,5	-16682,29	84880,27	167466,02
	4KB30X30	-228808,6	-16682,29	84880,27	167466,02
K4C2	4KB30X30	-2276881	-17153,45	95152,15	137799,13
	4KB30X30	-221538,5	-17153,45	95152,15	137799,13
K4C3	4KB30X30	-199804,1	-11196,47	65467,07	99896,71
	4KB30X30	-207331,6	-11196,47	65467,07	99896,71
K4C4	4KB30X30	-42060,47	-7104,9	30221,56	48900,75
	4KB30X30	-50281,87	-7104,9	30221,56	48900,75

K4C5	4KB30X30	-27770.72	-5334.39	11919.33	11773.32
	4KB30X30	35192.12	-3334.39	11919.53	11773.32
K4D1	4KB30X30	-233106.2	-10431.07	-56708.01	186987.42
	4KB30X30	-237982.1	-10431.07	-56708.01	186987.42
K4D2	4KB30X30	-236507.6	-12652.96	-58945.29	154460.35
	4KB30X30	-230366.4	-12652.96	-58945.29	154460.35
K4D3	4KB30X30	-211292.3	-9354.44	-42103.61	113414.34
	4KB30X30	-218909.7	-9354.44	-42103.61	113414.34
K4D4	4KB30X30	-57447.31	-7351.16	-17416.49	54032.48
	4KB30X30	-64668.5	-7351.16	-17416.49	54032.48
K4D6	4KB30X30	-37808.99	-4669.16	-4056.06	16145.56
	4KB30X30	-16230.39	-1669.16	-4056.06	16145.56
K4E1	4KB30X30	-26905.45	278.03	1107.51	-137.69
	4KB30X30	-24515.15	278.03	1107.51	-137.69
K4E2	4KB30X30	-23441.01	493.54	1061.20	-219.67
	4KB30X30	-25031.91	493.54	1061.20	-219.67
K4F1	4KB30X30	-46239.42	61.98	-615.14	2101.82
	4KB30X30	-44769.17	61.98	-615.14	2101.82
K4F2	4KB30X30	-59922.62	-1058.98	-843.57	-2187.88
	4KB30X30	-61553.11	-1058.98	-843.57	-2187.88
K4G1	4KB30X30	-40650.44	140.38	-150.76	2245.89
	4KB30X30	-42240.74	140.38	-150.76	2245.89
K4G2	4KB30X30	-39196.02	293.45	446.16	-2279.07
	4KB30X30	-40796.32	293.45	446.16	-2279.07
K4H1	4KB30X30	-90496.02	-3370	-826.19	-4674.29
	4KB30X30	-92086.32	-3370	-826.19	-4674.29
K4H2	4KB30X30	2678.52	3525.31	968.45	6472.76
	4KB30X30	1068.21	3525.31	968.45	6472.76
K4H3	4KB30X30	1398.45	1680.17	2.72	1047.9
	4KB30X30	-201.85	1680.17	2.72	1047.9
K4H4	4KB30X30	-93617.16	-2048.66	-473.62	502.31
	4KB30X30	-95207.44	-2048.66	-473.62	502.31
K4J1	4KB30X30	-90166.89	-3353.4	826.21	-4999.69
	4KB30X30	-91760.29	-3353.4	826.21	-4999.69
K4J2	4KB30X30	459.76	3496.06	-973.22	5526.43
	4KB30X30	2060.05	3496.06	-973.22	5526.43
K4J3	4KB30X30	6561.36	2166.14	-389.43	1023.11
	4KB30X30	4981.05	2166.14	-389.43	1023.11
K4J4	4KB30X30	-98276.07	-2522.45	834.71	-1546.13
	4KB30X30	-99666.38	-2522.45	834.71	-1546.13
K4K1	4KB30X30	-42160.78	145.08	162.12	2300.26
	4KB30X30	-40670.48	145.08	162.12	2300.26
K4K2	4KB30X30	-39400.74	300.76	-505.16	-2307.37
	4KB30X30	-40991.04	300.76	-505.16	-2307.37
K4L1	4KB30X30	-45996.31	126.93	618.2	2233.99
	4KB30X30	-44406.01	126.93	618.2	2233.99
K4L2	4KB30X30	-49985.68	-1119.05	790.93	-2316.95
	4KB30X30	-61675.98	-1119.05	790.93	-2316.95
K4M1	4KB30X30	-26047.02	262.31	-1096.67	-191.75
	4KB30X30	-24456.72	262.31	-1096.67	-191.75
K4M2	4KB30X30	-23836.6	494.36	-954.11	263.2
	4KB30X30	-25129.1	494.36	-954.11	263.2
K4N1	4KB30X30	-233402.2	-8123.61	66969.99	195840.95
	4KB30X30	-228626.3	-8123.61	66969.99	195840.95
K4N2	4KB30X30	-232082.7	-10607.84	59221.3	162586.1
	4KB30X30	-226933.6	-10607.84	59221.3	162586.1
K4N3	4KB30X30	-207724	-7009.79	42337.14	120421.13
	4KB30X30	-215251.4	-7009.79	42337.14	120421.13
K4N4	4KB30X30	-47233.23	-6027.65	17520.61	59714.19
	4KB30X30	-64854.63	-6027.65	17520.61	59714.19
K4N5	4KB30X30	-30291.63	-2522.72	4003.66	21137.19
	4KB30X30	-37713.23	-2522.72	4003.66	21137.19
K4O1	4KB30X30	-220324.5	-14797.02	-84709.41	175107.21
	4KB30X30	-223447.6	-14797.02	-84709.41	175107.21

K402	4KB30X30	-226623.8	-15268.81	-85191.06	144261.4
	4KB30X30	-216174.7	-15268.81	-85191.06	144261.4
K403	4KB30X30	-196010.8	-8607.09	-65578.21	104371.73
	4KB30X30	-202538.3	-8637.05	-65578.21	104371.73
K404	4KB30X30	-39934.28	-8097.58	-30196.67	51362.55
	4KB30X30	-47355.88	-8097.58	-30196.67	51362.55
K405	4KB30X30	-26583.32	-8055.77	-11862.02	12398.25
	4KB30X30	-34004.72	-8046.77	-11862.02	12398.25
K5A1	K30X25	-332892.6	-26196.04	102340.3	-136744.01
	K30X25	-238756.7	-26196.04	102340.3	-135744.01
K5A2	K30X25	-164592.3	-21300.26	82387.96	-111429.89
	K30X25	-194716.5	-21300.26	82387.96	-111429.89
K5A3	K30X25	-140160	-14802.96	55446.52	-80774.38
	K30X25	-145422.8	-14802.96	55446.52	-80774.38
K5A4	K30X25	-96322.52	-11326.45	26017.36	-45342.05
	K30X25	-106817	-11326.45	26017.36	-45342.05
K5A5	K30X25	-65428.93	-6883.34	7786.22	-18761.41
	K30X25	-62613.44	-6883.34	7786.22	-18761.41
K5A6	K30X25	-7947.21	-3569.88	315.06	-5305.89
	K30X25	-14131.7	-3569.88	315.06	-5305.89
K5A7	K30X25	-47464.85	-4791.27	16674.03	6201.54
	K30X25	-52069.05	-4791.27	16674.03	6201.54
K5B1	K30X25	-361542.4	-68586.09	-20322.58	12578.15
	K30X25	-365429.8	-68586.09	-20322.58	12578.15
K5B10	K30X25	-112635.5	-26034.66	-913.72	-19639.52
	K30X25	-118520	-26034.66	-913.72	-19639.52
K5B11	K30X25	-45108.72	-536.53	5772.34	-10811.89
	K30X25	-50162.34	-536.53	5772.34	-10811.89
K5B12	K30X25	-34184.81	-12631.96	2557.05	-6697.48
	K30X25	-40969.41	-12631.96	2557.05	-6697.48
K5B2	K30X25	-337919.2	-84135.13	-42692.91	-137349.2
	K30X25	-341983.3	-84135.13	-42692.91	-137349.2
K5B3	K30X25	-293130.1	-53884.42	-10631.42	814.89
	K30X25	-303077.7	-53884.42	-10631.42	814.89
K5B4	K30X25	-294086.8	-53577.99	-40261.76	-117776.88
	K30X25	-299210.2	-53577.99	-40261.76	-117776.88
K5B5	K30X25	-230112	-40021.43	109.22	-7845.74
	K30X25	-236296.8	-40021.43	109.22	-7845.74
K5B6	K30X25	-257017	-54572.19	-31412.49	-95809.46
	K30X25	-263269.5	-54572.19	-31412.49	-95809.46
K5B7	K30X25	-166526.3	-27193.62	7318.32	-17136.62
	K30X25	-171710.8	-27193.62	7318.32	-17136.62
K5B8	K30X25	-196715.1	-39799.35	-10291.16	-50766.14
	K30X25	-199499.6	-39799.35	-10291.16	-50766.14
K5B9	K30X25	-103687.2	-14010.81	9397.68	-18212.91
	K30X25	-109071.7	-14010.81	9397.68	-18212.91
K5C1	K30X25	-99250.21	-30700.1	-16175.74	-66364.42
	K30X25	-103314.3	-30700.1	-16175.74	-66364.42
K5C2	K30X25	-50794.23	-16250.09	-9612.71	-27388.81
	K30X25	-55518.53	-16250.09	-9612.71	-27388.81
K5D1	K30X25	-80403.91	-12759.77	-17355.66	-56921.26
	K30X25	-84468.01	-12759.77	-17355.66	-56921.26
K5D2	K30X25	-23097.57	-6810.19	-6794.94	-27246.53
	K30X25	-28221.87	-6810.19	-6794.94	-27246.53
K5G1	K30X25	-300952.4	-77242.85	25203.18	-186528.07
	K30X25	-296886.3	-77242.85	25203.18	-186528.07
K5G2	K30X25	-260084.6	-71592.84	11748.96	-155423.74
	K30X25	-265208.9	-71592.84	11748.96	-155423.74
K5G3	K30X25	-235592.4	-65529.14	2973.02	-1119626
	K30X25	-241865.3	-65529.14	2973.02	-1119626
K5G4	K30X25	-172634.1	-47497.54	2453.12	-66085.39
	K30X25	-178718.8	-47497.54	2453.12	-66085.39
K5G5	K30X25	-100160.5	-20500.3	2050.60	-30139.04
	K30X25	-112363.1	-20568.9	2056.68	-30136.04

K5G6	K30X25	-43441.16	-13329.44	1601.01	-12823.33
	K30X25	-55625.65	-13329.44	1601.01	-12823.33
K5H1	K30X25	-311639.3	-78266.74	34114.36	-302239.66
	K30X25	-311639.3	-78266.74	34114.36	-302239.66
K5H2	K30X25	-272150.9	-68361.9	49441.74	-273220.57
	K30X25	-272150.9	-68361.9	49441.74	-273220.57
K5H3	K30X25	-243514.1	-68425.26	37268.56	-124767.39
	K30X25	-243514.1	-68425.26	37268.56	-124767.39
K5H4	K30X25	-168640.4	-43367.49	21269.77	-36246.28
	K30X25	-168640.4	-43367.49	21269.77	-36246.28
K5H5	K30X25	-34899.46	-22560.45	7530.69	-5494.43
	K30X25	-34899.46	-22560.45	7530.69	-5494.43
K5H6	K30X25	-44802.34	-6627.2	-3178.94	506.58
	K30X25	-44802.34	-6627.2	-3178.94	506.58
K5J17	K30X25	-312627.9	-76054.46	-34241.08	-302392.16
	K30X25	-312627.9	-76054.46	-34241.08	-302392.16
K5J18	K30X25	-271345.8	-68313	49648.79	-273021.53
	K30X25	-271345.8	-68313	49648.79	-273021.53
K5J19	K30X25	-245298.7	-66483.33	37285.56	-124386.87
	K30X25	-245298.7	-66483.33	37285.56	-124386.87
K5J20	K30X25	-168653.3	-43519.94	-21202.12	-34958.86
	K30X25	-168653.3	-43519.94	-21202.12	-34958.86
K5J21	K30X25	-95636.92	-22884.64	-7390.37	-5856.86
	K30X25	-95636.92	-22884.64	-7390.37	-5856.86
K5J22	K30X25	-45736.92	-9043.66	3435.36	-1689.4
	K30X25	-45736.92	-9043.66	3435.36	-1689.4
K5K1	K30X25	-299721.6	-77064.99	-25321.76	-187118.88
	K30X25	-299721.6	-77064.99	-25321.76	-187118.88
K5K2	K30X25	-259491	-71548.61	-11866.99	-156874.18
	K30X25	-259491	-71548.61	-11866.99	-156874.18
K5K3	K30X25	-235794.3	-65584.42	-3052.66	-120882.17
	K30X25	-235794.3	-65584.42	-3052.66	-120882.17
K5K4	K30X25	-173826.4	-47575.06	-2604.33	-66874.56
	K30X25	-173826.4	-47575.06	-2604.33	-66874.56
K5K5	K30X25	-109482.8	-28609.93	-2098.76	-30765.14
	K30X25	-109482.8	-28609.93	-2098.76	-30765.14
K5K6	K30X25	-47379.01	-13356.78	-1683.43	-13167.34
	K30X25	-47379.01	-13356.78	-1683.43	-13167.34
K5N1	K30X25	-53172.36	-12357.47	16905.07	-56933.21
	K30X25	-53172.36	-12357.47	16905.07	-56933.21
K5N2	K30X25	-25306.66	-6645.94	6426.79	-28263.18
	K30X25	-25306.66	-6645.94	6426.79	-28263.18
K5O1	K30X25	-109779.6	-37039.15	745.35	-55692.4
	K30X25	-109779.6	-37039.15	745.35	-55692.4
K5O2	K30X25	-53545.96	-16691.8	2813.18	-26049.31
	K30X25	-53545.96	-16691.8	2813.18	-26049.31
K5P1	K30X25	-214694.1	-55954.94	-43618.4	-156814.39
	K30X25	-214694.1	-55954.94	-43618.4	-156814.39
K5P2	K30X25	-168652.4	-43457.23	-34402.5	-133940.28
	K30X25	-168652.4	-43457.23	-34402.5	-133940.28
K5P3	K30X25	-157391.1	-40916.83	-23953.79	-103341.88
	K30X25	-157391.1	-40916.83	-23953.79	-103341.88
K5P4	K30X25	-115831.7	-30341.18	-14126.48	-68196.19
	K30X25	-115831.7	-30341.18	-14126.48	-68196.19
K5P5	K30X25	-73358.74	-19816.66	-6968.03	-25248.72
	K30X25	-73358.74	-19816.66	-6968.03	-25248.72
K5P6	K30X25	-29482.75	-9613.66	-2192.63	-8773.56
	K30X25	-29482.75	-9613.66	-2192.63	-8773.56
K6H1	6K30X50	-1117931	-241422.3	26154.68	-160221.19
	6K30X50	-1117931	-241422.3	26154.68	-160221.19
K6H2	6K30X50	-930263.4	-176258.9	26047.36	-148106.9
	6K30X50	-930263.4	-176258.9	26047.36	-148106.9
K6H3	6K30X50	-704462.2	-117933.2	33348.7	-98422.96
	6K30X50	-704462.2	-117933.2	33348.7	-98422.96

K6H4	6K30X50	-587567,4	-95401,42	47271,19	-90804,56
	6K30X50	-589001	-95401,42	47271,19	-90804,56
K6H5	6K30X50	-424521,2	-65644,66	-6548,66	-30410,54
	6K30X50	-433007,6	-65644,66	-6548,66	-32418,54
K6H6	6K30X50	-316640,3	42799,31	6336,06	-16607,96
	6K30X50	-320053,9	42799,31	6336,06	-16607,96
K6H7	6K30X50	-147432,7	17185,63	-4562,85	9879,93
	6K30X50	-155904,3	17185,63	-4562,85	9879,93
K6H8	6K30X50	-34550,14	4636,9	4344,46	2968,93
	6K30X50	-44303,93	4636,9	4344,46	2968,93
K6H9	6K30X50	-16122,24	4462,32	997,03	11150,04
	6K30X50	-17070,4	4462,32	997,03	11150,04
K6J1	6K30X50	-1113808	-242362,6	-26189,81	-163969,99
	6K30X50	-1112300	-242362,6	-26189,81	-163969,99
K6J2	6K30X50	-820764,2	-176229,0	-26040,2	-146535,8
	6K30X50	-937952,6	-176229,8	-26040,2	-149535,8
K6J3	6K30X50	-703171,8	-117866,3	-33303,1	-99569,96
	6K30X50	-714634	-117866,3	-33303,1	-99669,96
K6J4	6K30X50	-665311,3	-95243,04	-47185,56	-92124,54
	6K30X50	-697324,9	-95243,04	-47185,56	-92124,54
K6J5	6K30X50	-434076	-66903,54	6685,52	-24420,67
	6K30X50	-432567,6	-66903,54	6685,52	-24420,67
K6J6	6K30X50	-318390,6	-43151,12	-8150,93	-19200,62
	6K30X50	-319804,2	-43151,12	-8150,93	-19200,62
K6J7	6K30X50	-147720,4	-17668,12	4759,52	7459,22
	6K30X50	-156200	-17668,12	4759,52	7459,22
K6J8	6K30X50	-34415,95	4163,36	-4154,26	910,56
	6K30X50	-44169,79	4163,36	-4154,26	910,56
K6J9	6K30X50	16883,24	4110,13	844,48	8791,67
	6K30X50	-16731,4	4110,13	-844,48	8791,67

Keterangan: **Lampiran** Gaya Aksial Kolom

1. Frame yang ditinjau
2. Stlemen yang ditinjau
3. ND = Gaya aksial kolom akibat beban mati
4. NL = Gaya aksial kolom akibat beban hidup
5. Nex = Gaya aksial kolom akibat beban gempa sejajar sb - x
6. Ney = Gaya aksial kolom akibat beban gempa sejajar sb - y

Lampiran Gaya Gesek Kolom

ELEMEN	Letak	m	Lon	Sejajar Sumbu Y				Sejajar Sumbu X				
				VO (N)	VL (N)	Verka (N)	Verki (N)	VO (N)	VL (N)	Verka (N)	Verki (N)	
1	2	3	4	5	6	7	8	9	10	11	12	
1K50X50	atas	100	2350	250	-11579,8	-4195,87	1385,04	90948,85	827,38	987,68	94804,42	-1951,73
1K50X50	bawah			2350	-11579,8	-4195,87	1099,04	90948,85	827,38	987,68	94804,42	-1951,73
1K50X50	atas	2100	2350	250	13729,47	5228,48	2436,21	86007,83	1893,35	-165,95	94096,47	-322,74
1K50X50	bawah			2350	13729,47	5228,48	2436,21	86007,83	1893,35	-165,95	94096,47	-322,74
1K50X50	atas	2600	3650	250	21082,96	8112,11	4361,13	103423,9	8030,38	475,22	103707,81	-653,84
1K50X50	bawah			3650	21082,96	8112,11	4361,13	103423,9	8030,38	475,22	103707,81	-653,84
1K50X50	atas	3300	3650	350	36293,89	7767,08	6272,78	126005,5	-9263,73	-2414,26	-171900,9	427,03
1K50X50	bawah			3650	36293,89	7767,08	6272,78	126005,5	-9263,73	-2414,26	-171900,9	427,03
1K50X50	atas	2600	3650	350	-10086,3	-3781,45	1226,81	77052,38	-2433,33	-589,2	-75950,88	3195,48
1K50X50	bawah			3650	-10086,3	-3781,45	1226,81	77052,38	-2433,33	-589,2	-75950,88	3195,48
1K50X50	atas	3300	3650	350	9586,33	3023,83	2604,71	39827,26	2709,88	828,34	91217,46	-855,52
1K50X50	bawah			3650	9586,33	3023,83	2604,71	39827,26	2709,88	828,34	91217,46	-855,52
1K50X50	atas	400	650	250	-4213,37	-1352,41	1009,59	66015,73	-2450,89	-1482,92	-138059,8	6919,9
1K50X50	bawah			650	-4213,37	-1352,41	1009,59	66015,73	-2450,89	-1482,92	-138059,8	6919,9
1K50X50	atas	2400	2750	350	6594,65	5994,65	3846,42	117664,1	18256,35	5792,66	-148125,8	2039,85
1K50X50	bawah			2750	6594,65	5994,65	3846,42	117664,1	18256,35	5792,66	-148125,8	2039,85
1K50X50	atas	2100	2350	250	-11469,1	-4059,2	-1949,41	91420,29	-2447,7	-1301,48	94349,36	2406,84
1K50X50	bawah			2350	-11469,1	-4059,2	-1949,41	91420,29	-2447,7	-1301,48	94349,36	2406,84
1K50X50	atas	2100	2350	250	13194,04	5061,34	-2396,95	86089,53	-4705,13	-589,67	93961,56	-279,54
1K50X50	bawah			2350	13194,04	5061,34	-2396,95	86089,53	-4705,13	-589,67	93961,56	-279,54
1K50X50	atas	2600	3650	350	20683,73	6032,2	-4306,1	109852,3	-13185,2	-1880,42	133907,83	151,72
1K50X50	bawah			3650	20683,73	6032,2	-4306,1	109852,3	-13185,2	-1880,42	133907,83	151,72
1K50X50	atas	3300	3650	350	35894,56	7747,13	-8187,87	126754	16035,92	3987,32	-171919,5	690,76
1K50X50	bawah			3650	35894,56	7747,13	-8187,87	126754	16035,92	3987,32	-171919,5	690,76
1K50X50	atas	3300	3650	350	30472,62	5254,95	-2493,65	62707,7	15284,85	5106,74	-136328,2	996,91
1K50X50	bawah			3650	30472,62	5254,95	-2493,65	62707,7	15284,85	5106,74	-136328,2	996,91
1K50X50	atas	2600	2950	350	-13053,5	-3706,58	-1192,2	77586,53	3655,89	938,82	-76687,81	-3601,34
1K50X50	bawah			2950	-13053,5	-3706,58	-1192,2	77586,53	3655,89	938,82	-76687,81	-3601,34
1K50X50	atas	3300	3650	350	9208,52	2965,88	-2547,41	90216,19	3964,71	1078,14	-91217,85	-1505,3
1K50X50	bawah			3650	9208,52	2965,88	-2547,41	90216,19	3964,71	1078,14	-91217,85	-1505,3
1K50X50	atas	400	650	250	-1096,31	-322,95	-12046,3	68462,46	3392,35	3041,29	-129084,5	-6635,22
1K50X50	bawah			650	-1096,31	-322,95	-12046,3	68462,46	3392,35	3041,29	-129084,5	-6635,22
1K50X50	atas	2400	2750	350	16374,64	6506,7	-3770,4	117782,6	-18058	-5820,08	-144990,4	-3307,85
1K50X50	bawah			2750	16374,64	6506,7	-3770,4	117782,6	-18058	-5820,08	-144990,4	-3307,85
KB50X45	atas	2100	2350	250	-10968,5	-1521,12	245,19	78812,29	-11315,2	-2634,42	56015,82	-531,41
KB50X45	bawah			2350	-10968,5	-1521,12	245,19	78812,29	-11315,2	-2634,42	56015,82	-531,41
KB50X45	atas	2100	2350	250	12891	2893,06	-6131,61	81189,77	-6792,82	-1991,7	62506,25	784,74
KB50X45	bawah			2350	12891	2893,06	-6131,61	81189,77	-6792,82	-1991,7	62506,25	784,74
KB50X45	atas	2600	2950	350	-9851,54	-1809,53	-512,49	68748,78	12921,45	2953,58	-50718,61	682,14
KB50X45	bawah			2950	-9851,54	-1809,53	-512,49	68748,78	12921,45	2953,58	-50718,61	682,14
KB50X45	atas	3300	3650	350	9600,47	2575,24	-4193,82	73753,91	8266,83	2407,17	-44976,62	-1648,65
KB50X45	bawah			3650	9600,47	2575,24	-4193,82	73753,91	8266,83	2407,17	-44976,62	-1648,65
KB50X45	atas	3300	3650	350	-4642,21	-832,89	541,84	68510,84	13174,85	2606,41	-48945,27	1179,29
KB50X45	bawah			3650	-4642,21	-832,89	541,84	68510,84	13174,85	2606,41	-48945,27	1179,29
KB50X45	atas	2100	2350	250	7288,7	2281,84	-440,01	77398,02	8461,98	2429,49	-48168,38	-2116,65
KB50X45	bawah			2350	7288,7	2281,84	-440,01	77398,02	8461,98	2429,49	-48168,38	-2116,65
KB50X45	atas	2100	2350	250	-9084,22	-4400,11	-505,27	81653,73	-9653,3	-2651,52	58177,99	-328,44
KB50X45	bawah			2350	-9084,22	-4400,11	-505,27	81653,73	-9653,3	-2651,52	58177,99	-328,44
KB50X45	atas	2100	2350	250	10921,6	3633,26	535,78	81016,73	-5686,76	-2314,04	62691,26	-1003,05
KB50X45	bawah			2350	10921,6	3633,26	535,78	81016,73	-5686,76	-2314,04	62691,26	-1003,05
KB50X45	atas	2600	2950	350	17304,93	5001,4	1866,35	75778,88	7789,44	2937,72	-76385,15	1910,03
KB50X45	bawah			2950	17304,93	5001,4	1866,35	75778,88	7789,44	2937,72	-76385,15	1910,03
KB50X45	atas	3300	3650	350	12900,41	3053,64	678,48	72060,04	3523,11	2984,42	-73889,98	2198,48
KB50X45	bawah			3650	12900,41	3053,64	678,48	72060,04	3523,11	2984,42	-73889,98	2198,48
KB50X45	atas	2600	2950	350	-10209,1	-2289,49	-929,86	76809,23	14848,86	3516,26	-49686,11	821,22
KB50X45	bawah			2950	-10209,1	-2289,49	-929,86	76809,23	14848,86	3516,26	-49686,11	821,22
KB50X45	atas	3300	3650	350	-9553,13	-947,88	-1356,1	78804,29	-53,87	2913,34	-46796,96	700,49
KB50X45	bawah			3650	-9553,13	-947,88	-1356,1	78804,29	-53,87	2913,34	-46796,96	700,49
KB50X45	atas	2100	2350	250	-2582,61	-1250,32	-2077,06	100914,4	-1137,64	-2001,38	63037,88	-670,23
KB50X45	bawah			2350	-2582,61	-1250,32	-2077,06	100914,4	-1137,64	-2001,38	63037,88	-670,23
KB50X45	atas	2600	2950	350	-5777,5	-2193,31	-2956,49	106677,3	1284,22	2250,89	-62074,14	1175,75
KB50X45	bawah			2950	-5777,5	-2193,31	-2956,49	106677,3	1284,22	2250,89	-62074,14	1175,75
KB50X45	atas	3300	3650	350	-212,61	-404,24	-2622,04	101303,2	-667,76	2228,72	-57437,49	1109,83
KB50X45	bawah			3650	-212,61	-404,24	-2622,04	101303,2	-667,76	2228,72	-57437,49	1109,83
KB50X45	atas	2100	2350	350	-41806,4	-15862,7	522,5	70184,47	3975,72	1056,04	-81563,44	-143,92
KB50X45	bawah			2350	-41806,4	-15862,7	522,5	70184,47	3975,72	1056,04	-81563,44	-143,92
KB50X45	atas	3300	3650	350	43229,43	13185,15	1261,26	82957,36	4867,45	1083,87	-76512,18	-337,49
KB50X45	bawah			3650	43229,43	13185,15	1261,26	82957,36	4867,45	1083,87	-76512,18	-337,49
KB50X45	atas	2600	2950	350	-57995,5	-32268	-343,14	57115,36	2304,26	1225,54	-86801,7	-298,67
KB50X45	bawah			2950	-57995,5	-32268	-343,14	57115,36	2304,26	1225,54	-86801,7	-298,67
KB50X45	atas	3300	3650	350	-44366,4	-13941,2	-1152	72484,97	9000,73	1207,27	-76234,9	31,89
KB50X45	bawah			3650	-44366,4	-13941,2	-1152	72484,97	9000,73	1207,27	-76234,9	31,89

KB50X45	atas		350	43213.85	15633.55	3065.05	70426.18	2684.88	396.57	-65317.23	-12.37
KB50X45	bawah	2100	2450	43213.85	15629.55	3000.05	70425.18	2684.88	396.97	-65317.23	-12.37
KB50X45	atas		350	47530.24	21481.37	3659.6	67638.23	-2270.82	-217.47	73029.05	223.46
KB50X45	bawah	2500	2550	47530.24	21481.37	3659.6	67538.23	-2270.82	-217.47	73029.05	223.46
KB50X45	atas		250	-48774.3	-13313.4	-129.79	64423.68	-367.65	-242.49	81156.3	683.08
KB50X45	bawah	2100	2550	-48774.3	-13313.4	1628.72	64423.68	-367.65	-242.49	81156.3	683.08
KB50X45	atas		350	-55375.7	-24965.4	1484.74	64549.45	732.85	5.93	-82650.13	-1047.34
KB50X45	bawah	3500	2450	-55375.7	-24965.4	1484.74	64549.45	732.85	5.93	-82650.13	-1047.34
KB50X45	atas		350	-51958	-15440.9	473.74	59936.82	912	200.66	-80633.4	-1118.41
KB50X45	bawah	3300	3550	-51958	-15440.9	473.74	59936.82	912	200.66	-80633.4	-1118.41
KB50X45	atas		350	52029.07	13954.51	-460.15	64942.38	-1080.74	-122.8	85781.43	-216.89
KB50X45	bawah	2100	2550	52029.07	13954.51	-560.15	64942.38	-1080.74	-122.8	85781.43	-216.89
KB50X45	atas		350	68686.21	25427.34	1203.65	65008.95	-749.7	-22.82	78901.41	-48.54
KB50X45	bawah	2500	2950	68686.21	25427.34	1203.65	65008.95	-749.7	-22.82	78901.41	-48.54
KB50X45	atas		350	32185.24	15285.44	1213.47	61295.84	285.88	-91.87	-75521.31	-453.36
KB50X45	bawah	3300	3550	32185.24	15285.44	1213.47	61295.84	285.88	-91.87	-75521.31	-453.36
KB50X45	atas		250	-36167.4	-15532.8	3324.01	68024.21	1252.04	85.53	82456.12	616.6
KB50X45	bawah	2100	2350	-36167.4	-15532.8	3324.01	68024.21	1252.04	85.53	82456.12	616.6
KB50X45	atas		350	-88137.4	-20552	3628.9	64633.77	-3787.26	-1269.89	-85163	-255.53
KB50X45	bawah	2500	2950	-88137.4	-20552	3628.9	64633.77	-3787.26	-1269.89	-85163	-255.53
KB50X45	atas		350	-46755	-14267.5	2642.27	58304.44	1087.47	-964.95	-83239.88	-587.62
KB50X45	bawah	3300	3550	-46755	-14267.5	2642.27	58304.44	1087.47	-964.95	-83239.88	-587.62
KB50X45	atas		250	-3484.73	-15309.95	935.67	75607.25	-2584.36	-225.67	91537.65	57.06
KB50X45	bawah	2100	2350	-3484.73	-15309.95	935.67	75607.25	-2584.36	-225.67	91537.65	57.06
KB50X45	atas		350	74076.57	25545.36	-425.52	76997.39	-2436	151.28	75005.62	337.2
KB50X45	bawah	2500	2950	74076.57	25545.36	-425.52	76997.39	-2436	151.28	75005.62	337.2
KB50X45	atas		350	59199.47	17420.42	177.82	71685.91	-1060.95	-734.75	-71753.3	-448.22
KB50X45	bawah	3300	3550	59199.47	17420.42	177.82	71685.91	-1060.95	-734.75	-71753.3	-448.22
KB50X45	atas		250	-38058.3	-15442	-3401.22	68700.26	-2661.32	-304.55	82541.01	-5.25E-01
KB50X45	bawah	2100	2350	-38058.3	-15442	-3401.22	68700.26	-2661.32	-304.55	82541.01	-5.25E-01
KB50X45	atas		350	-68395.21	-20578.7	-3859.53	65302.45	4134.64	1549.71	-95199.29	358.8
KB50X45	bawah	3500	2550	-68395.21	-20578.7	-3859.53	65302.45	4134.64	1549.71	-95199.29	358.8
KB50X45	atas		350	-46851.6	-14206.9	-2597.32	59345.36	2529.71	1179.71	83236.84	56.43
KB50X45	bawah	3300	3550	-46851.6	-14206.9	-2597.32	59345.36	2529.71	1179.71	83236.84	56.43
KB50X45	atas		250	43055.99	18956.87	636.63	76513.91	-163.63	-505.27	91229.42	-630.4
KB50X45	bawah	2100	2350	43055.99	18956.87	636.63	76513.91	-163.63	-505.27	91229.42	-630.4
KB50X45	atas		350	74152.01	22610.13	609.71	77721.9	110.1	-683.97	75889.7	-779.15
KB50X45	bawah	2500	2950	74152.01	22610.13	609.71	77721.9	110.1	-683.97	75889.7	-779.15
KB50X45	atas		350	59169.47	17509.15	-132.67	72390.83	3825.33	1437.35	-71754.18	914.16
KB50X45	bawah	3300	3550	59169.47	17509.15	-132.67	72390.83	3825.33	1437.35	-71754.18	914.16
KB50X45	atas		250	5035.89	-938.3	765.43	37077.57	1034.44	-1009.84	39637.69	691.29
KB50X45	bawah	3000	2450	5035.89	-938.3	765.43	37077.57	1034.44	-1009.84	39637.69	691.29
KB50X45	atas		350	53374.95	15465.72	-1175.73	62333.03	2400.25	700.82	-75501.4	953
KB50X45	bawah	3300	3550	53374.95	15465.72	-1175.73	62333.03	2400.25	700.82	-75501.4	953
KB50X45	atas		250	26865.05	3695.29	11544.64	4663.25	11215.93	-11542.17	907.86	
KB50X45	bawah	3000	3550	26865.05	3695.29	11544.64	4663.25	11215.93	-11542.17	907.86	
KB50X45	atas		250	-47684.2	-18301.8	-1638.23	65458.6	-437.11	-33.42	81164.57	34.93
KB50X45	bawah	2100	2350	-47684.2	-18301.8	-1638.23	65458.6	-437.11	-33.42	81164.57	34.93
KB50X45	atas		350	-68194	-24843.1	-1477.06	65570.44	751.14	271.63	-82646.02	476.93
KB50X45	bawah	2500	2950	-68194	-24843.1	-1477.06	65570.44	751.14	271.63	-82646.02	476.93
KB50X45	atas		350	-51759.7	-18309.9	-391.37	60912.15	209.32	70.79	-80637.49	631.21
KB50X45	bawah	3300	3550	-51759.7	-18309.9	-391.37	60912.15	209.32	70.79	-80637.49	631.21
KB50X45	atas		350	-33957.9	-4965.64	-2.5	9783.15	229.9	384.9	17864.8	-734.32
KB50X45	bawah	3400	3750	-33957.9	-4965.64	-2.5	9783.15	229.9	384.9	17864.8	-734.32
KB50X45	atas		250	61335.35	19073.85	-1637.75	65910.22	-1701.85	-581.47	85230.73	-321.57
KB50X45	bawah	2100	2350	61335.35	19073.85	-1637.75	65910.22	-1701.85	-581.47	85230.73	-321.57
KB50X45	atas		350	72007.31	25550.13	-1162.32	65038.15	-1687.84	-336.51	77329.91	-414.11
KB50X45	bawah	2500	2950	72007.31	25550.13	-1162.32	65038.15	-1687.84	-336.51	77329.91	-414.11
KB50X45	atas		250	-41711	-15733.5	-595.61	71998.36	2436.81	782.38	81577.48	492.63
KB50X45	bawah	2100	2350	-41711	-15733.5	-595.61	71998.36	2436.81	782.38	81577.48	492.63
KB50X45	atas		350	36097.67	13140	-1322.71	64397.45	-1143.38	-224.84	-76338.31	1927.97
KB50X45	bawah	3300	3550	36097.67	13140	-1322.71	64397.45	-1143.38	-224.84	-76338.31	1927.97
KB50X45	atas		250	52130.66	6639.57	770.83	18781.08	-19479	165.96	-13719	3085.66
KB50X45	bawah	240	490	52130.66	6639.57	770.83	18781.08	-19479	165.96	-13719	3085.66
KB50X45	atas		350	-37749.5	-13599.8	1301.22	74376.89	-7510.25	-866.4	-76216.15	-587.36
KB50X45	bawah	3300	3550	-37749.5	-13599.8	1301.22	74376.89	-7510.25	-866.4	-76216.15	-587.36
KB50X45	atas		250	-51200.8	-6188.99	200.14	20391.23	-16866	-2787.73	-13477.35	-1214.32
KB50X45	bawah	240	490	-51200.8	-6188.99	200.14	20391.23	-16866	-2787.73	-13477.35	-1214.32
KB50X45	atas		250	43906.85	15951.75	-3066.65	72233.9	-180.97	-254.49	84553.32	-588.22
KB50X45	bawah	2100	2350	43906.85	15951.75	-3066.65	72233.9	-180.97	-254.49	84553.32	-588.22
KB50X45	atas		350	59097.27	21634.15	-3637.63	69260.07	-248.85	-350.74	79653.73	-782.21
KB50X45	bawah	2600	2950	59097.27	21634.15	-3637.63	69260.07	-248.85	-350.74	79653.73	-782.21
KB50X45	atas		250	-5040.22	-1304.43	1154.23	84557.48	8550.22	2458.33	58186.44	823.66
KB50X45	bawah	2100	2350	-5040.22	-1304.43	1154.23	84557.48	8550.22	2458.33	58186.44	823.66
KB50X45	atas		2001	-13103.1	-845.25	1549.04	19119.56	3373.53	-3051.37	-8572.6	1923.64
KB50X45	bawah	2760	2460	-13103.1	-845.25	1549.04	19119.56	3373.53	-3051.37	-8572.6	1923.64
KB50X45	atas		350	10551.58	3562.1	-185.4	84320	419.08	131.95	-80478.8	589.36
KB50X45	bawah	2100	2450	10551.58	3562.1	-185.4	84320	419.08	131.95	-80478.8	589.36
KB50X45	atas		250	8432.31	1812.38	-1278.14	74353.3	23.78	-547.64	-72536.62	662.79
KB50X45	bawah	3000	3550	8432.31	1812.38	-1278.14	74353.3	23.78	-547.64	-72536.62	662.79

KB50X45	atas		250	-576,17	-404,12	362,97	15699,34	13256,83	-9716,15	-23165,39	2372,87
KB50X45	bawah	240	450	-576,17	-404,12	362,97	15699,34	13256,83	-9716,15	-23165,39	2372,87
KB50X45	atas		350	-5044,2	-330,43	1098,51	82774,1	1366,7	-2775,97	-46799,19	-1084,85
KB50X45	bawah	3000	3650	-5044,2	-330,43	1098,51	82774,1	1366,7	-2775,97	-46799,19	-1084,85
KB50X45	atas		350	-1189,58	800,97	3192,85	45392,53	-1232,95	-2581,97	-22822,45	-1550,64
KB50X45	bawah	3300	3650	-1189,58	800,97	3192,85	45392,53	-1232,95	-2581,97	-22822,45	-1550,64
KB50X45	atas		250	-2980,3	-1318,35	2606,55	105028,5	-566,23	1534,34	62158,11	700,19
KB50X45	bawah	2100	2250	-2980,3	-1318,35	2606,55	105028,5	-566,23	1534,34	62158,11	700,19
KB50X45	atas		350	-7064,07	-2441,63	3360,90	112753	358,26	-1332,44	-62153,4	-1230,1
KB50X45	bawah	2600	2660	-7064,07	-2441,63	3360,90	112753	358,26	-1332,44	-62153,4	-1230,1
KB50X45	atas		350	481,47	25,95	1366,53	106062,9	2998,79	-1688,55	57349,07	-1002,70
KB50X45	bawah	2300	2650	481,47	25,95	1366,53	106062,9	2998,79	-1688,55	57349,07	-1002,70
KB50X45	atas		350	1609,3	1309,18	1280,95	65622,13	1535,13	-1489,81	35194,95	-1024,81
KB50X45	bawah	3000	3650	1609,3	1309,18	1280,95	65622,13	1535,13	-1489,81	35194,95	-1024,81
KB50X45	atas		250	5133,47	914,06	1012,21	78551,96	10414,37	2516,15	56285,14	564,74
KB50X45	bawah	2100	2350	5133,47	914,06	1012,21	78551,96	10414,37	2516,15	56285,14	564,74
KB50X45	atas		250	395,84	410,24	336,12	14906,62	31154,4	-2784,68	-7715,34	-1099,88
KB50X45	bawah	240	405	395,84	410,24	336,12	14906,62	31154,4	-2784,68	-7715,34	-1099,88
KB50X45	atas		350	-9154,19	-1517,11	109,48	76831,17	-12401,5	-2969,68	-51389,61	-993,36
KB50X45	bawah	4600	2650	-9154,19	-1517,11	109,48	76831,17	-12401,5	-2969,68	-51389,61	-993,36
KB50X45	atas		350	6366,48	-637,52	-1603,68	70365,07	-12948,1	-2774,40	-48801,05	-1487,32
KB50X45	bawah	3300	2650	6366,48	-637,52	-1603,68	70365,07	-12948,1	-2774,40	-48801,05	-1487,32
KB50X45	atas		200	-13555,21	-109,57	370,42	6993,28	-9254,64	1275,5	413,01	1395,68
KB50X45	bawah	2700	2350	-13555,21	-109,57	370,42	6993,28	-9254,64	1275,5	413,01	1395,68
KB50X45	atas		250	8270,88	2425,4	3621,53	64512,77	7930,63	3571,93	59106,65	-151,92
KB50X45	bawah	2700	2350	8270,88	2425,4	3621,53	64512,77	7930,63	3571,93	59106,65	-151,92
KB50X45	atas		350	13125,03	3917,34	4314,63	32537,55	-13587,1	-4748,26	-42864,77	-148,41
KB50X45	bawah	3600	2650	13125,03	3917,34	4314,63	32537,55	-13587,1	-4748,26	-42864,77	-148,41
KB45X45	atas		350	12715,31	2682,22	2215,57	79762,49	-13541,6	-4047,71	-44645,54	-369,41
KB45X45	bawah	3300	3650	12715,31	2682,22	2215,57	79762,49	-13541,6	-4047,71	-44645,54	-369,41
KB45X45	atas		250	-5689,14	-911,84	745,95	36932,6	-1264,33	865,35	30599,46	-234,75
KB45X45	bawah	2200	2450	-5689,14	-911,84	745,95	36932,6	-1264,33	865,35	30599,46	-234,75
KB45X45	atas		250	-6520,53	-2055,5	-1994,42	22862,94	11013,15	3083,67	-39319,21	-1295,97
KB45X45	bawah	3800	3050	-6520,53	-2055,5	-1994,42	22862,94	11013,15	3083,67	-39319,21	-1295,97
KB45X45	atas		250	6817,42	1643,47	400,28	34089,85	5843,94	1950,77	-38806,6	-1272,54
KB45X45	bawah	4500	4750	6817,42	1643,47	400,28	34089,85	5843,94	1950,77	-38806,6	-1272,54
KB45X45	atas		250	5714,27	63,02	-4155,55	36536,91	11879,57	4341,67	-26951,29	982,53
KB45X45	bawah	3500	3750	5714,27	63,02	-4155,55	36536,91	11879,57	4341,67	-26951,29	982,53
KB45X45	atas		250	-6646,57	-2075,2	1943,68	22868,27	-10192	-2941,06	-39316,92	850,43
KB45X45	bawah	2600	3050	-6646,57	-2075,2	1943,68	22868,27	-10192	-2941,06	-39316,92	850,43
KB45X45	atas		250	6789,98	1648,72	422,36	35043,62	-4978,41	-1300,4	30808,01	924,14
KB45X45	bawah	4500	4750	6789,98	1648,72	422,36	35043,62	-4978,41	-1300,4	30808,01	924,14
KB45X45	atas		250	5116,25	-43,78	4189,75	36715,84	-11580,3	-4834,13	-26951,77	-1293,14
KB45X45	bawah	3500	3750	5116,25	-43,78	4189,75	36715,84	-11580,3	-4834,13	-26951,77	-1293,14
KB45X45	atas		250	-63831,6	-20323,1	111,93	55555,17	-685,48	-123,47	74793,03	294,31
KB45X45	bawah	3100	2350	-63831,6	-20323,1	111,93	55555,17	-685,48	-123,47	74793,03	294,31
KB45X45	atas		350	-61226,6	-19434,4	77,58	51582,89	565,71	17,07	-109050,1	-378,41
KB45X45	bawah	3600	2650	-61226,6	-19434,4	77,58	51582,89	565,71	17,07	-109050,1	-378,41
KB45X45	atas		350	22636,11	10357,35	-43,86	51666,06	1299,63	314,87	-81122,87	330,56
KB45X45	bawah	2100	2450	22636,11	10357,35	-43,86	51666,06	1299,63	314,87	-81122,87	330,56
KB45X45	atas		350	4306,72	5001,6	-26,48	50414,4	-1903,93	-438,51	115661,55	-325,4
KB45X45	bawah	2600	2650	4306,72	5001,6	-26,48	50414,4	-1903,93	-438,51	115661,55	-325,4
KB30X30	atas		200	378,3	104,78	-98,43	13221,81	788,72	-225,11	8171,65	169,39
KB30X30	bawah	2300	2500	378,3	104,78	-98,43	13221,81	788,72	-225,11	8171,65	169,39
KB30X30	atas		200	99,05	1,65	-154,78	12814,57	-1927,56	-389,65	8220,73	292,43
KB30X30	bawah	2900	3100	99,05	1,65	-154,78	12814,57	-1927,56	-389,65	8220,73	292,43
KB30X30	atas		250	3589,23	109,55	-260,86	13953,41	494,99	782,68	-13363,97	-44,61
KB30X30	bawah	3550	3800	3589,23	109,55	-260,86	13953,41	494,99	782,68	-13363,97	-44,61
KB30X30	atas		200	534,38	138,54	621,79	13218,62	-428,38	-133,04	-6582,21	-150,91
KB30X30	bawah	2300	2500	534,38	138,54	621,79	13218,62	-428,38	-133,04	-6582,21	-150,91
KB30X30	atas		200	-421,55	-21,01	907,52	13670,42	1102,57	354,08	6567,51	199,52
KB30X30	bawah	2900	3100	-421,55	-21,01	907,52	13670,42	1102,57	354,08	6567,51	199,52
KB30X30	atas		250	2439,43	-164,22	1149,62	14726,09	70,66	-735,76	-14706,99	767,12
KB30X30	bawah	3550	3800	2439,43	-164,22	1149,62	14726,09	70,66	-735,76	-14706,99	767,12
KB30X30	atas		200	526,19	154,02	-633,23	13538,62	-632,07	-151,87	6590,76	-61,63
KB30X30	bawah	2300	2500	526,19	154,02	-633,23	13538,62	-632,07	-151,87	6590,76	-61,63
KB30X30	atas		200	-245,25	-15,08	-911,82	13954,45	-1240,16	-359,1	6593,79	-95,31
KB30X30	bawah	2900	3100	-245,25	-15,08	-911,82	13954,45	-1240,16	-359,1	6593,79	-95,31
KB30X30	atas		250	2547,78	131,24	-1115,79	15050,73	132,05	770,65	-14588,09	615,03
KB30X30	bawah	3550	3800	2547,78	131,24	-1115,79	15050,73	132,05	770,65	-14588,09	615,03
KB30X30	atas		200	375,23	116,85	187,67	13767,1	695,21	208,23	6181,35	-82,31
KB30X30	bawah	2300	2500	375,23	116,85	187,67	13767,1	695,21	208,23	6181,35	-82,31
KB30X30	atas		200	89,48	10,44	233,76	13039,23	1196,7	365,29	8225,75	-163,52
KB30X30	bawah	2900	3100	89,48	10,44	233,76	13039,23	1196,7	365,29	8225,75	-163,52
KB30X30	atas		250	3812,06	214,93	214,57	14568,49	-297,44	-755,57	-13365,16	-121,47
KB30X30	bawah	3550	3800	3812,06	214,93	214,57	14568,49	-297,44	-755,57	-13365,16	-121,47
KB30X50	atas		250	-2731,9	-1089,38	1271,1	41400,79	-1066,17	-275,08	37155,87	-5,38
KB30X50	bawah	2100	2350	-2731,9	-1089,38	1271,1	41400,79	-1066,17	-275,08	37155,87	-5,38

IK30X50	atas		350	-151,41	-36,01	1607,4	47250,14	-3273,84	-45,35	-30960,87	-312,3
IK30X50	bawah	2500	2500	-151,41	-36,01	1607,4	47330,14	-3273,84	-45,35	-30960,87	-312,3
IK30X50	atas		350	6887,47	3241,55	1584,76	38737,15	-3248,45	-1937,89	-45223,54	66,79
IK30X50	bawah	2300	2650	6887,47	2241,55	1584,76	38737,15	-5249,45	-1937,89	-45223,54	66,79
IK30X50	atas		350	-2437,39	-636,5	-1240,13	41901,06	131,9	56,92	36362,73	33,35
IK30X50	bawah	2100	2350	-2437,39	-936,5	-1240,13	41901,06	131,9	56,92	36362,73	33,35
IK30X50	atas		350	5,6	64,13	-1530,96	47918,83	4053,38	216,16	-31697,07	265,48
IK30X50	bawah	2600	2950	5,6	64,13	-1530,96	47918,83	4053,38	216,16	-31697,07	265,48
IK30X50	atas		350	6761,46	2226,95	-1562,57	38980,06	6046,62	2121,39	-46188,49	-143,63
IK30X50	bawah	2300	2650	6761,46	2226,95	-1562,57	38980,06	6046,62	2121,39	-46188,49	-143,63
K30X25	atas		200	1139,37	242,2	-313,93	11317,15	1595,55	535,42	-10710,97	152,58
K30X25	bawah	2300	2500	1139,37	242,2	-313,93	11317,15	1595,55	535,42	-10710,97	152,58
K30X25	atas		200	1873,86	343,13	-407,15	10475,02	2795,67	645,65	-3842,34	431,75
K30X25	bawah	2900	3100	1873,86	343,13	-407,15	10475,02	2795,67	645,65	-3842,34	431,75
K30X25	atas		350	1599,86	384,2	-75,77	11692,1	1734,41	406,08	-11463,75	-125,31
K30X25	bawah	3550	3800	1599,86	384,2	-75,77	11692,1	1734,41	406,08	-11463,75	-125,31
K30X25	atas		350	-251,05	123,14	-266,03	10673,73	435,7	189,92	-17708,59	92,96
K30X25	bawah	2200	2450	-251,05	123,14	-266,03	10673,73	435,7	189,92	-17708,59	92,96
K30X25	atas		200	1354,33	140,11	-222,32	10854,36	-502,2	17,89	-13696	53,4
K30X25	bawah	2300	2500	1354,33	140,11	-222,32	10854,36	-502,2	17,89	-13696	53,4
K30X25	atas		200	-555,71	191,9	-305,34	10021,85	687,32	292,73	-21467,06	153,78
K30X25	bawah	2900	3050	-555,71	191,9	-305,34	10021,85	687,32	292,73	-21467,06	153,78
K30X25	atas		200	1944,82	165,23	-325,66	10523,57	-955,92	-3,53	-13506,77	-79,87
K30X25	bawah	2900	3100	1944,82	165,23	-325,66	10523,57	-955,92	-3,53	-13506,77	-79,87
K30X25	atas		250	18,34	213,86	-286,73	10284,41	1038,74	387,46	-17504,18	153,98
K30X25	bawah	3500	3750	18,34	213,86	-286,73	10284,41	1038,74	387,46	-17504,18	153,98
K30X25	atas		250	1512,94	184,67	-384,6	10853,78	766,78	502,44	-14874,58	501,69
K30X25	bawah	3550	3800	1512,94	184,67	-384,6	10853,78	766,78	502,44	-14874,58	501,69
K30X25	atas		200	1762,51	501,37	-5,05	11441,17	631,07	321,17	-13081,7	9,98
K30X25	bawah	2800	2500	1762,51	501,37	-5,05	11441,17	631,07	321,17	-13081,7	9,98
K30X25	atas		200	4063,07	1106,46	133,36	14423,17	409,93	399,5	-14108,59	-152,46
K30X25	bawah	2900	3100	4063,07	1106,46	133,36	14423,17	409,93	399,5	-14108,59	-152,46
K30X25	atas		200	2079,94	234,74	256,6	11629,38	-1399,56	598,29	-9723,64	161,97
K30X25	bawah	2800	2500	2079,94	234,74	256,6	11629,38	-1399,56	598,29	-9723,64	161,97
K30X25	atas		300	4590,25	944,51	199,03	15250,1	-1996,7	-909,8	-9370,09	367,78
K30X25	bawah	2900	3100	4590,25	944,51	199,03	15250,1	-1996,7	-909,8	-9370,09	367,78
K30X25	atas		200	2062,42	153,33	479,71	12636,02	-2131,71	-835,95	12414,23	-255,92
K30X25	bawah	2800	2500	2062,42	153,33	479,71	12636,02	-2131,71	-835,95	12414,23	-255,92
K30X25	atas		200	1869,62	305,1	564,69	13712,04	2863,52	1005,96	-9496,81	417,64
K30X25	bawah	2900	3100	1869,62	305,1	564,69	13712,04	2863,52	1005,96	-9496,81	417,64
K30X25	atas		250	2542,89	853,04	521,39	12607,26	339,14	57,1	-9491,28	-84,06
K30X25	bawah	3550	3800	2542,89	853,04	521,39	12607,26	339,14	57,1	-9491,28	-84,06
K30X25	atas		200	792,64	-42,8	267,82	12700,64	1895,02	743,76	11017,5	-268,63
K30X25	bawah	2800	2500	792,64	-42,8	267,82	12700,64	1895,02	743,76	11017,5	-268,63
K30X25	atas		200	1732,12	224,05	192,71	15229,33	-1727,31	-615,93	-14578,97	276,81
K30X25	bawah	2900	3100	1732,12	224,05	192,71	15229,33	-1727,31	-615,93	-14578,97	276,81
K30X25	atas		250	3873,82	812,86	261,43	15136,38	-323,17	-177,75	-15646,8	277,56
K30X25	bawah	3550	3800	3873,82	812,86	261,43	15136,38	-323,17	-177,75	-15646,8	277,56
K30X25	atas		200	761,03	-44,27	-260,88	12764,11	-2272,53	-836,14	11008,32	177,73
K30X25	bawah	2300	2500	761,03	-44,27	-260,88	12764,11	-2272,53	-836,14	11008,32	177,73
K30X25	atas		200	1689,68	222,32	-163,93	15316,8	2251,21	741,02	-14584,87	-121,2
K30X25	bawah	2900	3100	1689,68	222,32	-163,93	15316,8	2251,21	741,02	-14584,87	-121,2
K30X25	atas		250	3805,77	805,46	-250,77	15221,78	981,45	235,14	-15656,59	-53,86
K30X25	bawah	3550	3800	3805,77	805,46	-250,77	15221,78	981,45	235,14	-15656,59	-53,86
K30X25	atas		200	4036,14	162,29	-472,48	12681,49	1700,79	730,96	12405,16	130,85
K30X25	bawah	2300	2500	4036,14	162,29	-472,48	12681,49	1700,79	730,96	12405,16	130,85
K30X25	atas		200	1782,15	314,7	-556,18	13846,04	-2543,87	-928,93	-4498,97	320,71
K30X25	bawah	2900	3100	1782,15	314,7	-556,18	13846,04	-2543,87	-928,93	-4498,97	320,71
K30X25	atas		250	2432,17	688,81	-513,87	12730,66	88,09	34,27	-9500,12	246,41
K30X25	bawah	3550	3800	2432,17	688,81	-513,87	12730,66	88,09	34,27	-9500,12	246,41
K30X25	atas		200	1475,42	258,82	-265,54	11928,32	1549,42	590,02	-9341,7	-23,77
K30X25	bawah	2900	2500	1475,42	258,82	-265,54	11928,32	1549,42	590,02	-9341,7	-23,77
K30X25	atas		200	4376,61	1007,74	-186,76	16712,22	2095,61	825,37	-8923,08	-191,3
K30X25	bawah	2900	3100	4376,61	1007,74	-186,76	16712,22	2095,61	825,37	-8923,08	-191,3
K30X25	atas		200	1900,78	573,74	104,02	12023,9	603,44	205,65	-12016	49,77
K30X25	bawah	2300	2500	1900,78	573,74	104,02	12023,9	603,44	205,65	-12016	49,77
K30X25	atas		200	4657,98	1330,19	31,6	15448,99	573,08	173,75	-13187,61	30,28
K30X25	bawah	2900	3100	4657,98	1330,19	31,6	15448,99	573,08	173,75	-13187,61	30,28
K30X25	atas		200	1047,97	275,52	415,9	11626,44	-1945,09	-812,9	-9155,65	95,16
K30X25	bawah	2300	2500	1047,97	275,52	415,9	11626,44	-1945,09	-812,9	-9155,65	95,16
K30X25	atas		200	1478,36	365,81	487,94	12067,89	2847,81	-1109,81	-5698,59	221,81
K30X25	bawah	2900	3100	1478,36	365,81	487,94	12067,89	2847,81	-1109,81	-5698,59	221,81
K30X25	atas		250	1394,94	253,38	334,24	12232,54	-3112,2	-1195,78	-9832,26	445,75
K30X25	bawah	3550	3800	1394,94	253,38	334,24	12232,54	-3112,2	-1195,78	-9832,26	445,75
IK50X50	atas		150	-26617,2	-2317,85	-4663,02	-1638,02	14226,76	-3660,35	-20426,38	-695,13
IK50X50	bawah	340	490	-26617,2	-2317,85	-4663,02	-1638,02	14226,76	-3660,35	-20426,38	-695,13
IK50X50	atas		350	39711,89	7224,76	3555,03	47844,33	-6788,63	-3435,04	-91087,62	161,85
IK50X50	bawah	3300	3650	39711,89	7224,76	3555,03	47844,33	-6788,63	-3435,04	-91087,62	161,85

IK50X50	atas	250	13667,32	-250,35	1430,55	17760,74	7756,64	620,82	-25704,56	241,75
IK50X50	bawah	2400	3650	13667,32	-250,35	1430,55	17760,74	7756,64	620,82	-25704,56
IK50X50	atas	250	-15760	-5391,65	1537,65	5321,22	32375,54	15485,26	-24747,77	4528,93
IK50X50	bawah	400	650	-16760	-5391,65	1537,65	5321,22	32375,54	15485,26	-24747,77
IK50X50	atas	250	16074,41	5513,84	799,15	70954,3	23747,99	7331,83	59378,94	1573,32
IK50X50	bawah	2400	3700	16074,41	5513,84	799,15	70954,3	23747,99	7331,83	59378,94
IK50X50	atas	0	-23910,7	-2307,13	9341,59	7017,13	39392,51	8576,9	-5373,24	7736,96
IK50X50	bawah	500	600	-22910,7	-2307,13	9341,59	7017,13	39392,51	8576,9	-5373,24
IK50X50	atas	200	-10372,7	-1565,9	-175,15	20864,68	6345,45	-3143,13	-13373,87	1674,15
IK50X50	bawah	2410	3610	-10372,7	-1565,9	-175,15	20864,68	6345,45	-3143,13	-13373,87
IK50X50	atas	150	-27069,3	-3163,9	4775,65	-521,34	-14528,2	3510,03	-20530,63	922,76
IK50X50	bawah	340	490	-27069,3	-3163,9	4775,65	-521,34	-14528,2	3510,03	-20530,63
IK50X50	atas	350	36194,17	7133,45	3530,37	47997,64	11521,31	3949,65	91107,3	303,01
IK50X50	bawah	3370	3590	36194,17	7133,45	3530,37	47997,64	11521,31	3949,65	91107,3
IK50X50	atas	250	14038	-433,24	1106,39	15153,36	-8544,17	-836,89	-25191,3	-245,63
IK50X50	bawah	3400	2650	14038	-433,24	1106,39	15153,36	-8544,17	-836,89	-25191,3
IK50X50	atas	250	-18026	-6515,9	1515,45	5233,09	-31790,4	-18394,6	-25280,59	-4848,42
IK50X50	bawah	400	650	-18026	-6515,9	1515,45	5233,09	-31790,4	-18394,6	-25280,59
IK50X50	atas	250	16137,32	5391,79	646,3	76857,24	-23339,5	-7360,7	-39355,95	-1906,80
IK50X50	bawah	2400	2750	16137,32	5391,79	646,3	76857,24	-23339,5	-7360,7	-39355,95
IK50X50	atas	0	-20371,4	-1827,53	6460,44	8793,12	70369,9	-9026,29	-5076,66	-7751,75
IK50X50	bawah	600	500	-20371,4	-1827,53	6460,44	8793,12	70369,9	-9026,29	-5076,66
IK50X50	atas	200	-9591,7	-2643,93	79,71	21926,2	-8353,36	3678,33	-13336,77	-1725,52
IK50X50	bawah	2410	2910	-9591,7	-2643,93	79,71	21926,2	-8353,36	3678,33	-13336,77
KB50X45	atas	350	6713,57	2406,43	542,55	39671,1	9090,81	2787,92	23170,26	-1719,41
KB50X45	bawah	1300	3650	6713,57	2406,43	542,55	39671,1	9090,81	2787,92	23170,26
KB50X45	atas	200	-17700	839,11	1212,09	5698,29	9302,06	-1188,04	263,68	1620,62
KB50X45	bawah	2750	2060	-17700	839,11	1212,09	5698,29	9302,06	-1188,04	263,68
KB50X45	atas	200	13667,33	876,47	1050,54	8268,03	12118,22	2885,15	-4908,75	-1374,62
KB50X45	bawah	2750	2060	13667,33	876,47	1050,54	8268,03	12118,22	2885,15	-4908,75
KB50X45	atas	250	-9242	51,24	-298,68	14649,65	10241,91	1305,56	-6298,04	-3067,3
KB50X45	bawah	240	490	-9242	51,24	-298,68	14649,65	10241,91	1305,56	-6298,04
KB50X45	atas	350	-7769,68	-1014,53	2251,44	91099,35	15590,38	3100,88	-29053,56	1332,1
KB50X45	bawah	1300	3650	-7769,68	-1014,53	2251,44	91099,35	15590,38	3100,88	-29053,56
KB50X45	atas	350	10536,58	2683,71	-170,1	61558,33	9644,51	2731,93	-34156,16	-2192,67
KB50X45	bawah	3300	3650	10536,58	2683,71	-170,1	61558,33	9644,51	2731,93	-34156,16
KB50X45	atas	350	-8395,13	-1389,96	1913,06	32796,54	8040,5	2738,25	-25055,87	1735,27
KB50X45	bawah	3100	3650	-8395,13	-1389,96	1913,06	32796,54	8040,5	2738,25	-25055,87
KB50X45	atas	350	-2501,74	-247,1	-1646,07	53032,82	2213,03	1487,32	-32160,86	1746,16
KB50X45	bawah	3300	3650	-2501,74	-247,1	-1646,07	53032,82	2213,03	1487,32	-32160,86
KB50X45	atas	200	-18584,5	-3050,81	-1673,48	17550,19	-2235,93	3170,14	-5014,46	-2043,71
KB50X45	bawah	3750	2960	-18584,5	-3050,81	-1673,48	17550,19	-2235,93	3170,14	-5014,46
KB50X45	atas	350	8933,71	2016,93	267,21	55212,39	9710	3606,49	-57246,46	2952,64
KB50X45	bawah	3600	3650	8933,71	2016,93	267,21	55212,39	9710	3606,49	-57246,46
KB50X45	atas	350	9395,03	1920,89	659,66	35444,58	9033,9	3521,48	-39774,5	2542,02
KB50X45	bawah	3900	3650	9395,03	1920,89	659,66	35444,58	9033,9	3521,48	-39774,5
KB50X45	atas	200	17486,45	8045,59	-2065,33	9963,56	10090,11	4391,59	-18366,43	2610,26
KB50X45	bawah	1750	2960	17486,45	8045,59	-2065,33	9963,56	10090,11	4391,59	-18366,43
KB50X45	atas	250	171,7	-23,24	-510,39	19371,54	2417,04	6999,71	-27675,81	1966,75
KB50X45	bawah	240	490	171,7	-23,24	-510,39	19371,54	2417,04	6999,71	-27675,81
KB50X45	atas	350	-7013,44	-650,26	-1613,76	63662,61	184,85	3674,26	-14620,34	1013,44
KB50X45	bawah	3300	3650	-7013,44	-650,26	-1613,76	63662,61	184,85	3674,26	-14620,34
KB50X45	atas	350	-3594,64	-164,13	-3075,12	42942,9	7011,38	2411,75	-22666,29	1071,97
KB50X45	bawah	3300	3650	-3594,64	-164,13	-3075,12	42942,9	7011,38	2411,75	-22666,29
KB50X45	atas	350	-1125,6	335,42	-2115,21	81531,06	410,11	2787,23	-35158,81	1210,43
KB50X45	bawah	3300	3650	-1125,6	335,42	-2115,21	81531,06	410,11	2787,23	-35158,81
KB50X45	atas	350	36076,7	1073,66	573,19	46042,49	5344,95	1628,63	60109,16	-261,33
KB50X45	bawah	3300	3650	36076,7	1073,66	573,19	46042,49	5344,95	1628,63	60109,16
KB50X45	atas	350	31328,87	10318,26	518,59	31476,19	5305,3	1698,97	42126,78	-363,21
KB50X45	bawah	3300	3650	31328,87	10318,26	518,59	31476,19	5305,3	1698,97	42126,78
KB50X45	atas	200	36060,93	8912,89	723,37	14267,33	4960,9	399,58	-17791	-346,71
KB50X45	bawah	2750	2960	36060,93	8912,89	723,37	14267,33	4960,9	399,58	-17791
KB50X45	atas	250	56903,15	8480,57	-1486,18	20703,17	21007,66	1329,56	-16787,63	-2625,74
KB50X45	bawah	240	490	56903,15	8480,57	-1486,18	20703,17	21007,66	1329,56	-16787,63
KB50X45	atas	350	-41114,7	-12530	-352,48	60479,56	12549,36	1805,47	-39684,47	238,42
KB50X45	bawah	3300	3650	-41114,7	-12530	-352,48	60479,56	12549,36	1805,47	-39684,47
KB50X45	atas	350	-35143,2	-11738,6	-196,64	36666,1	3419,69	-11,65	-40140,49	-998,03
KB50X45	bawah	3300	3650	-35143,2	-11738,6	-196,64	36666,1	3419,69	-11,65	-40140,49
KB50X45	atas	200	-34973	-6301,72	-717,59	16739,26	14976,27	2286,61	-12655,51	-181,07
KB50X45	bawah	2750	2960	-34973	-6301,72	-717,59	16739,26	14976,27	2286,61	-12655,51
KB50X45	atas	250	-54984,3	-7722,01	345,18	12413,63	17023,4	2904,76	-13643,27	1033,91
KB50X45	bawah	240	490	-54984,3	-7722,01	345,18	12413,63	17023,4	2904,76	-13643,27
KB50X45	atas	350	52962,9	14154,24	1623,77	49627,87	-1620,07	-487,74	-53430,2	-824,58
KB50X45	bawah	3300	3650	52962,9	14154,24	1623,77	49627,87	-1620,07	-487,74	-53430,2
KB50X45	atas	350	53204,78	16521,63	717,29	33582,34	-150,16	-860,28	-41561,36	-361,9
KB50X45	bawah	3300	3650	53204,78	16521,63	717,29	33582,34	-150,16	-860,28	-41561,36
KB50X45	atas	250	31275,62	3339,15	1256,59	11159,84	-2670,29	1196,22	-11545,43	-899,93
KB50X45	bawah	3400	3650	31275,62	3339,15	1256,59	11159,84	-2670,29	1196,22	-11545,43
KB50X45	atas	350	-55515	-15124,1	-134,5	47418,22	1242,52	997,42	-47108,4	689,38
KB50X45	bawah	3300	3650	-55515	-15124,1	-134,5	47418,22	1242,52	997,42	-47108,4

KB50X45	atas		350	-57874,5	-18051	-118,92	32121,24	-1532,58	-1055,46	-45569,55	-1748,44
KB50X45	bawah	3300	3650	-57874,5	-18051	-118,92	32121,24	-1532,58	-1055,46	-45569,55	-1748,44
KB50X45	atas		350	-37377,1	-3071,76	-48,74	9473,69	-2419,93	-387,61	-17631,69	-678,32
KB50X45	bawah	2400	3750	-37377,1	-3071,76	-48,74	9473,69	-2419,93	-387,61	-17631,69	-678,32
KB50X45	atas		350	31565,35	17877,04	-558,45	55727,22	-4515,35	-1710,08	-59771,21	-703,48
KB50X45	bawah	3300	3650	31565,35	17877,04	-558,45	55727,22	-4515,35	-1710,08	-59771,21	-703,48
KB50X45	atas		350	60123,59	19789,44	-1105,67	38726,05	-5751,44	-2338,04	-40242,95	-765,16
KB50X45	bawah	3300	3650	60123,59	19789,44	-1105,67	38726,05	-5751,44	-2338,04	-40242,95	-765,16
KB50X45	atas		350	41808,9	6638,04	-89,85	14131,94	-7225,02	-2017,66	-11650,55	-590,31
KB50X45	bawah	3400	3650	41808,9	6638,04	-89,85	14131,94	-7225,02	-2017,66	-11650,55	-590,31
KB50X45	atas		350	38576,9	-14719,5	2431,63	43379	55,17	-115,19	-47594,56	-59,09
KB50X45	bawah	3300	3650	38576,9	-14719,5	2431,63	43379	55,17	-115,19	-47594,56	-59,09
KB50X45	atas		350	-49251	-16507	2410,95	31213,93	-8238,79	-2919,32	-51069,65	-592,45
KB50X45	bawah	3300	3650	-49251	-16507	2410,95	31213,93	-8238,79	-2919,32	-51069,65	-592,45
KB50X45	atas		350	-36812,6	-5084,41	327,51	9519,51	-1523,46	38,9	-17835,79	-96,48
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KB50X45	atas		350	52811,83	17908,32	607,45	56308,8	5503,6	2135,24	-56789,1	1114,37
KB50X45	bawah	2300	3650	52811,83	17908,32	607,45	56308,8	5503,6	2135,24	-56789,1	1114,37
KB50X45	atas		350	54197,36	19315,82	1138,06	59072,96	6959,25	2536,42	-40232,61	1006,77
KB50X45	bawah	3200	3650	54197,36	19315,82	1138,06	59072,96	6959,25	2536,42	-40232,61	1006,77
KB50X45	atas		350	33943,34	3545,77	148,03	14517,55	-4868,79	1933,38	-11700,43	615,24
KB50X45	bawah	3400	3650	33943,34	3545,77	148,03	14517,55	-4868,79	1933,38	-11700,43	615,24
KB50X45	atas		350	-39331,7	-14145,9	-2387,98	-42735,39	538,58	195,94	-47675,36	-300,67
KB50X45	bawah	3500	3650	-39331,7	-14145,9	-2387,98	-42735,39	538,58	195,94	-47675,36	-300,67
KB50X45	atas		350	-42753,4	-16500,5	-2376,77	31500,11	6634,33	3312,28	-51071,77	-285,53
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KB50X45	atas		350	-33832,4	-5051,23	-230,39	10018,82	-551,06	-116,03	-17852,71	26,32
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KB50X45	atas		350	53378,83	14371,14	-1637,86	50811,95	2969,99	954,84	-59442,25	1267,09
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KB50X45	atas		350	-54843,7	-14909,1	251,85	48354,29	-1533,07	-634,67	-47091,17	568,88
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KB50X45	atas		350	-51181,2	-17399,3	10,94	53025,24	4901,51	1755,47	-45993,36	1649,05
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KB50X45	atas		350	38287,44	10445,35	-835,8	45536,21	-3002,74	-308,55	-59876,09	1038,17
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KB50X45	atas		350	31562,57	10339,88	-834,64	32670,99	-3100,68	1154,52	-41857,54	1015,31
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KB50X45	atas		200	36032,93	9077,13	-895,26	15321,65	-2458,37	117,81	-17899,47	1173,6
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KB50X45	atas		350	-59574,7	-22200,8	278,22	68766,91	-739,42	-948,5	-66793,68	-339,69
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KB50X45	atas		350	-37591,7	-12175	507,49	37587,31	-2627,24	267,11	-39499,24	496,99
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KB50X45	atas		200	-35309,9	-9485,22	1065	15229,13	-14718,1	-2156,26	-12229,18	-57,15
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KB50X45	atas		350	17190,57	4932,85	-1831,9	78731,74	587,88	-85,03	-75667,23	687,51
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KB50X45	atas		350	2210,1	-492,28	-686,42	54840,03	-1823,84	-1197,19	-56290,58	521,05
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KB50X45	atas		350	2532,9	-637,51	-1089,06	34557,15	-3207,09	-1155,02	-36526,81	125,85
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KB50X45	atas		350	-4610,37	342,15	1537,13	67483,75	424,38	-3641,57	-14571,96	-1137,12
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KB50X45	atas		350	13102,2	2744,9	1118,51	84012,85	-15942,8	-4765,71	-31470,07	-864,97
KB50X45	bawah	3300	3650	13102,2	2744,9	1118,51	84012,85	-15942,8	-4765,71	-31470,07	-864,97
KB50X45	atas		350	10970,46	2547,8	512,24	40269,45	-15002,2	-5098,9	-22426,77	-871,09
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KB50X45	atas		200	17755,65	1024,76	183,79	5405,59	-22196,3	-4822,78	-6340,03	-1291,91
KB50X45	bawah	2750	2950	17755,65	1024,76	183,79	5405,59	-22196,3	-4822,78	-6340,03	-1291,91
KB50X45	atas		350	-6655,85	-582,19	-1578,05	53435,29	-15637,3	-3330,92	-28925,62	-1675,4
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3KB45X45	atas		200	2155,66	237,82	-5636,25	16039,12	16130,1	4100,12	-14712,67	3115,2
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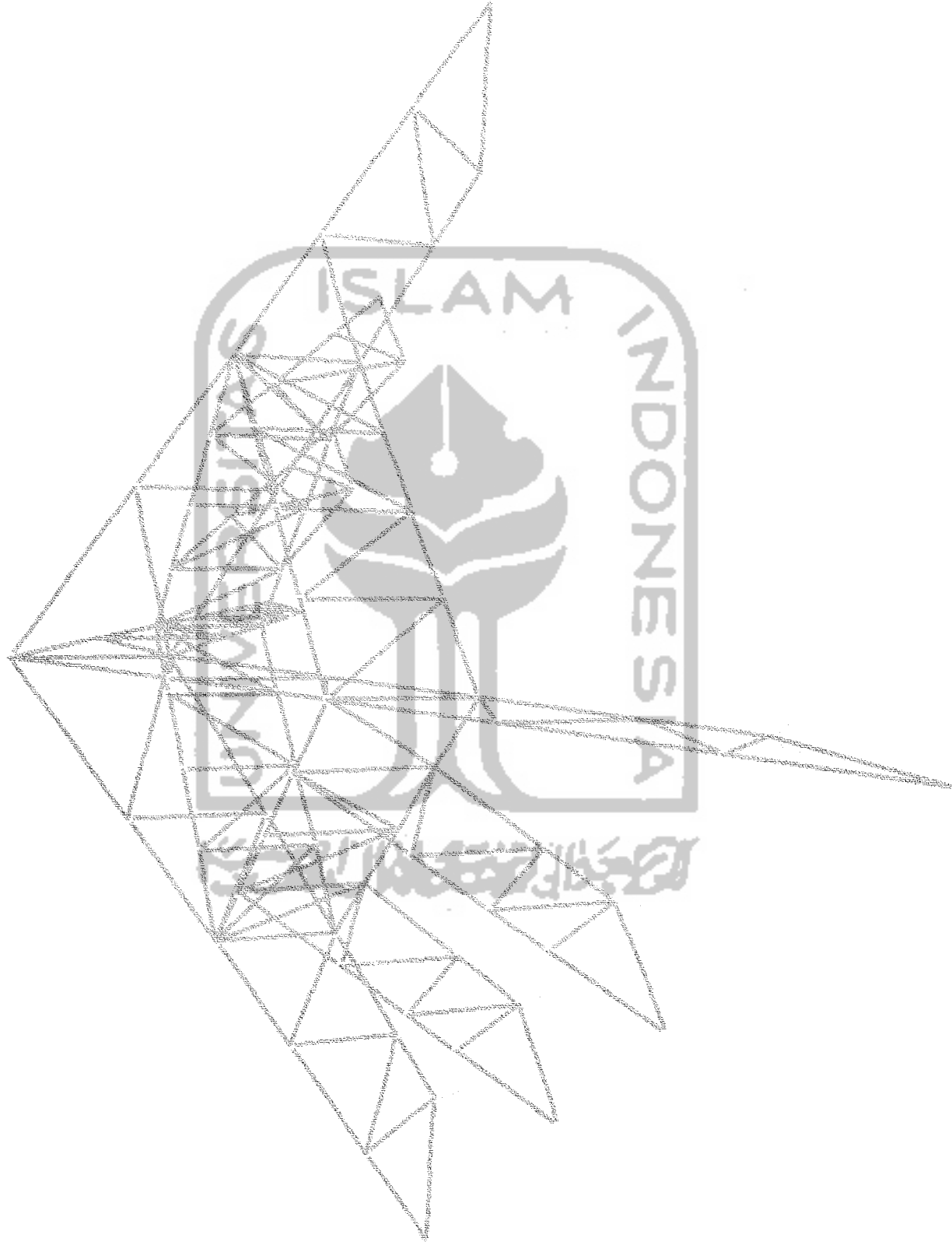
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4KB30X30	atas		250	4421,2	272,38	-412,72	12383,3	-99,09	529,99	-11410,95	-253,9
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4KB30X30	atas		250	2651	-119,61	1404,51	13143,65	636,04	-536,91	-12626,59	-1013,77
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4KB30X30	atas		250	-158,37	-334,34	1510,54	7485,82	-2074,85	-691,59	-9903,59	-439,25
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4KB30X30	atas		250	-54313,2	-3265,4	802,4	-1525,03	-11130,2	1036,5	5017,73	316,03
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4KB30X30	atas		200	55444,23	2624,2	-1496,8	1367,53	10800,87	1251,49	-3196,26	74,03
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4KB30X30	atas		250	-35732,5	-4216,42	-340,32	-3389,31	8296,69	595,3	516,83	-1978,67
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4KB30X30	atas		200	39490,2	8843,42	220,57	3149,04	-5842,09	320,84	-1270,09	1548,7
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4KB30X30	atas		200	-20337,2	-2148,75	-742,89	679,49	-2756,15	-574,39	2683,97	-1593,72
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4KB30X30	atas		200	22762,63	3765,07	1237,46	9499,66	-3700,06	-511,09	2814,27	1736,07
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4KB30X30	atas		200	37308,32	5857,61	-250,33	3284,1	5542,14	-445,28	-735,86	-1547,20
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K30X25	atas		200	1637,55	414,08	140,85	10510,63	1809,98	455,33	-7376,64	-195,2
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K30X25	atas		250	1763,02	375,14	147,38	5407,92	2221,95	583,74	-4532,83	-25,29
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K30X25	atas		250	1106,6	290,76	147,08	2139,04	1873,51	508,9	-1405,54	-27,45
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K30X25	atas		350	1869,55	540,57	-863,09	18761,54	1727,21	623,22	-5791,94	-95,05
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K30X25	atas		250	-63,2	-87,84	-276,42	366,21	3651,63	1271,83	-2772,71	609,47
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K30X25	atas		250	256,8	231,04	-540,18	9853,66	1306,19	498,4	-13983,19	230,1
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K30X25	atas		250	1264,93	115,61	-451,61	9136,34	3033,93	1305,89	-10684,85	1295,16
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K30X25	atas		250	66,01	155,54	-370,85	5172,04	1196,57	500,43	-9193,2	211,07
K30X25	bawah	3500	3750	66,01	155,54	-370,85	5172,04	1196,57	500,43	-9193,2	211,07

K30X25	atas		250	3907,3	513,86	530,63	10387,41	-1512,7	-592,54	-2713,33	-639,54
K30X25	bawah	3500	3750	3907,3	513,86	530,63	10387,41	-1512,7	-592,94	-2713,33	-639,54
K30X25	atas		250	3632,25	534,64	455,66	6157,47	-1655,29	-573,23	-2606,36	-261,59
K30X25	bawah	3500	3750	3632,25	534,64	455,66	6157,47	-1655,29	-573,23	-2606,36	-261,59
K30X25	atas		250	2926	455,34	376,11	2951,65	-3030,11	-343,4	-3439,42	-213,13
K30X25	bawah	3500	3750	2926	455,34	376,11	2951,65	-3030,11	-343,4	-3439,42	-213,13
K30X25	atas		250	3291,41	524,76	-136,38	6350,4	-185,29	-93,63	-13183,29	141,86
K30X25	bawah	3500	3750	3291,41	524,76	-136,38	6350,4	-185,29	-93,63	-13183,29	141,86
K30X25	atas		250	4055,11	592,54	103,04	5390,44	-2,95	-48,2	-8771,9	87,14
K30X25	bawah	3500	3750	4055,11	592,54	103,04	5390,44	-2,95	-48,2	-8771,9	87,14
K30X25	atas		250	390,36	-289,72	-26,13	1663,38	3389,3	479,75	-3939,72	225,76
K30X25	bawah	3500	3750	390,36	-289,72	-26,13	1663,38	3389,3	479,75	-3939,72	225,76
K30X25	atas		250	3165,1	499,07	142,72	6414,38	720,15	231,67	-13189,26	23,12
K30X25	bawah	3500	3750	3165,1	499,07	142,72	6414,38	720,15	231,67	-13189,26	23,12
K30X25	atas		250	3934,61	579,07	-99,15	5401,52	229,33	108,5	-3770,81	-19,13
K30X25	bawah	3500	3750	3934,61	579,07	-99,15	5401,52	229,33	108,5	-3770,81	-19,13
K30X35	atas		250	513,65	-228,3	3,2	1921,46	-3304,02	-457,54	-3883,62	-294,61
K30X35	bawah	3500	3750	513,65	-228,3	3,2	1921,46	-3304,02	-457,54	-3883,62	-294,61
K30X35	atas		250	3714,01	937,16	-523,45	10450,85	1889,71	600,63	-9719,11	766,55
K30X35	bawah	3500	3750	3714,01	937,16	-523,45	10450,85	1889,71	600,63	-9719,11	766,55
K30X35	atas		250	3552,72	983,2	-460,63	8223,76	1807,56	610,13	-8803,39	337,87
K30X35	bawah	3500	3750	3552,72	983,2	-460,63	8223,76	1807,56	610,13	-8803,39	337,87
K30X35	atas		250	3155,06	483,93	3045,66	3109,33	357,08	-3440,85	228,85	
K30X35	bawah	3500	3750	3155,06	483,93	3045,66	3109,33	357,08	-3440,85	228,85	
K30X35	atas		250	1501,85	162,55	310,43	10971,83	-5569,63	-2030,84	-6103,2	-1358,83
K30X35	bawah	3500	3750	1501,85	162,55	310,43	10971,83	-5569,63	-2030,84	-6103,2	-1358,83
K30X35	atas		250	1527,33	74,54	281,27	6734,36	-5802,9	-2051,72	-4204,96	-760,54
K30X35	bawah	3500	3750	1527,33	74,54	281,27	6734,36	-5802,9	-2051,72	-4204,96	-760,54
K30X35	atas		250	1191,48	30,34	232,85	2350,6	-6812,57	-2390,89	-1796,15	-755,46
K30X35	bawah	3500	3750	1191,48	30,34	232,85	2350,6	-6812,57	-2390,89	-1796,15	-755,46
6K30X50	atas		250	28390,84	9757,93	680,86	103700,1	-13516,9	-5397,07	-94669,14	-435,17
6K30X50	bawah	400	650	28390,84	9757,93	680,86	103700,1	-13516,9	-5397,07	-94669,14	-435,17
6K30X50	atas		350	10760,08	3920,54	651,22	42630,09	20005,75	1528,71	-81192,17	513,83
6K30X50	bawah	2400	2750	10760,08	3920,54	651,22	42630,09	20005,75	1528,71	-81192,17	513,83
6K30X50	atas		250	46740,23	17011,83	8136,06	76441,79	40555,53	4112,61	-26078,01	2406,64
6K30X50	bawah	400	650	46740,23	17011,83	8136,06	76441,79	40555,53	4112,61	-26078,01	2406,64
6K30X50	atas		350	12084,22	4979,7	1419,04	29387,88	19374,79	214,93	-24060,15	-1053,12
6K30X50	bawah	2400	2750	12084,22	4979,7	1419,04	29387,88	19374,79	214,93	-24060,15	-1053,12
6K30X50	atas		200	-42,25	881,11	1226,31	13907,87	1579,17	-1375,77	-7945,79	1048,61
6K30X50	bawah	2750	2960	-42,25	881,11	1226,31	13907,87	1579,17	-1375,77	-7945,79	1048,61
6K30X50	atas		250	6856,55	1272,94	-238,43	41524,9	-2893,27	-718,65	-7229,35	-944,55
6K30X50	bawah	240	490	6856,55	1272,94	-238,43	41524,9	-2893,27	-718,65	-7229,35	-944,55
6K30X50	atas		250	29903,37	10155,22	-839,93	104418,4	9322,47	4371,93	-84203,08	-526,01
6K30X50	bawah	400	650	29903,37	10155,22	-839,93	104418,4	9322,47	4371,93	-84203,08	-526,01
6K30X50	atas		350	10071,88	3768,84	-628,01	42914,53	-16871,1	-925,24	-81217,6	-302,12
6K30X50	bawah	2400	2750	10071,88	3768,84	-628,01	42914,53	-16871,1	-925,24	-81217,6	-302,12
6K30X50	atas		250	46444,96	17526,03	-8150,13	76550,65	-40605,6	-4101,57	-25760,83	-2366,69
6K30X50	bawah	400	650	46444,96	17526,03	-8150,13	76550,65	-40605,6	-4101,57	-25760,83	-2366,69
6K30X50	atas		350	12721,65	4931,03	-1414,07	29458,93	-18853,6	-55,99	-24251,48	1211,57
6K30X50	bawah	2400	2750	12721,65	4931,03	-1414,07	29458,93	-18853,6	-55,99	-24251,48	1211,57
6K30X50	atas		200	171,45	952,54	-1260,03	14151,58	-1983,96	1860,77	-7780,23	-1159,77
6K30X50	bawah	2750	2960	171,45	952,54	-1260,03	14151,58	-1983,96	1860,77	-7780,23	-1159,77
6K30X50	atas		250	7667,26	1396,77	151,27	41650,4	2689,33	704,81	-8210,11	874,21
6K30X50	bawah	240	490	7667,26	1396,77	151,27	41650,4	2689,33	704,81	-8210,11	874,21

Keterangan Lampiran Gaya Geser Balok

1. Kolom yang ditinjau
2. Letak yang ditinjau
3. In = panjang bersih kolom
4. Lokasi yang ditinjau
5. VD = Gaya geser kolom akibat beban mati sejajar sb-y
6. VL = Gaya geser kolom akibat beban hidup sejajar sb-y

7. Veksa = Gaya geser kolom akibat beban gempa kanan sejajar sb-y
8. Veksi = Gaya geser kolom akibat beban gempa kiri sejajar sb-y
9. VD = Gaya geser kolom akibat beban mati sejajar sb-x
10. VL = Gaya geser kolom akibat beban hidup sejajar sb-x
11. Veksa = Gaya geser kolom akibat beban gempa kanan sejajar sb-x
12. Veksi = Gaya geser kolom akibat beban gempa kiri sejajar sb-x



SAP2000 v7.42 File: KUDA-KUDA IREV Hgt-m Units PAGE 1
10/04/03 23:00:01

SOONY & Sohe. Engineer
Kampus D3 Ekonomi UII Block B

STATI C L O A D C A S E S

STATIC CASE	CASE TYPE	SELF WT FACTOR
DL	DEAD	1,0000
LL	LIVE	0,0000
WL	WIND	0,0000
WR	WIND	0,0000

SAP2000 v7.42 File: KUDA-KUDA IREV Hgt-m Units PAGE 2
10/04/03 23:00:01

SOONY & Sohe. Engineer
Kampus D3 Ekonomi UII Block B

J O I N T F O R C E S Load Case DL

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-XX	GLOBAL-YY	GLOBAL-ZZ
71	0,000	0,000	-223,318	0,000	0,000	0,000
67	0,000	0,000	-223,318	0,000	0,000	0,000
70	0,000	0,000	-223,318	0,000	0,000	0,000
66	0,000	0,000	-223,318	0,000	0,000	0,000
12	0,000	0,000	-304,079	0,000	0,000	0,000
8	0,000	0,000	-304,079	0,000	0,000	0,000
9	0,000	0,000	-304,079	0,000	0,000	0,000
5	0,000	0,000	-304,079	0,000	0,000	0,000
28	0,000	0,000	-329,368	0,000	0,000	0,000
26	0,000	0,000	-329,368	0,000	0,000	0,000
27	0,000	0,000	-329,368	0,000	0,000	0,000
35	0,000	0,000	-329,368	0,000	0,000	0,000
54	0,000	0,000	-281,134	0,000	0,000	0,000
52	0,000	0,000	-281,134	0,000	0,000	0,000
53	0,000	0,000	-281,134	0,000	0,000	0,000
51	0,000	0,000	-281,134	0,000	0,000	0,000
18	0,000	0,000	-279,912	0,000	0,000	0,000
2	0,000	0,000	-279,912	0,000	0,000	0,000
15	0,000	0,000	-279,912	0,000	0,000	0,000
1	0,000	0,000	-279,912	0,000	0,000	0,000
73	0,000	0,000	-509,858	0,000	0,000	0,000
75	0,000	0,000	-509,858	0,000	0,000	0,000
62	0,000	0,000	-509,858	0,000	0,000	0,000
64	0,000	0,000	-509,858	0,000	0,000	0,000
30	0,000	0,000	-299,083	0,000	0,000	0,000
14	0,000	0,000	-299,083	0,000	0,000	0,000
29	0,000	0,000	-299,083	0,000	0,000	0,000
23	0,000	0,000	-299,083	0,000	0,000	0,000
56	0,000	0,000	-243,321	0,000	0,000	0,000
50	0,000	0,000	-243,321	0,000	0,000	0,000
55	0,000	0,000	-243,321	0,000	0,000	0,000
49	0,000	0,000	-243,321	0,000	0,000	0,000
76	0,000	0,000	-188,546	0,000	0,000	0,000
65	0,000	0,000	-188,546	0,000	0,000	0,000
72	0,000	0,000	-188,546	0,000	0,000	0,000
61	0,000	0,000	-188,546	0,000	0,000	0,000
61	0,000	0,000	-656,697	0,000	0,000	0,000
79	0,000	0,000	-656,697	0,000	0,000	0,000
80	0,000	0,000	-656,697	0,000	0,000	0,000
78	0,000	0,000	-656,697	0,000	0,000	0,000
82	0,000	0,000	-86,472	0,000	0,000	0,000

SAP2000 v7.42 File: KUDA-KUDA IREV Hgt-m Units PAGE 3
10/04/03 23:00:01

SOONY & Sohe. Engineer
Kampus D3 Ekonomi UII Block B

J O I N T F O R C E S Load Case LL

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-XX	GLOBAL-YY	GLOBAL-ZZ
82	0,000	0,000	-100,000	0,000	0,000	0,000
81	0,000	0,000	-100,000	0,000	0,000	0,000
76	0,000	0,000	-100,000	0,000	0,000	0,000

57	0,000	0,000	-100,000	0,000	0,000	0,000
16	0,000	0,000	-100,000	0,000	0,000	0,000
10	0,000	0,000	-100,000	0,000	0,000	0,000
12	0,000	0,000	-100,000	0,000	0,000	0,000
48	0,000	0,000	-100,000	0,000	0,000	0,000
59	0,000	0,000	-100,000	0,000	0,000	0,000
71	0,000	0,000	-100,000	0,000	0,000	0,000
99	0,000	0,000	-100,000	0,000	0,000	0,000
65	0,000	0,000	-100,000	0,000	0,000	0,000
50	0,000	0,000	-100,000	0,000	0,000	0,000
23	0,000	0,000	-100,000	0,000	0,000	0,000
2	0,000	0,000	-100,000	0,000	0,000	0,000
8	0,000	0,000	-100,000	0,000	0,000	0,000
32	0,000	0,000	-100,000	0,000	0,000	0,000
16	0,000	0,000	-100,000	0,000	0,000	0,000
67	0,000	0,000	-100,000	0,000	0,000	0,000
60	0,000	0,000	-100,000	0,000	0,000	0,000
72	0,000	0,000	-100,000	0,000	0,000	0,000
55	0,000	0,000	-100,000	0,000	0,000	0,000
39	0,000	0,000	-100,000	0,000	0,000	0,000
15	0,000	0,000	-100,000	0,000	0,000	0,000
9	0,000	0,000	-100,000	0,000	0,000	0,000
53	0,000	0,000	-100,000	0,000	0,000	0,000
27	0,000	0,000	-100,000	0,000	0,000	0,000
70	0,000	0,000	-100,000	0,000	0,000	0,000
78	0,000	0,000	-100,000	0,000	0,000	0,000
61	0,000	0,000	-100,000	0,000	0,000	0,000
49	0,000	0,000	-100,000	0,000	0,000	0,000
23	0,000	0,000	-100,000	0,000	0,000	0,000
1	0,000	0,000	-100,000	0,000	0,000	0,000
5	0,000	0,000	-100,000	0,000	0,000	0,000
51	0,000	0,000	-100,000	0,000	0,000	0,000
25	0,000	0,000	-100,000	0,000	0,000	0,000
66	0,000	0,000	-100,000	0,000	0,000	0,000
73	0,000	0,000	-100,000	0,000	0,000	0,000
75	0,000	0,000	-100,000	0,000	0,000	0,000
62	0,000	0,000	-100,000	0,000	0,000	0,000
64	0,000	0,000	-100,000	0,000	0,000	0,000
32	0,000	0,000	-100,000	0,000	0,000	0,000
31	0,000	0,000	-100,000	0,000	0,000	0,000

KAP2080 v7.42 File: KUDA-KUDA IREV Kuda-m Units PAGE 4
10/24/03 23:00:01

©Sony & Ocha. Engineer
Kampus D3 Ekonomika Uti Eлект B

P O I N T F O R C E S Load Case WL

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-MX	GLOBAL-MY	GLOBAL-MZ
82	-16,070	0,000	-2,010	0,000	0,000	0,000
81	-122,400	0,000	-122,400	0,000	0,000	0,000
76	-23,700	0,000	-23,700	0,000	0,000	0,000
56	-42,430	0,000	-42,430	0,000	0,000	0,000
16	-58,970	0,000	-58,970	0,000	0,000	0,000
30	-59,400	0,000	-59,400	0,000	0,000	0,000
12	-93,550	0,000	-93,550	0,000	0,000	0,000
20	-89,100	0,000	-89,100	0,000	0,000	0,000
54	-89,100	0,000	-89,100	0,000	0,000	0,000
71	-70,850	0,000	-70,850	0,000	0,000	0,000
79	-122,400	0,000	-122,400	0,000	0,000	0,000
63	-23,700	0,000	-23,700	0,000	0,000	0,000
52	-42,430	0,000	-42,430	0,000	0,000	0,000
24	-59,400	0,000	-59,400	0,000	0,000	0,000
1	-58,970	0,000	-58,970	0,000	0,000	0,000
8	-93,550	0,000	-93,550	0,000	0,000	0,000
52	-89,100	0,000	-89,100	0,000	0,000	0,000
36	-89,100	0,000	-89,100	0,000	0,000	0,000
67	-70,850	0,000	-70,850	0,000	0,000	0,000
80	-97,920	0,000	-97,920	0,000	0,000	0,000
72	-19,000	0,000	-19,000	0,000	0,000	0,000
55	-33,950	0,000	-33,950	0,000	0,000	0,000
29	-47,520	0,000	-47,520	0,000	0,000	0,000
15	-47,180	0,000	-47,180	0,000	0,000	0,000
9	-74,640	0,000	-74,640	0,000	0,000	0,000
53	-71,260	0,000	-71,260	0,000	0,000	0,000
27	-71,260	0,000	-71,260	0,000	0,000	0,000
70	-56,680	0,000	-56,680	0,000	0,000	0,000
78	-97,920	0,000	-97,920	0,000	0,000	0,000
61	-19,000	0,000	-19,000	0,000	0,000	0,000

49	-68,950	0,000	93,950	0,000	0,000	0,000
33	-47,520	0,000	47,520	0,000	0,000	0,000
1	-47,180	0,000	47,180	0,000	0,000	0,000
5	-74,840	0,000	74,840	0,000	0,000	0,000
51	-71,280	0,000	71,280	0,000	0,000	0,000
13	-71,280	0,000	71,280	0,000	0,000	0,000
66	-56,680	0,000	56,680	0,000	0,000	0,000

SAP2000 v7.41 File: KUDA-KUDA IREN Kufin Unika PAGE 5
13/04/03 13:00:01

Story : Deck, Engineer
Kampus D3 Ekonomi VII Block E

C O I N T F O R C E S Load Case WB

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-MX	GLOBAL-MY	GLOBAL-MZ
82	16,070	0,000	-2,010	0,000	0,000	0,000
80	132,400	0,000	-123,400	0,000	0,000	0,000
72	23,700	0,000	-23,700	0,000	0,000	0,000
55	42,410	0,000	-42,410	0,000	0,000	0,000
29	59,400	0,000	-59,400	0,000	0,000	0,000
15	58,970	0,000	-58,970	0,000	0,000	0,000
9	83,550	0,000	-83,550	0,000	0,000	0,000
53	89,100	0,000	-89,100	0,000	0,000	0,000
27	103,950	0,000	-103,950	0,000	0,000	0,000
70	70,850	0,000	-70,850	0,000	0,000	0,000
28	122,400	0,000	-122,400	0,000	0,000	0,000
61	23,700	0,000	-23,700	0,000	0,000	0,000
49	42,410	0,000	-42,410	0,000	0,000	0,000
23	59,400	0,000	-59,400	0,000	0,000	0,000
1	58,970	0,000	-58,970	0,000	0,000	0,000
5	83,550	0,000	-83,550	0,000	0,000	0,000
51	89,100	0,000	-89,100	0,000	0,000	0,000
25	103,950	0,000	-103,950	0,000	0,000	0,000
66	70,850	0,000	-70,850	0,000	0,000	0,000
61	122,400	0,000	-122,400	0,000	0,000	0,000
79	122,400	0,000	-122,400	0,000	0,000	0,000
76	19,000	0,000	-19,000	0,000	0,000	0,000
65	19,000	0,000	-19,000	0,000	0,000	0,000
71	56,680	0,000	-56,680	0,000	0,000	0,000
67	56,680	0,000	-56,680	0,000	0,000	0,000
56	33,930	0,000	-33,930	0,000	0,000	0,000
90	33,930	0,000	-33,930	0,000	0,000	0,000
54	71,280	0,000	-71,280	0,000	0,000	0,000
52	71,280	0,000	-71,280	0,000	0,000	0,000
30	47,520	0,000	-47,520	0,000	0,000	0,000
24	47,520	0,000	-47,520	0,000	0,000	0,000
28	83,160	0,000	-83,160	0,000	0,000	0,000
26	83,160	0,000	-83,160	0,000	0,000	0,000
16	47,180	0,000	-47,180	0,000	0,000	0,000
3	47,180	0,000	-47,180	0,000	0,000	0,000
12	74,840	0,000	-74,840	0,000	0,000	0,000
8	74,840	0,000	-74,840	0,000	0,000	0,000

SAP2000 V7.41 File: KUDA-KUDA IREV N-nam Units PAGE 1
10/22/03 21:18:45

Shony & Cohe. Engineer
Kampus D3 Ekonomi HIT Block B

LOAD COMBINATION MULTIPLE CASES

CASE	TYPE	CASE	FACTOR	TYPE	TITLE
DSTL1	ADD	DL	1,0000	STATIC (DEAD)	DSTL1
DSTL2	ADD	DL	1,0000	STATIC (DEAD)	DSTL2
		LL	1,0000	STATIC (LIVE)	
DSTL3	ADD	DL	1,0000	STATIC (DEAD)	DSTL3
		LL	0,5000	STATIC (LIVE)	
		WL	1,0000	STATIC (WIND)	
DSTL4	ADD	DL	1,0000	STATIC (DEAD)	DSTL4
		LL	0,5000	STATIC (LIVE)	
		WR	-1,0000	STATIC (WIND)	
DSTL5	ADD	DL	1,0000	STATIC (DEAD)	DSTL5
		LL	0,5000	STATIC (LIVE)	
		WR	1,0000	STATIC (WIND)	
DSTL6	ADD	DL	1,0000	STATIC (DEAD)	DSTL6
		LL	0,5000	STATIC (LIVE)	
		WR	-1,0000	STATIC (WIND)	
DSTL7	ADD	DL	0,9000	STATIC (DEAD)	DSTL7
		WL	1,0000	STATIC (WIND)	
DSTL8	ADD	DL	0,9000	STATIC (DEAD)	DSTL8
		WR	-1,0000	STATIC (WIND)	
DSTL9	ADD	DL	0,9000	STATIC (DEAD)	DSTL9
		WR	1,0000	STATIC (WIND)	
DSTL10	ADD	DL	0,9000	STATIC (DEAD)	DSTL10
		WR	-1,0000	STATIC (WIND)	
COMB1	ADD	DL	1,0000	STATIC (DEAD)	COMB1
COMB2	ADD	DL	1,0000	STATIC (LIVE)	COMB2

SAP2000 V7.42 File: KUDA-KUDA IREV N-nam Units PAGE 3
10/22/03 21:18:47

Shony & Cohe. Engineer
Kampus D3 Ekonomi HIT Block B

FRAME ELEMENT FORCES

FRAME	LOAD	LOC	P	QX	QY	T	MZ	M3
GA1	Minima		-1102,81	-42,19	-5,161E-01	0,00	-968,59	-72214,20
		WR		DSTL3	WL	COMB2	DSTL5	DSTL3
GA1	Maxima		7855,30	131,31	1,37	0,00	968,59	51572,01
		DSTL3		DSTL3	DSTL5	COMB2	DSTL5	DSTL3
GA2	Minima		-1102,87	-42,18	-1,53	0,00	-1079,86	-72201,33
		WR		DSTL3	DSTL4	COMB2	DSTL4	DSTL3
GA2	Maxima		7855,36	131,31	6,612E-01	0,00	1079,86	51572,04
		DSTL3		DSTL3	WL	COMB2	DSTL4	DSTL3
GA3	Minima		-742,45	-125,41	-1,77	0,00	-2310,12	-204045,69
		WR		WR	WL	COMB2	DSTL5	DSTL3
GA3	Maxima		10150,38	606,16	7,08	0,00	2310,12	204080,04
		DSTL2		DSTL3	DSTL5	COMB2	DSTL5	DSTL3
GA4	Minima		-742,55	-125,50	-8,23	0,00	-2310,16	-204023,77

GA4	Máxima	WR	WL	DSTL4	COMB2	DSTL4	DSTL3
		10190,74 DSTL2	606,10 DSTL3	7,54 WL	0,00 COMB1	0910,14 DSTL4	204058,19 DSTL3
GA5	Mínima	-805,30 WR	-71,00 WR	-2,99 WL	0,00 COMB2	-4887,51 DSTL3	-179760,00 DSTL3
GA5	Máxima	3037,17 DSTL3	384,47 DSTL3	3,46 DSTL3	0,00 COMB2	4207,51 DSTL3	189649,90 DSTL3
GA6	Mínima	-805,51 WR	-71,07 WR	-10,73 DSTL3	0,00 COMB2	-5285,09 DSTL3	-179793,50 DSTL3
GA6	Máxima	3688,59 DSTL3	383,63 DSTL3	4,13 WL	0,00 COMB2	5235,09 DSTL3	189638,34 DSTL3
GA7	Mínima	-2000,16 DSTL4	-27,57 WR	-9,84 DSTL3	0,00 COMB2	-8599,53 DSTL3	-110209,94 DSTL3
GA7	Máxima	630,51 WL	103,78 DSTL3	11,05 DSTL3	0,00 COMB2	8139,53 DSTL3	88268,38 DSTL3
GA8	Mínima	-8061,30 DSTL4	-27,59 WR	-10,43 DSTL3	0,00 COMB2	-8194,09 DSTL3	-110179,92 DSTL3
GA8	Máxima	632,68 WL	103,75 DSTL3	3,30 DSTL3	0,00 COMB2	8194,09 DSTL3	88148,38 DSTL3
GB1	Mínima	-6977,73 DSTL3	-139,75 DSTL3	-1,37 DSTL3	0,00 COMB2	-1027,53 DSTL3	-71222,15 DSTL3
GB1	Máxima	1504,41 WR	65,38 DSTL4	5,151E-01 WL	0,00 COMB2	1027,53 DSTL3	38993,33 DSTL3
GB2	Mínima	-6977,73 DSTL3	-139,73 DSTL3	-2,613E-01 WL	0,00 COMB2	-1145,64 DSTL4	-71209,94 DSTL3
GB2	Máxima	1534,48 WR	65,45 DSTL4	1,43 DSTL4	0,00 COMB2	1145,64 DSTL4	38971,31 DSTL3
GB3	Mínima	-12046,31 DSTL2	-73,08 WL	-6,81 WL	0,00 COMB2	-7391,38 DSTL4	-172597,47 DSTL3
GB3	Máxima	679,39 WL	388,87 DSTL3	15,60 DSTL4	0,00 COMB2	7891,38 DSTL3	162939,29 DSTL3
GB4	Mínima	-12040,05 DSTL2	-73,18 WR	-17,13 DSTL4	0,00 COMB2	-8018,25 DSTL4	-172589,49 DSTL3
GB4	Máxima	683,36 WL	388,14 DSTL3	8,17 WL	0,00 COMB2	8018,25 DSTL4	163005,31 DSTL3
GB5	Mínima	-5757,56 DSTL4	-30,50 WR	-7,49 WL	0,00 COMB2	-11155,39 DSTL4	-119037,40 DSTL3
GB5	Máxima	382,79 WL	193,87 DSTL3	15,18 DSTL4	0,00 COMB2	11155,39 DSTL4	36410,40 DSTL3
GB6	Mínima	-5770,43 DSTL4	-30,59 WR	-16,24 DSTL4	0,00 COMB2	-11955,74 DSTL4	-118998,63 DSTL3
GB6	Máxima	986,71 WL	193,78 DSTL3	3,48 WL	0,00 COMB2	11955,74 DSTL4	35353,32 DSTL3
GD1	Mínima	-5554,13 DSTL3	-135,57 DSTL3	-6,01 DSTL5	0,00 COMB2	-3259,09 DSTL5	-101162,99 DSTL3
GD1	Máxima	1299,44 WR	52,37 WR	2,26 WL	0,00 COMB2	3259,09 DSTL5	92999,40 DSTL3
GD2	Mínima	-5554,13 DSTL3	-135,54 DSTL3	-6,90 WL	0,00 COMB2	-3745,22 DSTL4	-101146,56 DSTL3
GD2	Máxima	1299,49 WR	52,31 WR	6,70 DSTL4	0,00 COMB2	3745,22 DSTL4	92982,36 DSTL3
GD3	Mínima	-328,91 WR	-51,46 WR	-1,35 DSTL3	0,00 COMB2	-756,84 DSTL3	-119114,22 DSTL3
GD3	Máxima	8055,57 DSTL2	200,60 DSTL3	1,87 DSTL3	0,00 COMB2	766,84 DSTL3	106649,41 DSTL3
GD4	Mínima	-327,86 WR	-51,47 WR	-1,29 DSTL3	0,00 COMB2	-732,71 DSTL3	-119065,09 DSTL3
GD4	Máxima	8059,35 DSTL2	200,63 DSTL3	1,30 DSTL3	0,00 COMB2	732,71 DSTL3	106589,22 DSTL3
GD5	Mínima	-773,12 WL	-127,37 DSTL3	-11,33 WL	0,00 COMB2	-13012,62 DSTL4	-122327,35 DSTL3
GD5	Máxima	4516,47 DSTL4	40,27 WR	20,77 DSTL4	0,00 COMB2	13012,62 DSTL4	102217,33 DSTL3
GD6	Mínima	-773,71 WL	-127,31 DSTL3	-11,78 DSTL4	0,00 COMB2	-13646,43 DSTL4	-122300,51 DSTL3
GD6	Máxima	4516,11 DSTL4	40,30 WR	12,30 WL	0,00 COMB2	13646,43 DSTL4	102190,50 DSTL3
GV1	Mínima	-12716,05 DSTL2	-30,03 WR	-1,25 WL	0,00 COMB2	-2502,47 DSTL3	-85366,39 DSTL3
GV1	Máxima	349,43 DSTL2	119,16 WR	0,34 WL	0,00 COMB2	2502,47 DSTL3	85366,39 DSTL3

		WR	DSTL2	DSTL5	COMB2	DSTL3	DSTL3
GV2	Minima	-13719,76	-30,06	-1,71	0,00	-2750,14	-88365,22
		DSTL2	WR	DSTL4	COMB2	DSTL4	DSTL3
GV2	Maxima	346,84	115,14	1,61	0,00	1730,14	88365,22
		WR	DSTL3	WL	COMB2	DSTL4	DSTL3
GV3	Minima	-13683,15	-21,40	-1,708E-01	0,00	-1571,44	-82619,54
		DSTL2	WR	WL	COMB2	DSTL5	DSTL3
GV3	Maxima	470,43	117,33	1,93	0,00	1532,44	82619,54
		WR	DSTL3	DSTL5	COMB2	DSTL5	DSTL3
GV4	Minima	-13636,14	-17,40	-1,136	0,00	-1737,21	-82473,74
		DSTL2	WR	DSTL5	COMB2	DSTL5	DSTL3
GV4	Maxima	174,72	117,18	6,880E-01	0,00	1737,21	82473,74
		WR	DSTL3	WL	COMB2	DSTL5	DSTL3
HA1	Minima	-1039,89	-47,92	-3,844E-01	0,00	-554,55	-70450,75
		WL	DSTL10	DSTL6	COMB2	DSTL6	DSTL5
HA1	Maxima	7849,91	128,84	3,849E-01	0,00	554,55	49831,48
		DSTL5	DSTL5	WR	COMB2	DSTL6	DSTL5
HA2	Minima	-1039,95	-47,93	-3,793E-01	0,00	-543,21	-70455,81
		WL	DSTL10	WR	COMB2	DSTL6	DSTL5
HA2	Maxima	7849,95	128,84	3,169E-01	0,00	543,21	49836,54
		DSTL5	DSTL5	DSTL6	COMB2	DSTL6	DSTL5
HA3	Minima	-825,30	-24,60	-4,23	0,00	-3585,84	-122879,27
		WL	WL	DSTL6	COMB2	DSTL6	DSTL5
HA3	Maxima	10345,78	173,84	1,53	0,00	3585,84	93149,97
		DSTL2	DSTL5	WR	COMB2	DSTL6	DSTL5
HA4	Minima	-825,40	-24,61	-1,04	0,00	-4190,88	-120886,15
		WL	WL	WR	COMB2	DSTL6	DSTL5
HA4	Maxima	10345,72	173,84	4,34	0,00	4190,88	93156,85
		DSTL2	DSTL5	DSTL6	COMB2	DSTL6	DSTL5
HA5	Minima	-1097,60	-26,84	-12,74	0,00	-3310,51	-108531,95
		DSTL5	WL	DSTL5	COMB2	DSTL5	DSTL5
HA5	Maxima	615,15	171,53	11,08	0,00	3310,51	93551,41
		WR	DSTL5	DSTL10	COMB2	DSTL5	DSTL5
HA6	Minima	-1299,98	-10,86	-15,56	0,00	-3493,12	-108434,10
		DSTL5	WL	DSTL10	COMB2	DSTL5	DSTL5
HA6	Maxima	617,04	171,63	12,46	0,00	3493,12	93553,55
		WR	DSTL5	DSTL5	COMB2	DSTL5	DSTL5
HB1	Minima	-5772,20	-128,70	-1,849E-01	0,00	-558,33	-69586,11
		DSTL5	DSTL5	WR	COMB2	DSTL5	DSTL5
HB1	Maxima	1031,30	71,24	7,844E-01	0,00	558,33	16847,49
		WL	DSTL5	DSTL6	COMB2	DSTL6	DSTL6
HB2	Minima	-5772,25	-128,71	-3,163E-01	0,00	-587,70	-69700,35
		DSTL5	DSTL5	DSTL6	COMB2	DSTL6	DSTL5
HB2	Maxima	1531,87	71,23	3,793E-01	0,00	587,70	16861,73
		WL	DSTL6	WR	COMB2	DSTL6	DSTL5
HB3	Minima	-5928,46	-57,23	-4,27	0,00	-5147,35	-102626,31
		DSTL5	DSTL6	DSTL6	COMB2	DSTL6	DSTL5
HB3	Maxima	1138,01	137,73	4,23	0,00	5147,35	99450,73
		WR	DSTL5	WR	COMB2	DSTL6	DSTL5
HB4	Minima	-5932,99	-57,21	-2,52	0,00	-5632,37	-102630,96
		DSTL6	DSTL6	WR	COMB2	DSTL6	DSTL5
HB4	Maxima	1139,57	137,73	4,58	0,00	5632,37	99453,08
		WR	DSTL5	DSTL6	COMB2	DSTL6	DSTL5
HD1	Minima	-5400,51	-191,74	-1,25	0,00	-1923,31	-99077,75
		DSTL5	DSTL5	WR	COMB2	DSTL5	DSTL5
HD1	Maxima	1021,74	50,81	3,44	0,00	1923,31	90864,15
		WL	WL	DSTL6	COMB2	DSTL6	DSTL5
HD2	Minima	-5400,49	-191,73	-4,02	0,00	-2248,15	-99046,98
		DSTL5	DSTL5	DSTL6	COMB2	DSTL6	DSTL5
HD2	Maxima	1021,71	50,86	1,56	0,00	2248,15	90833,29
		WL	WL	WR	COMB2	DSTL6	DSTL5
HD3	Minima	-16253,94	-15,88	-2,08	0,00	-2410,11	-81974,98
		DSTL2	DSTL10	DSTL6	COMB2	DSTL6	DSTL5
HD3	Maxima	643,86	92,28	7,504E-01	0,00	2410,11	59354,10
		WL	DSTL5	WR	COMB2	DSTL6	DSTL5
HD4	Minima	-16253,68	-15,90	-1,01	0,00	-2217,17	-82241,55
		DSTL2	DSTL10	WR	COMB2	DSTL6	DSTL5
HD4	Maxima	641,94	92,29	2,44	0,00	2217,17	59360,87
		WL	DSTL5	DSTL6	COMB2	DSTL6	DSTL5

HD6	Minima	-213,91 WR	-214,89 DSTL8	-17,00 DSTL8	0,00 COMB1	-10048,79 DSTL8	120600,44 DSTL8
HD6	Maxima	4443,69 DSTL4	38,64 WL	13,04 DSTL9	0,00 COMB1	10648,79 DSTL8	10048,79 DSTL9
HD6	Minima	-214,42 WR	-104,79 DSTL8	-13,00 DSTL9	0,00 COMB2	11032,38 DSTL8	110668,78 DSTL8
HD6	Maxima	4443,61 DSTL4	38,60 WL	17,74 DSTL8	0,00 COMB2	11032,38 DSTL8	10648,79 DSTL9
HD7	Minima	-124,31 COMB2	11,57 DSTL10	-4,545E-11 DSTL2	0,00 COMB1	-40,45 DSTL1	11000,46 DSTL8
HD7	Maxima	1250,40 DSTL1	13,80 DSTL8	1,618E-10 WL	0,00 COMB2	40,45 DSTL8	12500,46 DSTL8
IIA1	Minima	-4042,40 DSTL8	-43,41 DSTL8	-131,04 WL	0,00 COMB2	-56568,97 DSTL8	-304011,71 DSTL8
IIA1	Maxima	1361,90 DSTL10	29,00 DSTL8	60,80 DSTL8	0,00 COMB1	56568,97 DSTL8	14740,46 WR
IIA2	Minima	-4034,31 DSTL8	-61,88 DSTL1	-10,11 DSTL8	0,00 COMB1	-12000,30 DSTL8	-13271,61 DSTL1
IIA2	Maxima	1363,41 WL	29,03 DSTL1	7,79 WL	0,00 COMB2	12000,30 DSTL8	7758,10 DSTL1
IIA3	Minima	-4034,31 DSTL8	-64,68 DSTL1	-7,68 WL	0,00 COMB2	-22968,41 DSTL8	-19090,79 DSTL1
IIA3	Maxima	1363,40 WL	29,03 DSTL1	34,02 DSTL8	0,00 COMB2	22968,41 DSTL8	7758,10 DSTL1
IIA4	Minima	-4045,81 DSTL8	-33,59 DSTL8	-836,28 DSTL8	0,00 COMB2	-564234,38 DSTL8	-34028,28 DSTL8
IIA4	Maxima	1363,37 DSTL10	29,03 DSTL8	128,98 WL	0,00 COMB2	564234,38 DSTL8	14328,38 WR
IIA5	Minima	-3953,12 DSTL8	-86,89 DSTL4	-805,57 DSTL8	0,00 COMB2	-599438,16 DSTL8	-30892,62 DSTL4
IIA5	Maxima	1360,06 DSTL8	34,43 DSTL8	127,02 WR	0,00 COMB2	599438,16 DSTL8	13264,89 WL
IIA6	Minima	-4140,74 DSTL8	-55,48 DSTL1	-0,99 WR	0,00 COMB1	-12007,88 DSTL8	-17895,92 DSTL1
IIA6	Maxima	1346,51 WR	71,47 DSTL1	74,50 DSTL8	0,00 COMB2	12007,88 DSTL8	7758,10 DSTL1
IIA7	Minima	-4140,80 DSTL8	-68,35 DSTL1	-34,36 DSTL8	0,00 COMB2	-12194,88 DSTL8	-17952,89 DSTL1
IIA7	Maxima	1346,50 WR	72,50 DSTL1	8,16 WR	0,00 COMB2	12194,88 DSTL8	7758,10 DSTL1
IIA8	Minima	-3955,72 DSTL8	-84,77 DSTL4	-135,43 WR	0,00 COMB2	-642468,26 DSTL8	-30619,93 DSTL4
IIA8	Maxima	1397,44 DSTL8	84,53 DSTL8	808,69 DSTL8	0,00 COMB2	642468,26 DSTL8	13260,03 WL
IIB1	Minima	-3042,61 DSTL8	-69,14 DSTL8	9,176E-01 WR	0,00 COMB3	-194008,77 DSTL8	-40080,11 DSTL8
IIB1	Maxima	1639,98 WR	80,97 DSTL8	438,53 DSTL8	0,00 COMB2	194008,77 DSTL8	16452,77 DSTL8
IIB2	Minima	-3055,01 DSTL8	-89,80 DSTL1	-21,62 WL	0,00 COMB2	-30129,01 DSTL8	-30668,93 DSTL8
IIB2	Maxima	3454,79 WR	78,23 DSTL1	126,23 DSTL8	0,00 COMB1	30129,01 DSTL8	7758,00 DSTL1
IIB3	Minima	-3057,97 DSTL8	-59,67 DSTL1	-126,18 DSTL8	0,00 COMB2	-85185,32 DSTL8	-23650,79 DSTL8
IIB3	Maxima	3456,76 WR	78,13 DSTL1	28,87 WL	0,00 COMB2	85185,32 DSTL8	7758,00 DSTL1
IIB4	Minima	-3046,06 DSTL8	-69,13 DSTL8	-435,50 DSTL1	0,00 COMB2	-294013,30 DSTL8	-40891,96 DSTL8
IIB4	Maxima	1701,16 WR	99,99 DSTL8	7,000E-01 WR	0,00 COMB2	294013,30 DSTL8	16458,99 DSTL8
IIB5	Minima	-3078,34 DSTL8	-79,51 DSTL8	-408,34 DSTL1	0,00 COMB2	-172254,53 DSTL8	-38369,98 DSTL8
IIB5	Maxima	1677,96 WL	84,17 DSTL2	0,68 WL	0,00 COMB2	172254,53 DSTL8	16459,70 DSTL8
IIB6	Minima	-3055,74 DSTL4	-68,20 DSTL1	-127,90 DSTL8	0,00 COMB2	-66343,06 DSTL8	-13121,50 DSTL8
IIB6	Maxima	3281,60 WL	77,87 DSTL1	30,06 WR	0,00 COMB2	66343,06 DSTL8	7758,00 DSTL1
IIB7	Minima	-3059,01 DSTL4	-66,18 DSTL1	-28,97 WR	0,00 COMB2	-66366,05 DSTL8	-13159,39 DSTL8

IIE7	Maxima	2684,05 WL	77,78 DSTL1	127,94 DSTL3	0,00 COMB3	86866,65 DSTL5	2752,90 DSTL1
IIE8	Maxima	-3863,88 DSTL1	-70,86 DSTL4	-4,54 WL	0,00 COMB3	-272065,74 DSTL2	-37024,36 DSTL3
IIE8	Maxima	1681,24 WL	94,16 DSTL3	433,06 DSTL2	0,00 COMB2	272065,74 DSTL1	13626,89 DSTL3
IID1	Maxima	-5101,40 DSTL3	-48,94 DSTL1	-3,80 WL	0,00 COMB3	-91504,30 DSTL1	-28971,13 DSTL3
IID1	Maxima	2869,86 WR	68,90 DSTL1	84,39 DSTL3	0,00 COMB3	91504,30 DSTL1	12476,19 DSTL1
IID2	Maxima	-8,52 WR	-47,94 DSTL1	-31,19 DSTL3	0,00 COMB2	-100060,82 DSTL1	-16157,30 DSTL3
IID2	Maxima	498,05 DSTL1	70,97 DSTL1	21,05 WL	0,00 COMB1	100060,82 DSTL5	12476,21 DSTL3
IID3	Maxima	-41,80 WR	-67,84 DSTL1	-31,13 WL	0,00 COMB3	-100084,48 DSTL5	-26180,52 DSTL1
IID3	Maxima	496,26 DSTL1	70,08 DSTL1	31,11 DSTL3	0,00 COMB2	100084,48 DSTL5	12476,21 DSTL1
IID4	Maxima	-5185,31 DSTL3	-58,35 DSTL1	-84,42 DSTL3	0,00 COMB3	-91638,87 DSTL2	-16860,19 DSTL3
IID4	Maxima	2871,22 WR	68,97 DSTL1	3,86 WL	0,00 COMB2	91638,87 DSTL2	12476,09 DSTL1
IID5	Maxima	-5878,82 DSTL4	-53,31 DSTL1	-74,23 DSTL2	0,00 COMB2	-81224,14 DSTL3	-13105,14 DSTL4
IID5	Maxima	2600,29 WL	68,31 DSTL1	1,71 WR	0,00 COMB2	81224,14 DSTL2	12476,09 DSTL1
IID6	Maxima	-7,36 WL	-68,97 DSTL1	-21,89 WR	0,00 COMB1	-101484,38 DSTL2	-25913,98 DSTL1
IID6	Maxima	498,43 DSTL1	68,97 DSTL1	93,80 DSTL2	0,00 COMB2	101484,38 DSTL3	12476,21 DSTL1
IID7	Maxima	-11,54 WL	-68,94 DSTL1	-99,45 DSTL3	0,00 COMB1	-101440,13 DSTL3	-15955,08 DSTL1
IID7	Maxima	498,74 DSTL1	68,89 DSTL1	21,93 WR	0,00 COMB2	101440,13 DSTL3	12476,21 DSTL1
IID8	Maxima	-5276,49 DSTL4	-69,87 DSTL1	-1,30 WR	0,00 COMB2	-81222,87 DSTL2	-19060,11 DSTL4
IID8	Maxima	2602,07 WL	68,08 DSTL1	74,83 DSTL3	0,00 COMB3	81222,87 DSTL2	12476,09 DSTL1
IIV0	Maxima	-4081,30 DSTL5	-39,46 DSTL3	-15,13 DSTL6	0,00 COMB3	-12864,15 DSTL3	-24551,30 DSTL5
IIV1	Maxima	871,13 WL	22,77 WL	34,81 DSTL5	0,00 COMB1	12864,32 DSTL6	84550,87 DSTL5
IIV2	Maxima	-803,41 DSTL1	-67,94 DSTL3	-3,620E-02 DSTL3	0,00 COMB3	-29,92 DSTL7	-57746,59 DSTL5
IIV2	Maxima	5,63 WR	15,55 WL	7,964E-03 WR	0,00 COMB2	29,92 DSTL3	57746,59 DSTL5
IIV3	Maxima	-4359,80 DSTL5	-48,47 DSTL3	-14,84 DSTL6	0,00 COMB3	-12822,00 DSTL6	-84555,87 DSTL5
IIV3	Maxima	849,87 WL	12,79 WL	15,03 DSTL6	0,00 COMB2	12822,03 DSTL6	84555,84 DSTL5
IIV4	Maxima	-4891,87 DSTL3	-23,84 WR	-15,35 DSTL4	0,00 COMB1	-12474,48 DSTL4	-85737,55 DSTL3
IIV4	Maxima	872,43 WR	100,96 DSTL3	13,54 DSTL7	0,00 COMB2	12474,71 DSTL4	85737,73 DSTL3
IIV5	Maxima	-304,48 DSTL1	-16,15 WR	-9,009E-01 DSTL4	0,00 COMB2	-78,57 DSTL4	-58548,63 DSTL3
IIV5	Maxima	8,13 WL	68,88 DSTL3	1,317E-02 WL	0,00 COMB1	78,57 DSTL4	58548,63 DSTL3
IIV6	Maxima	-4091,28 DSTL3	-13,65 WR	-10,60 DSTL7	0,00 COMB2	-13326,95 DSTL4	-85715,30 DSTL3
IIV6	Maxima	871,24 WR	100,83 DSTL3	15,89 DSTL4	0,00 COMB2	13326,73 DSTL4	85715,53 DSTL3
IC21	Maxima	-10085,16 DSTL2	-151,09 DSTL3	-15,93 DSTL6	0,00 COMB1	-11488,02 DSTL3	-75383,93 DSTL6
IC21	Maxima	844,57 WL	17,87 DSTL3	17,02 DSTL5	0,00 COMB1	11488,02 DSTL3	49734,77 DSTL6
IC22	Maxima	-10227,50 DSTL2	-93,59 DSTL3	-6,25 DSTL6	0,00 COMB2	-5239,79 DSTL3	-36561,01 DSTL6
IC22	Maxima	-63,15 WR	71,39 DSTL3	7,75 DSTL5	0,00 COMB2	5239,79 DSTL5	13293,15 DSTL6

12A3	Minima	-10078,07	-59,28	-0,68	0,00	-5265,60	-13292,10
		DSTL2	DSTL5	DSTL7	COMB1	DSTL4	DSTL6
12A5	Maxima	-977,33	86,14	7,68	0,00	1167,60	14159,80
		WL	DSTL3	DSTL4	COMB1	DSTL4	DSTL7
12A4	Minima	-10045,40	-13,43	-11,47	0,00	-11131,25	-99000,41
		DSTL1	DSTL10	DSTL7	COMB2	DSTL4	DSTL5
12A4	Maxima	725,10	133,40	16,86	0,00	11131,25	59400,14
		WL	DSTL3	DSTL4	COMB1	DSTL4	DSTL6
12A5	Maxima	10046,90	-151,00	-16,01	0,00	-10995,54	-93375,74
		DSTL3	DSTL1	DSTL5	COMB1	DSTL5	DSTL6
12A5	Maxima	-655,19	20,93	14,41	0,00	10305,14	43770,11
		WL	DSTL5	DSTL10	COMB2	DSTL5	DSTL6
12A6	Minima	-10037,00	-38,46	-6,57	0,00	-4835,52	-15480,75
		DSTL3	DSTL5	DSTL5	COMB2	DSTL5	DSTL6
12A6	Maxima	-83,34	71,44	5,81	0,00	4736,53	13093,83
		WL	DSTL5	DSTL10	COMB1	DSTL5	DSTL6
12A7	Minima	-10220,69	-59,35	-6,48	0,00	4511,07	-38923,97
		DSTL3	DSTL5	DSTL1	COMB2	DSTL5	DSTL5
12A7	Maxima	-30,13	30,18	5,69	0,00	4511,07	14174,63
		WL	DSTL5	DSTL10	COMB2	DSTL5	DSTL5
12A8	Maxima	-10017,49	-15,41	-15,33	0,00	-10335,14	-77036,29
		DSTL2	DSTL10	DSTL4	COMB2	DSTL4	DSTL5
12A8	Maxima	731,14	152,93	13,19	0,00	10335,14	59437,12
		WL	DSTL5	DSTL7	COMB2	DSTL4	DSTL5
12B1	Minima	-9473,82	-151,64	-31,08	0,00	-13227,21	-78430,09
		DSTL3	DSTL3	DSTL5	COMB2	DSTL5	DSTL3
12B1	Maxima	1487,84	18,43	20,05	0,00	13227,21	49331,23
		WL	WL	DSTL10	COMB2	DSTL5	DSTL3
12B2	Minima	-821,21	-109,37	-6,23	0,00	-4207,05	-47115,88
		WL	DSTL6	DSTL5	COMB2	DSTL5	DSTL6
12B2	Maxima	5311,71	50,81	8,05	0,00	4207,05	30627,03
		DSTL4	DSTL5	DSTL10	COMB2	DSTL5	DSTL6
12B3	Maxima	-932,11	-58,68	-5,39	0,00	-4931,08	-49054,37
		WL	DSTL6	DSTL4	COMB2	DSTL4	DSTL5
12B3	Maxima	5339,07	112,08	3,33	0,00	4931,08	23455,52
		DSTL6	DSTL5	DSTL7	COMB1	DSTL4	DSTL6
12B4	Maxima	-8796,40	-15,08	-23,36	0,00	-13748,39	-73290,82
		DSTL5	WL	DSTL4	COMB2	DSTL4	DSTL5
12B4	Maxima	1461,59	155,39	17,61	0,00	13748,39	51631,97
		WL	DSTL5	DSTL7	COMB2	DSTL4	DSTL6
12B5	Minima	-13485,31	-152,52	-21,04	0,00	-13952,84	-76421,42
		DSTL3	DSTL3	DSTL10	COMB1	DSTL5	DSTL3
12B5	Maxima	1493,67	15,66	22,90	0,00	13952,84	49822,57
		WL	WL	DSTL5	COMB2	DSTL5	DSTL3
12B6	Minima	-826,77	-109,36	-7,24	0,00	-4307,52	-47215,38
		WL	DSTL4	DSTL3	COMB2	DSTL5	DSTL6
12B6	Maxima	5319,32	50,87	7,37	0,00	4307,52	30615,13
		DSTL4	DSTL5	DSTL5	COMB1	DSTL5	DSTL4
12B7	Maxima	-926,52	-58,53	-6,71	0,00	-4751,83	-49039,68
		WL	DSTL6	DSTL7	COMB1	DSTL4	DSTL5
12B7	Maxima	5353,06	112,13	7,04	0,00	4751,83	22490,70
		DSTL6	DSTL3	DSTL4	COMB2	DSTL4	DSTL5
12B8	Minima	-10795,24	-15,04	-15,14	0,00	-14343,02	-78339,01
		DSTL6	WL	DSTL7	COMB1	DSTL4	DSTL5
12B8	Maxima	1458,77	155,46	21,33	0,00	14343,02	51745,16
		WL	DSTL5	DSTL4	COMB1	DSTL4	DSTL5
12D1	Minima	-1317,80	-64,65	-7,12	0,00	-3278,78	-34416,75
		WL	DSTL1	DSTL10	COMB2	DSTL5	DSTL6
12D1	Maxima	10934,97	53,27	7,63	0,00	3278,78	14202,42
		DSTL6	DSTL7	DSTL5	COMB2	DSTL5	DSTL6
12D2	Minima	-1550,82	-73,01	-1,85	0,00	-2137,23	-34159,78
		DSTL9	DSTL1	DSTL10	COMB1	DSTL5	DSTL6
12D2	Maxima	2043,74	64,61	1,57	0,00	2137,23	12476,76
		DSTL6	DSTL1	DSTL5	COMB2	DSTL5	DSTL1
12D3	Maxima	-1485,47	-63,72	-1,64	0,00	-2127,97	-35165,43
		DSTL10	DSTL1	DSTL7	COMB2	DSTL4	DSTL5
12D3	Maxima	2141,82	74,20	1,36	0,00	2127,97	12476,76
		DSTL5	DSTL1	DSTL4	COMB2	DSTL4	DSTL1
12D4	Minima	-1243,72	-53,44	-6,47	0,00	-3063,24	-45321,45

I2D4	Maxima	WL	DSTL1	DSTL7	COMB2	DSTL4	DSTL5
		11027,59	85,49	7,49	0,00	8055,14	14640,93
		DSTL5	DSTL1	DSTL4	COMB1	DSTL4	DSTL5
I2D5	Minima	-1213,00	-31,24	-7,42	0,00	-3052,47	-44442,54
		WR	DSTL1	DSTL5	COMB2	DSTL5	DSTL6
I2D6	Maxima	10924,71	93,16	6,86	0,00	9055,49	14200,49
		DSTL5	DSTL1	DSTL10	COMB1	DSTL7	DSTL5
I2D7	Minima	-1556,57	-73,29	-1,76	0,00	-1910,95	-34154,55
		DSTL5	DSTL1	DSTL5	COMB1	DSTL5	DSTL6
I2D8	Maxima	1048,47	64,63	1,89	0,00	1510,95	12476,76
		DSTL5	DSTL1	DSTL10	COMB1	DSTL5	DSTL1
I2D9	Minima	-1489,85	-63,71	-1,70	0,00	-1044,41	-37161,30
		DSTL10	DSTL1	DSTL4	COMB2	DSTL4	DSTL5
I2D9	Maxima	2144,95	74,23	1,37	0,00	1044,41	12476,76
		DSTL5	DSTL1	DSTL5	COMB2	DSTL4	DSTL1
I2D8	Minima	-1145,11	-51,40	-7,14	0,00	-7749,45	-45337,71
		WL	DSTL1	DSTL4	COMB2	DSTL4	DSTL5
I2D8	Maxima	11031,00	95,30	5,11	0,00	9749,45	14649,01
		DSTL5	DSTL1	DSTL7	COMB2	DSTL4	DSTL5
I2V1	Minima	-9348,62	-9,20	-6,80	0,00	-6135,03	-17190,64
		DSTL6	WR	DSTL10	COMB1	DSTL5	DSTL6
I2V1	Maxima	1030,98	20,22	7,31	0,00	6135,01	17190,61
		WR	DSTL6	DSTL5	COMB2	DSTL5	DSTL6
I2V2	Minima	-1294,73	-12,06	-3,363E-01	0,00	-1235,10	-10251,83
		DSTL1	DSTL5	DSTL5	COMB2	DSTL5	DSTL5
I2V2	Maxima	2,92	10,97	-1,363E-01	0,00	133,03	10381,63
		COMB2	DSTL10	WR	COMB2	DSTL5	DSTL5
I2V3	Minima	-8921,93	-2,89	-7,03	0,00	-6977,64	-13167,78
		DSTL5	WL	DSTL4	COMB2	DSTL4	DSTL5
I2V3	Maxima	973,03	11,86	5,10	0,00	6980,36	13158,00
		WL	DSTL5	DSTL7	COMB2	DSTL4	DSTL5
I2V4	Minima	-9348,31	-9,10	-7,31	0,00	-6216,10	-17180,63
		DSTL6	WR	DSTL5	COMB1	DSTL5	DSTL6
I2V4	Maxima	1031,92	20,21	6,95	0,00	6216,52	17180,41
		WR	DSTL6	DSTL10	COMB2	DSTL5	DSTL6
I2V5	Minima	-1294,73	-12,06	-1,931E-01	0,00	-170,12	-10275,38
		DSTL1	DSTL5	WR	COMB2	DSTL6	DSTL5
I2V5	Maxima	2,92	10,97	-3,187E-01	0,00	270,44	10275,38
		COMB2	DSTL10	DSTL6	COMB2	DSTL6	DSTL5
I2V6	Minima	-8414,83	-7,83	-6,22	0,00	-6009,53	-16179,31
		DSTL5	WL	DSTL7	COMB2	DSTL4	DSTL5
I2V6	Maxima	974,20	21,38	7,07	0,00	6009,21	16179,53
		WL	DSTL5	DSTL4	COMB2	DSTL4	DSTL5
K1A1	Minima	-833,53	-119,08	-162,86	0,00	-237809,16	-67360,32
		WL	DSTL1	DSTL9	COMB2	DSTL6	DSTL3
K1A1	Maxima	8604,24	23,86	263,04	0,00	237809,16	31507,36
		DSTL3	DSTL4	DSTL6	COMB2	DSTL6	DSTL3
K1A2	Minima	-825,39	-121,03	-365,13	0,00	-227854,96	-69063,04
		WR	DSTL5	DSTL3	COMB2	DSTL3	DSTL5
K1A2	Maxima	8600,94	39,20	262,94	0,00	227854,96	33910,06
		DSTL2	DSTL10	DSTL8	COMB1	DSTL3	DSTL5
K1A3	Minima	-2896,68	-69,34	-19,27	0,00	-21323,07	-58240,40
		DSTL5	DSTL6	DSTL3	COMB2	DSTL6	DSTL5
K1A3	Maxima	722,79	106,55	20,52	0,00	21323,07	19468,19
		WL	DSTL1	DSTL5	COMB2	DSTL6	DSTL5
K1A4	Minima	-2556,89	-69,84	-10,37	0,00	-12320,06	-57314,19
		DSTL3	DSTL4	DSTL7	COMB2	DSTL4	DSTL3
K1A4	Maxima	722,79	106,29	11,86	0,00	12320,06	19005,08
		WR	DSTL1	DSTL4	COMB1	DSTL4	DSTL3
K1A5	Minima	-16449,13	-51,00	-107,77	0,00	-124433,97	-51394,68
		DSTL5	DSTL1	DSTL9	COMB2	DSTL5	DSTL1
K1A5	Maxima	2664,17	106,53	130,62	0,00	124433,97	17268,56
		WL	DSTL1	DSTL5	COMB2	DSTL6	DSTL5
K1A6	Minima	-19794,04	-51,49	-118,75	0,00	-134364,06	-50941,92
		DSTL3	DSTL1	DSTL7	COMB2	DSTL4	DSTL1
K1A6	Maxima	2701,52	106,48	141,05	0,00	134364,06	16833,31
		WR	DSTL1	DSTL4	COMB2	DSTL4	DSTL3
K1A7	Minima	-12135,98	-79,64	-355,96	0,00	-369923,84	-37367,84
		DSTL5	DSTL1	DSTL6	COMB2	DSTL6	DSTL1

FLA7	Maxima	452,58 WL	59,74 DSTL1	244,25 DSTL3	0,00 COMB2	463945,64 DSTL6	15014,97 DSTL1
FLA8	Maxima	-11981,97 DSTL3	-78,93 DSTL1	-355,08 DSTL4	0,00 COMB1	-146314,26 DSTL4	-36083,26 DSTL1
FLA9	Maxima	1026,56 WR	34,45 DSTL1	341,78 DSTL7	0,00 COMB1	369214,26 DSTL4	15014,97 DSTL1
FLA9	Minima	-13391,40 DSTL3	-112,12 DSTL1	-199,41 DSTL5	0,00 COMB1	-147347,87 DSTL4	-37061,49 DSTL1
FLA9	Maxima	187,07 WR	104,60 DSTL1	188,07 DSTL10	0,00 COMB1	147347,87 DSTL4	17461,04 DSTL1
FLB1	Maxima	-2386,19 DSTL3	-20,32 DSTL1	-158,77 DSTL5	0,00 COMB1	-289068,55 DSTL4	-78710,73 DSTL1
FLB1	Maxima	1004,76 WL	144,41 DSTL1	268,39 DSTL10	0,00 COMB1	185035,55 DSTL4	27943,66 DSTL1
FLB2	Maxima	-5790,75 DSTL3	-31,62 DSTL1	-168,53 DSTL7	0,00 COMB1	-194937,55 DSTL4	-73535,31 DSTL1
FLB2	Maxima	1006,71 WR	145,10 DSTL1	248,49 DSTL4	0,00 COMB1	184987,55 DSTL4	27943,17 DSTL1
FLB3	Minima	-4294,31 DSTL3	-34,58 WL	-170,46 DSTL6	0,00 COMB1	-150180,94 DSTL6	-59941,53 DSTL5
FLB3	Maxima	405,11 WR	137,93 DSTL5	271,38 DSTL5	0,00 COMB1	180160,94 DSTL6	61211,31 DSTL5
FLB4	Minima	-42842,00 DSTL2	-37,11 WR	-256,18 DSTL4	0,00 COMB1	-143765,14 DSTL4	-95117,63 DSTL5
FLB4	Maxima	294,00 WL	121,60 DSTL2	245,25 DSTL7	0,00 COMB1	143760,14 DSTL4	78226,11 DSTL5
FLB5	Maxima	-33400,62 DSTL3	-52,01 DSTL6	-16,31 DSTL5	0,00 COMB1	-16401,23 DSTL5	-68724,21 DSTL5
FLB5	Maxima	3662,70 WR	103,36 DSTL1	9,55 DSTL10	0,00 COMB1	16401,23 DSTL5	11531,93 DSTL5
FLB6	Minima	-23019,26 DSTL5	-31,73 DSTL4	-14,55 DSTL3	0,00 COMB1	-16405,62 DSTL3	-57191,42 DSTL5
FLB6	Maxima	3467,63 WL	108,83 DSTL1	8,39 DSTL8	0,00 COMB1	16405,62 DSTL3	20773,63 DSTL5
FLB7	Minima	-9116,22 DSTL6	-70,48 DSTL1	-74,17 DSTL10	0,00 COMB1	-89078,35 DSTL3	-45203,28 DSTL1
FLB7	Maxima	3898,67 WR	103,89 DSTL1	88,89 DSTL5	0,00 COMB1	89078,35 DSTL3	14479,83 DSTL1
FLB8	Minima	-9363,39 DSTL5	-70,16 DSTL1	-73,63 DSTL9	0,00 COMB1	-11204,31 DSTL5	-48521,96 DSTL1
FLB8	Maxima	2643,10 WL	103,21 DSTL1	51,00 DSTL6	0,00 COMB1	11204,31 DSTL5	14479,83 DSTL1
FLD1	Maxima	-19264,92 DSTL5	-20,87 WR	-632,96 DSTL5	0,00 COMB1	-391893,97 DSTL3	-66714,31 DSTL3
FLD1	Maxima	2311,73 WL	129,59 DSTL3	836,54 DSTL10	0,00 COMB1	391893,97 DSTL3	54076,31 DSTL3
FLD2	Maxima	-16527,83 DSTL3	-15,48 WL	-665,08 DSTL7	0,00 COMB1	-181508,50 DSTL4	-63071,59 DSTL5
FLD3	Maxima	3921,17 WR	137,44 DSTL5	633,89 DSTL4	0,00 COMB1	181508,50 DSTL4	89433,68 DSTL5
FLD3	Maxima	-2342,17 WL	-103,96 DSTL5	-140,48 DSTL5	0,00 COMB1	-122371,05 DSTL5	-47300,72 DSTL5
FLD3	Maxima	19874,69 DSTL5	78,35 DSTL5	129,83 DSTL10	0,00 COMB1	122371,05 DSTL5	15539,34 DSTL5
FLD4	Maxima	-2352,39 WR	-78,93 DSTL5	-160,60 DSTL3	0,00 COMB1	-130911,57 DSTL3	-49156,80 DSTL5
FLD4	Maxima	19389,13 DSTL3	101,49 DSTL5	147,63 DSTL5	0,00 COMB1	130911,57 DSTL3	14504,91 DSTL5
FLD5	Maxima	-1462,60 WL	-48,83 DSTL1	-147,89 DSTL5	0,00 COMB1	-123302,30 DSTL5	-49432,50 DSTL5
FLD5	Maxima	11665,07 DSTL5	110,11 DSTL1	133,32 DSTL10	0,00 COMB1	123302,30 DSTL5	17642,89 DSTL5
FLD6	Maxima	-1472,31 WR	-42,57 DSTL1	-120,47 DSTL5	0,00 COMB1	-142129,20 DSTL3	-48452,40 DSTL3
FLD6	Maxima	11200,70 DSTL3	109,36 DSTL1	138,81 DSTL8	0,00 COMB1	142129,20 DSTL3	17127,84 DSTL3
FLD7	Maxima	-266,56 WR	-72,50 DSTL1	-146,41 DSTL5	0,00 COMB1	-132604,26 DSTL5	-39855,91 DSTL1
FLD7	Maxima	1475,27 DSTL5	100,47 DSTL1	128,35 DSTL9	0,00 COMB1	132604,26 DSTL5	13088,58 DSTL1

K119	Maxima	-146,58 WL	-72,16 DSTL1	-146,57 DSTL4	0,00 COMB1	-139714,18 DSTL4	-134239,40 DSTL1
K119	Maxima	2581,83 DSTL4	101,11 DSTL1	118,50 DSTL7	0,00 COMB2	130715,13 DSTL4	13031,83 DSTL1
K119	Maxima	10486,06 DSTL8	-117,87 DSTL1	-104,30 DSTL5	0,00 COMB7	-1316736,10 DSTL7	-140151,10 DSTL5
K119	Maxima	1817,81 WL	105,75 DSTL1	237,86 DSTL10	0,00 COMB7	103600,91 DSTL5	13670,75 DSTL1
K111	Maxima	-18964,19 DSTL8	-13,44 DSTL5	-144,69 DSTL8	0,00 COMB7	-117135,34 DSTL5	-114080,50 DSTL7
K111	Maxima	1874,87 WL	11,71 DSTL10	142,06 DSTL10	0,00 COMB2	117135,34 DSTL5	18271,21 DSTL5
K112	Maxima	-16061,84 DSTL8	-58,16 DSTL8	-58,16 DSTL4	0,00 COMB7	-130461,44 DSTL4	-130235,58 DSTL8
K112	Maxima	8004,84 WL	54,17 DSTL8	84,88 DSTL8	0,00 COMB2	130461,44 DSTL4	8043,48 DSTL8
K113	Maxima	-11138,41 DSTL8	-13,51 DSTL8	-34,87 DSTL10	0,00 COMB7	-130461,44 DSTL5	-12993,43 DSTL8
K113	Maxima	-84,36 WL	6,37 WL	26,43 DSTL5	0,00 COMB2	130461,44 DSTL5	13997,87 DSTL8
K114	Maxima	-10990,51 DSTL8	-6,08 WL	-11,51 DSTL8	0,00 COMB2	-11680,51 DSTL4	-10780,40 DSTL8
K114	Maxima	-170,89 WL	14,44 DSTL8	18,30 DSTL4	0,00 COMB2	11680,51 DSTL4	10780,41 DSTL8
K115	Maxima	-1868,88 DSTL8	-98,87 DSTL8	-176,98 DSTL5	0,00 COMB2	-158316,10 DSTL8	-161560,00 DSTL8
K115	Maxima	187,77 WL	98,98 DSTL8	278,93 DSTL10	0,00 COMB2	158316,10 DSTL8	16680,88 DSTL8
K116	Maxima	-1068,94 DSTL8	-97,83 DSTL8	-175,84 DSTL8	0,00 COMB2	-158316,10 DSTL8	-161519,99 DSTL8
K116	Maxima	141,07 WL	100,31 DSTL8	278,93 DSTL8	0,00 COMB2	158316,10 DSTL8	161519,19 DSTL8
K2A1	Maxima	-826,35 WL	-111,04 DSTL8	-348,00 DSTL8	0,00 COMB2	-121946,19 DSTL8	-169070,84 DSTL8
K2A1	Maxima	2600,84 DSTL8	28,16 DSTL10	261,11 DSTL8	0,00 COMB2	121946,19 DSTL8	13317,80 DSTL8
K2A2	Maxima	-803,54 WL	-118,87 DSTL1	-348,07 DSTL8	0,00 COMB2	-120746,96 DSTL8	-17250,97 DSTL8
K2A2	Maxima	8604,19 DSTL8	28,32 DSTL4	262,60 DSTL8	0,00 COMB2	120746,96 DSTL8	11458,03 DSTL8
K2A3	Maxima	-2617,31 DSTL8	-69,73 DSTL4	-20,19 DSTL4	0,00 COMB2	-139381,28 DSTL4	-17383,99 DSTL8
K2A3	Maxima	733,15 WL	138,38 DSTL1	18,31 DSTL7	0,00 COMB2	139381,28 DSTL4	15009,93 DSTL8
K2A4	Maxima	-1896,16 DSTL8	-89,93 DSTL8	-136,93 DSTL8	0,00 COMB2	-138871,35 DSTL8	-15244,81 DSTL8
K2A4	Maxima	114,37 WL	106,84 DSTL1	17,87 DSTL8	0,00 COMB2	138871,35 DSTL8	15970,40 DSTL8
K2A5	Maxima	-15064,70 DSTL8	-11,64 DSTL1	-131,27 DSTL4	0,00 COMB7	-120064,08 DSTL4	-15065,01 DSTL1
K2A5	Maxima	6686,36 WL	108,19 DSTL1	107,43 DSTL7	0,00 COMB2	120064,08 DSTL4	16365,04 DSTL8
K2A6	Maxima	-16447,60 DSTL8	-62,01 DSTL1	-130,14 DSTL8	0,00 COMB2	-133970,86 DSTL8	-11381,02 DSTL1
K2A6	Maxima	2698,00 WL	108,92 DSTL1	107,38 DSTL8	0,00 COMB2	133970,86 DSTL8	17106,96 DSTL5
K2A7	Maxima	-11947,81 DSTL8	-78,94 DSTL1	-344,29 DSTL7	0,00 COMB2	-1369673,80 DSTL4	-138061,88 DSTL1
K2A7	Maxima	1012,76 WL	94,40 DSTL1	155,70 DSTL4	0,00 COMB2	1369673,80 DSTL4	15014,87 DSTL1
K2A8	Maxima	-12101,85 DSTL8	-79,63 DSTL1	-343,96 DSTL8	0,00 COMB2	-1309466,01 DSTL8	-137860,78 DSTL1
K2A8	Maxima	956,14 WL	93,75 DSTL1	359,54 DSTL8	0,00 COMB2	1309466,01 DSTL8	16014,97 DSTL1
K2A9	Maxima	-1871,92 DSTL8	-111,56 DSTL1	-136,81 DSTL8	0,00 COMB2	-1246605,08 DSTL8	-132238,40 DSTL8
K2A9	Maxima	208,80 WL	105,18 DSTL1	185,88 DSTL8	0,00 COMB2	1246605,08 DSTL8	13461,08 DSTL1

K2E1	Maxima	-7000,50 DSTL2	-71,53 DSTL1	-269,81 DSTL4	0,00 COMB2	-264908,24 DSTL4	-79735,41 DSTL1
K2E1	Maxima	1600,87 WF	145,13 DSTL3	688,48 DSTL7	0,00 COMB1	264908,24 DSTL4	27475,72 DSTL2
K2E2	Minima	-7000,14 DSTL5	-71,53 DSTL3	-269,89 DSTL10	0,00 COMB2	-265174,78 DSTL6	-79701,53 DSTL1
K2E2	Maxima	1600,79 WL	144,40 DSTL1	688,89 DSTL5	0,00 COMB2	265174,78 DSTL6	27386,09 DSTL1
K2E3	Minima	-40851,31 DSTL2	-190,88 DSTL3	-166,35 DSTL7	0,00 COMB2	-161306,36 DSTL4	-44971,80 DSTL1
K2E3	Maxima	807,09 WL	98,79 WF	274,80 DSTL4	0,00 COMB2	161306,36 DSTL4	27964,89 DSTL1
K2E4	Maxima	-42849,10 DSTL2	-32,42 WF	-271,71 DSTL9	0,00 COMB2	-160991,49 DSTL6	-46865,83 DSTL1
K2E4	Maxima	401,89 WF	197,64 DSTL5	174,31 DSTL5	0,00 COMB1	160991,49 DSTL6	84937,80 DSTL5
K2E5	Minima	-36986,88 DSTL5	108,81 DSTL1	-9,47 DSTL3	0,00 COMB1	-20690,03 DSTL3	-57117,27 DSTL7
K2E5	Maxima	8488,16 WL	81,43 DSTL4	22,79 DSTL0	0,00 COMB2	20690,03 DSTL3	20774,89 DSTL3
K2E6	Minima	-22897,46 DSTL3	-82,03 DSTL6	-9,72 DSTL10	0,00 COMB2	-14601,90 DSTL6	-88728,26 DSTL1
K2E6	Maxima	8864,38 WF	109,58 DSTL1	15,99 DSTL5	0,00 COMB2	14601,90 DSTL6	21582,25 DSTL5
K2E7	Minima	-9020,88 DSTL3	-70,20 DSTL1	-91,90 DSTL6	0,00 COMB2	-9155,57 DSTL6	-45479,34 DSTL1
K2E7	Maxima	8647,81 WL	108,17 DSTL1	79,87 DSTL3	0,00 COMB2	9155,57 DSTL6	14479,83 DSTL1
K2E8	Minima	-9112,97 DSTL6	-79,48 DSTL1	-98,82 DSTL5	0,00 COMB2	-89817,14 DSTL6	-48204,58 DSTL1
K2E8	Maxima	8897,09 WF	102,89 DSTL1	73,95 DSTL10	0,00 COMB2	89817,14 DSTL6	14479,83 DSTL1
K2E9	Minima	-6877,70 DSTL5	-110,81 DSTL1	-48,62 DSTL3	0,00 COMB1	-65282,88 DSTL3	-45019,57 DSTL6
K2E9	Maxima	8629,96 WL	101,82 DSTL1	58,09 DSTL3	0,00 COMB1	65282,88 DSTL3	21827,23 DSTL1
K2D1	Minima	-18946,38 DSTL3	-15,42 WL	-638,74 DSTL4	0,00 COMB2	-131133,59 DSTL4	-69084,37 DSTL6
K2D1	Maxima	8227,79 WF	138,44 DSTL5	687,24 DSTL7	0,00 COMB2	131133,59 DSTL4	58445,26 DSTL5
K2D2	Maxima	-19284,57 DSTL5	-20,88 WF	-639,08 DSTL10	0,00 COMB2	-132181,75 DSTL6	-69697,31 DSTL3
K2D2	Maxima	8212,77 WL	128,56 DSTL4	640,45 DSTL5	0,00 COMB2	132181,75 DSTL6	54089,31 DSTL3
K2D3	Minima	-12368,44 WF	-78,81 DSTL5	-109,87 DSTL3	0,00 COMB2	-12368,52 DSTL3	-48342,82 DSTL6
K2D3	Maxima	18946,38 DSTL3	101,71 DSTL6	141,83 DSTL3	0,00 COMB1	12368,52 DSTL3	14582,51 DSTL6
K2D4	Minima	-12344,75 WL	-78,31 DSTL6	-134,85 DSTL10	0,00 COMB1	-12222,46 DSTL6	-47301,31 DSTL5
K2D4	Maxima	19872,81 DSTL5	103,96 DSTL5	140,82 DSTL5	0,00 COMB2	12222,46 DSTL6	19541,63 DSTL6
K2D5	Minima	-1482,34 WF	-49,64 DSTL1	-190,02 DSTL9	0,00 COMB2	-117926,05 DSTL3	-48373,45 DSTL3
K2D5	Maxima	11204,85 DSTL3	109,89 DSTL1	153,32 DSTL3	0,00 COMB2	117926,05 DSTL3	17088,06 DSTL3
K2D6	Minima	-1484,87 WL	-49,83 DSTL1	-132,58 DSTL10	0,00 COMB2	-122783,98 DSTL6	-49432,87 DSTL6
K2D6	Maxima	11964,88 DSTL5	119,19 DSTL1	147,27 DSTL5	0,00 COMB1	122783,98 DSTL6	17612,77 DSTL5
K2D7	Minima	-211,96 WL	-70,31 DSTL1	-128,95 DSTL7	0,00 COMB2	-133033,21 DSTL4	-29191,00 DSTL1
K2D7	Maxima	2547,96 DSTL4	101,04 DSTL1	146,88 DSTL4	0,00 COMB2	133033,21 DSTL4	13035,58 DSTL1
K2D8	Minima	-269,28 WF	-70,90 DSTL1	-139,06 DSTL9	0,00 COMB2	-122297,49 DSTL6	-28660,24 DSTL1
K2D8	Maxima	8479,20 DSTL6	100,48 DSTL1	146,97 DSTL6	0,00 COMB2	122297,49 DSTL6	13085,58 DSTL1
K2D9	Minima	-10267,02 DSTL3	-116,18 DSTL1	-197,39 DSTL8	0,00 COMB1	-392937,76 DSTL3	-48161,83 DSTL6

KED9	Maxima	2042,47 WR	106,16 DSTL1	204,86 DSTL3	0,00 COMB2	20267,79 DSTL3	19660,79 DSTL1
KED1	Maxima	-14999,61 DSTL3	-21,33 DSTL5	-141,53 DSTL3	0,00 COMB2	-114871,51 DSTL3	-14999,61 DSTL3
KED1	Maxima	1499,54 WL	13,74 DSTL9	145,79 DSTL3	0,00 COMB1	114871,51 DSTL3	14999,61 DSTL3
KED2	Maxima	-18764,49 DSTL5	-23,44 DSTL5	-143,34 DSTL10	0,00 COMB1	-117613,41 DSTL5	18764,49 DSTL5
KED2	Maxima	1876,13 WL	13,79 DSTL10	143,28 DSTL5	0,00 COMB1	117613,41 DSTL5	18764,49 DSTL5
KED3	Maxima	-10980,76 DSTL3	-6,09 WL	15,66 DSTL4	0,00 COMB2	24213,07 DSTL4	-10980,76 DSTL3
KED3	Maxima	-180,37 WL	24,43 DSTL3	23,43 DSTL7	0,00 COMB2	11313,48 DSTL4	18764,49 DSTL3
KED4	Maxima	-14123,06 DSTL3	-38,51 DSTL6	-26,47 DSTL5	0,00 COMB1	-22507,77 DSTL6	-14999,61 DSTL3
KED4	Maxima	-70,39 WL	8,57 WL	24,82 DSTL10	0,00 COMB1	22507,77 DSTL6	14999,61 DSTL3
KED5	Maxima	-2069,27 DSTL2	-39,03 DSTL3	-276,23 DSTL3	0,00 COMB1	-21223,16 DSTL3	-2069,27 DSTL3
KED5	Maxima	136,67 WL	100,39 DSTL5	206,00 DSTL3	0,00 COMB2	21223,16 DSTL3	2069,27 DSTL3
KED6	Maxima	-1373,41 DSTL6	-39,79 DSTL9	-275,75 DSTL10	0,00 COMB2	-21223,16 DSTL6	-1373,41 DSTL6
KED6	Maxima	130,27 WR	99,89 DSTL8	275,77 DSTL5	0,00 COMB1	21223,16 DSTL6	1373,41 DSTL6
KED10	Maxima	-1892,37 DSTL2	-111,36 DSTL1	-159,17 DSTL3	0,00 COMB2	-24661,80 DSTL3	-1892,37 DSTL2
KED10	Maxima	209,01 WL	103,18 DSTL1	159,71 DSTL9	0,00 COMB1	24661,80 DSTL3	2092,37 DSTL1
KED13	Maxima	-6564,72 DSTL6	-111,43 DSTL1	-72,30 DSTL5	0,01 COMB2	-6552,32 DSTL5	-50132,59 DSTL5
KED13	Maxima	2720,48 WR	103,31 DSTL1	48,23 DSTL10	0,00 COMB1	6552,32 DSTL5	11627,23 DSTL1
KED14	Maxima	-6875,32 DSTL5	-110,79 DSTL1	-92,58 DSTL3	0,00 COMB2	-6833,36 DSTL3	-49004,50 DSTL5
KED14	Maxima	2526,69 WL	105,34 DSTL1	48,91 DSTL3	0,00 COMB2	6833,36 DSTL3	22637,23 DSTL1
KED10	Maxima	-10273,33 DSTL3	-110,17 DSTL1	-335,44 DSTL3	0,00 COMB2	-332046,06 DSTL3	-45136,49 DSTL3
KED10	Maxima	2046,14 WR	106,56 DSTL1	298,60 DSTL3	0,00 COMB2	332046,06 DSTL3	19660,79 DSTL1
KED15	Maxima	-1377,13 DSTL3	-111,11 DSTL1	-136,08 DSTL10	0,00 COMB1	-24761,41 DSTL3	-1377,13 DSTL3
KED15	Maxima	267,41 WR	104,51 DSTL1	130,64 DSTL3	0,00 COMB2	24761,41 DSTL3	23461,06 DSTL1
KED10	Maxima	-6557,13 DSTL3	-111,41 DSTL1	-48,56 DSTL10	0,00 COMB1	-65961,06 DSTL3	-60096,62 DSTL3
KED10	Maxima	2715,94 WR	105,32 DSTL1	52,66 DSTL4	0,00 COMB2	65961,06 DSTL3	22637,23 DSTL1
KED15	Maxima	-10486,94 DSTL3	-110,96 DSTL1	-298,23 DSTL10	0,00 COMB2	-331991,73 DSTL3	-36143,12 DSTL3
KED15	Maxima	1613,52 WL	103,74 DSTL1	294,66 DSTL3	0,00 COMB2	331991,73 DSTL3	19660,79 DSTL1

SAP2000 v7.42 File: KUDA-KUDA IREV Hgfi-m Units PAGE 1
10/24/03 22:49:15

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Kampus D3 Ekonomi UII Block E

M A T E R I A L P R O P E R T Y D A T A

MAT LABEL	MODULUS OF ELASTICITY	POISSON'S RATIO	THERMAL COEFF	WEIGHT PER UNIT VOL	MASS PER UNIT VOL
STEEL	200000000	0.300	1.170E-05	7853.414	785.147
BAJA	2.000E+10	0.300	1.170E-05	7853.400	785.100
BATI	2.000E+10	0.300	1.170E-05	7853.300	785.100

SAP2000 v7.42 File: KUDA-KUDA IREV Hgfi-m Units PAGE 2
10/24/03 22:49:15

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M A T E R I A L P R O P E R T Y D A T A

MAT LABEL	DESIGN CODE	STEEL FV	CONCRETE FC	REBAR FV	CONCRETE FCS	REBAR FVS
STEEL		S 24010507.0				
BAJA		S 24473200.0				
BATI		S 25310500.0				

SAP2000 v7.42 File: KUDA-KUDA IREV Hgfi-m Units PAGE 3
10/24/03 22:49:15

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F R A M E S E C T I O N P R O P E R T Y D A T A

SECTION LABEL	MAT LABEL	SECTION TYPE	DEPTH n	FLANGE WIDTH TOP	FLANGE THICK TOP	WEB THICK	FLANGE WIDTH BOTTOM	FLANGE THICK BOTTOM
EL55K5EK	BAJA	EL55K5EK5-10	5.500E-02	0.120	5.000E-03	5.000E-03	0.000	0.000
EL65K6EK	BAJA	EL65K6EK5-10	5.500E-02	0.140	5.000E-03	5.000E-03	0.000	0.000
EL60K6D1	BAJA		5.000E-02	0.110	5.000E-03	5.000E-03	0.000	0.000
EL60K6D1	BAJA		5.000E-02	0.130	5.000E-03	5.000E-03	0.000	0.000
EL45K4EK	BAJA	EL45K4EK5-10	4.500E-02	0.100	5.000E-03	5.000E-03	0.000	0.000
EL45K3EK	STEEL	EL45K3EK5-10	4.500E-02	7.000E-02	5.000E-03	5.000E-03	0.000	0.000
EL45K4EK	STEEL	EL45K4EK4-10	4.500E-02	0.100	4.000E-03	4.000E-03	0.000	0.000
EL55K3EK	STEEL	EL55K3EK5-10	5.500E-02	8.000E-02	5.000E-03	5.000E-03	0.000	0.000

SAP2000 v7.42 File: KUDA-KUDA IREV Hgfi-m Units PAGE 4
10/24/03 22:49:15

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Kampus D3 Ekonomi UII Block E

F R A M E S E C T I O N P R O P E R T Y D A T A

SECTION LABEL	AREA	TORSIONAL INERTIA	MOMENTS OF INERTIA		SHAP AREA	
			I11	I22	A1	A2
EL55K5EK	1.050E-03	0.000	0.000	0.000	5.500E-04	5.500E-04
EL65K6EK	1.250E-03	0.000	0.000	1.178E-05	5.500E-04	5.500E-04
EL60K6D1	8.500E-04	0.000	0.000	0.000	5.000E-04	5.000E-04
EL60K6D1	1.368E-03	0.000	0.000	1.141E-05	7.200E-04	7.200E-04
EL45K4EK	5.500E-04	0.000	0.000	0.000	4.500E-04	4.500E-04
EL45K3EK	7.000E-04	0.000	0.000	0.000	4.500E-04	2.000E-04
EL45K4EK	5.500E-04	0.000	0.000	0.000	5.500E-04	5.500E-04
EL55K3EK	8.500E-04	0.000	0.000	0.000	5.500E-04	5.500E-04

SAP2000 v7.42 File: KUDA-KUDA IREV Hgfi-m Units PAGE 5
10/24/03 22:49:15

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Kampus D3 Ekonomi UII Block E

F R A M E S E C T I O N P R O P E R T Y D A T A

SECTION LABEL	SECTION MODULII		PLASTIC MODULII		RATIO OF ELONGATION	
	S11	S22	P11	P22	R11	R22
EL55K5EK	1.041E-05	1.248E-05	7.700E-06	0.000	1.599E-02	2.570E-02
EL65K6EK	1.460E-05	1.683E-05	1.090E-05	0.000	2.322E-02	7.070E-02
EL60K6D1	8.310E-06	1.055E-05	1.157E-05	1.838E-05	1.539E-02	3.472E-02
EL60K6D1	1.090E-05	1.736E-05	1.965E-05	3.000E-05	1.347E-02	2.899E-02
EL45K4EK	7.000E-06	8.760E-06	5.060E-06	0.000	1.376E-02	2.270E-02

3145MB0M 4,639E-06 4,747E-06 4,750E-06 0,000 1,415E-06 1,540E-06
 3145MB0M 5,783E-06 5,868E-06 4,130E-06 0,000 1,890E-06 2,250E-06
 3155MB0M 5,010E-06 5,008E-06 7,190E-06 0,000 1,701E-06 1,590E-06

SAP2000 v7.42 File: KUDA-KUDA IPEV Kgf-m Units PAGE 6
 10/24/03 22:48:15

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 Kampus D3 Ekonomi UII Block B

LOAD COMBINATION MULTIPLEPS

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
DSTL1	ADD	DL	1,0000	STATIC (DEAD)	DSTL1
DSTL2	ADD	DL LL	1,2000 1,8000	STATIC (DEAD) STATIC (LIVE)	DSTL2
DSTL3	ADD	DL LL WL	1,2000 0,5000 1,3000	STATIC (DEAD) STATIC (LIVE) STATIC (WIND)	DSTL3
DSTL4	ADD	DL LL WL	1,2000 0,5000 -1,3000	STATIC (DEAD) STATIC (LIVE) STATIC (WIND)	DSTL4
DSTL5	ADD	DL LL WR	1,2000 0,5000 1,3000	STATIC (DEAD) STATIC (LIVE) STATIC (WIND)	DSTL5
DSTL6	ADD	DL LL WR	1,2000 0,5000 -1,3000	STATIC (DEAD) STATIC (LIVE) STATIC (WIND)	DSTL6
DSTL7	ADD	DL LL	0,9000 1,3000	STATIC (DEAD) STATIC (WIND)	DSTL7
DSTL8	ADD	DL WL	0,9000 -1,3000	STATIC (DEAD) STATIC (WIND)	DSTL8
DSTL9	ADD	DL WR	0,9000 1,3000	STATIC (DEAD) STATIC (WIND)	DSTL9
DSTL10	ADD	DL WR	0,9000 -1,3000	STATIC (DEAD) STATIC (WIND)	DSTL10
COMB1	ADD	DL	1,0000	STATIC (DEAD)	COMB1
COMB2	ADD	LL	1,0000	STATIC (LIVE)	COMB2

SAP2000 v7.42 File: KUDA-KUDA IPEV Kgf-m Units PAGE 7
 10/24/03 22:48:15

sGony & Goh, Engineer
 Kampus D3 Ekonomi UII Block B

CODE PREFERENCES

Code: AISC-LRFD93

Phi_bending : 0,9
 Phi_tension : 0,9
 Phi_compression : 0,85
 Phi_shear : 0,9

SAP2000 v7.42 File: KUDA-KUDA IPEV Kgf-m Units PAGE 8
 10/24/03 22:48:15

sGony & Goh, Engineer
 Kampus D3 Ekonomi UII Block B

[illegible]

MEMBER	ELSOXSD1	CONCENT	1,000	1,000	1,000	1,000	1,000
MEMBER	ELSOXSD1	MOMENT	1,000	1,000	1,000	1,000	1,000
MEMBER	ELSOXSD1	AXIAL	1,000	1,000	1,000	1,000	1,000
MEMBER	ELSOXSD1	CONCENT	1,000	1,000	1,000	1,000	1,000

SAP2000 v7.40 File: MUDA-MUDA 199V Rpt-m Units PAGE 9
10/24/03 11:48:17

Design: S. Ochoa, Engineer
Planquis D.9 Khonoma UII Block B

STEEL TYPE 3 CHECK OUTPUT (AISC-LRFD)

FRAME ID	SECTION ID	/-----MOMENT INTERACTION CHECK-----/				/---SHEAR---/		/---SHEAR---/	
		COMBO	RATIO	M1 + M2 + M3	COMBO	RATIO	COMBO	RATIO	
GA1	ELSOXSD1	DTL3 (T)	0.072	= 0.019 + 0.053 + 0.000	DTL3	0.000	DTL5	0.000	
GA2	ELSOXSD1	DTL3 (T)	0.072	= 0.019 + 0.053 + 0.000	DTL3	0.000	DTL4	0.000	
GA3	ELSOXSD1	DTL3 (T)	0.177	= 0.019 + 0.154 + 0.000	DTL3	0.000	DTL5	0.000	
GA4	ELSOXSD1	DTL3 (T)	0.177	= 0.019 + 0.154 + 0.000	DTL3	0.000	DTL4	0.000	
GA5	ELSOXSD1	DTL3 (T)	0.143	= 0.009 + 0.132 + 0.000	DTL3	0.000	DTL5	0.000	
GA6	ELSOXSD1	DTL3 (T)	0.141	= 0.009 + 0.132 + 0.000	DTL3	0.000	DTL5	0.000	
GA7	ELSOXSD1	DTL3 (C)	0.000	= 0.002 + 0.001 + 0.004	DTL3	0.000	DTL3	0.000	
GA8	ELSOXSD1	DTL3 (T)	0.000	= 0.000 + 0.004 + 0.004	DTL3	0.000	DTL3	0.000	
GA9	ELSOXSD1	DTL3 (C)	0.000	= 0.002 + 0.001 + 0.004	DTL3	0.000	DTL3	0.000	
GA10	ELSOXSD1	DTL3 (T)	0.000	= 0.000 + 0.004 + 0.000	DTL3	0.000	DTL5	0.000	
GB1	ELSOXSD1	DTL3 (C)	0.001	= 0.000 + 0.002 + 0.000	DTL3	0.000	DTL4	0.000	
GB2	ELSOXSD1	DTL3 (C)	0.001	= 0.000 + 0.002 + 0.000	DTL3	0.000	DTL4	0.000	
GB3	ELSOXSD1	DTL3 (C)	0.165	= 0.000 + 0.127 + 0.000	DTL3	0.000	DTL4	0.000	
GB4	ELSOXSD1	DTL3 (C)	0.154	= 0.000 + 0.127 + 0.001	DTL3	0.000	DTL4	0.000	
GB5	ELSOXSD1	DTL3 (C)	0.103	= 0.014 + 0.087 + 0.001	DTL3	0.000	DTL4	0.000	
GB6	ELSOXSD1	DTL3 (C)	0.103	= 0.014 + 0.087 + 0.002	DTL3	0.000	DTL4	0.000	
GB7	ELSOXSD1	DTL3 (C)	0.093	= 0.019 + 0.074 + 0.000	DTL3	0.000	DTL5	0.000	
GB8	ELSOXSD1	DTL3 (C)	0.093	= 0.019 + 0.074 + 0.000	DTL3	0.000	DTL4	0.000	
GB9	ELSOXSD1	DTL3 (T)	0.104	= 0.017 + 0.087 + 0.000	DTL3	0.000	DTL5	0.000	
GB10	ELSOXSD1	DTL3 (T)	0.104	= 0.017 + 0.087 + 0.000	DTL3	0.000	DTL3	0.000	
GB11	ELSOXSD1	DTL3 (T)	0.098	= 0.006 + 0.090 + 0.000	DTL3	0.000	DTL4	0.000	
GB12	ELSOXSD1	DTL3 (T)	0.098	= 0.006 + 0.090 + 0.000	DTL3	0.000	DTL4	0.000	
GV1	ELSOXSD1	DTL3 (C)	0.144	= 0.007 + 0.046 + 0.001	DTL3	0.000	DTL5	0.000	
GV2	ELSOXSD1	DTL3 (C)	0.144	= 0.007 + 0.046 + 0.001	DTL3	0.000	DTL4	0.000	
GV3	ELSOXSD1	DTL3 (C)	0.109	= 0.041 + 0.068 + 0.000	DTL3	0.000	DTL5	0.000	
GV4	ELSOXSD1	DTL3 (C)	0.109	= 0.041 + 0.068 + 0.000	DTL3	0.000	DTL5	0.000	
HA1	ELSOXSD1	DTL3 (T)	0.071	= 0.019 + 0.052 + 0.000	DTL3	0.000	DTL5	0.000	
HA2	ELSOXSD1	DTL3 (T)	0.071	= 0.019 + 0.052 + 0.000	DTL3	0.000	DTL6	0.000	
HA3	ELSOXSD1	DTL3 (T)	0.113	= 0.023 + 0.090 + 0.000	DTL3	0.000	DTL6	0.000	
HA4	ELSOXSD1	DTL3 (T)	0.113	= 0.023 + 0.090 + 0.000	DTL3	0.000	DTL6	0.000	
HA5	ELSOXSD1	DTL3 (C)	0.086	= 0.002 + 0.080 + 0.004	DTL3	0.000	DTL5	0.000	
HA6	ELSOXSD1	DTL3 (T)	0.087	= 0.000 + 0.082 + 0.004	DTL3	0.000	DTL5	0.000	
HA7	ELSOXSD1	DTL3 (C)	0.086	= 0.002 + 0.080 + 0.004	DTL3	0.000	DTL6	0.000	
HA8	ELSOXSD1	DTL3 (C)	0.079	= 0.028 + 0.051 + 0.000	DTL3	0.000	DTL6	0.000	
HA9	ELSOXSD1	DTL3 (C)	0.080	= 0.028 + 0.051 + 0.000	DTL3	0.000	DTL6	0.000	
HA10	ELSOXSD1	DTL3 (C)	0.111	= 0.045 + 0.065 + 0.001	DTL3	0.000	DTL6	0.000	

HD4	2L50XSD1	DSTL2	(C)	0,111 = 0,045 + 0,066 + 0,001	DSTL7	0,001	DSTL6	0,000
HD1	2L50XSD1	DSTL8	(C)	0,091 = 0,018 + 0,073 + 0,000	DSTL1	0,003	DSTL6	0,000
HD2	2L50XSD1	DSTL5	(C)	0,091 = 0,018 + 0,073 + 0,000	DSTL5	0,003	DSTL6	0,000
HD3	2L50XSD1	DSTL1	(C)	0,109 = 0,041 + 0,047 + 0,001	DSTL5	0,001	DSTL4	0,000
HD4	2L50XSD1	DSTL2	(C)	0,100 = 0,151 + 0,047 + 0,001	DSTL5	0,001	DSTL4	0,000
HD1	2L50XSD1	DSTL5	(T)	0,092 = 0,008 + 0,084 + 0,000	DSTL1	0,000	DSTL6	0,000
HD2	2L50XSD1	DSTL5	(T)	0,092 = 0,008 + 0,084 + 0,000	DSTL1	0,000	DSTL6	0,000
HD3	2L50XSD1	COMB2	(C)	0,001 = 0,001 + 0,000 + 0,000	DSTL5	0,000	COMB2	0,000
HD4	2L50XSD1	DSTL5	(T)	0,012 = 0,003 + 0,009 + 0,000	DSTL5	0,001	DSTL5	0,013
IIA1	2L50XSD1	DSTL5	(C)	0,091 = 0,018 + 0,083 + 0,010	DSTL3	0,122 = 0,002 + 0,000 + 0,121	DSTL1	0,001
IIA2	2L50XSD1	DSTL3	(T)	0,122 = 0,002 + 0,000 + 0,121	DSTL1	0,001	DSTL1	0,001
IIA3	2L50XSD1	DSTL1	(C)	0,042 = 0,018 + 0,013 + 0,010	DSTL6	0,016 = 0,003 + 0,010 + 0,003	DSTL1	0,001
IIA4	2L50XSD1	DSTL6	(T)	0,016 = 0,003 + 0,010 + 0,003	DSTL6	0,001	DSTL6	0,013
IIA5	2L50XSD1	DSTL5	(C)	0,190 = 0,018 + 0,023 + 0,149	DSTL3	0,183 = 0,003 + 0,000 + 0,181	DSTL4	0,001
IIA6	2L50XSD1	DSTL3	(T)	0,183 = 0,003 + 0,000 + 0,181	DSTL4	0,001	DSTL3	0,012
IIA7	2L50XSD1	DSTL3	(C)	0,276 = 0,018 + 0,042 + 0,239	DSTL5	0,150 = 0,008 + 0,021 + 0,126	DSTL1	0,001
IIA8	2L50XSD1	DSTL5	(T)	0,150 = 0,008 + 0,021 + 0,126	DSTL4	0,001	DSTL3	0,001
IIA9	2L50XSD1	DSTL3	(C)	0,039 = 0,018 + 0,013 + 0,010	DSTL4	0,016 = 0,003 + 0,010 + 0,003	DSTL1	0,001
IIA10	2L50XSD1	DSTL4	(T)	0,016 = 0,003 + 0,010 + 0,003	DSTL1	0,001	DSTL3	0,001
IIA11	2L50XSD1	DSTL3	(C)	0,039 = 0,018 + 0,013 + 0,010	DSTL4	0,016 = 0,003 + 0,010 + 0,003	DSTL1	0,001
IIA12	2L50XSD1	DSTL4	(T)	0,016 = 0,003 + 0,010 + 0,003	DSTL1	0,001	DSTL3	0,012
IIA13	2L50XSD1	DSTL3	(C)	0,275 = 0,015 + 0,022 + 0,238	DSTL5	0,151 = 0,003 + 0,021 + 0,127	DSTL5	0,002
IIA14	2L50XSD1	DSTL5	(T)	0,151 = 0,003 + 0,021 + 0,127	DSTL5	0,002	DSTL2	0,007
IIA15	2L50XSD1	DSTL2	(C)	0,153 = 0,004 + 0,019 + 0,129	DSTL5	0,142 = 0,003 + 0,020 + 0,109	DSTL1	0,001
IIA16	2L50XSD1	DSTL5	(T)	0,142 = 0,003 + 0,020 + 0,109	DSTL1	0,001	DSTL5	0,002
IIA17	2L50XSD1	DSTL2	(C)	0,051 = 0,005 + 0,015 + 0,036	DSTL5	0,061 = 0,005 + 0,017 + 0,037	DSTL1	0,001
IIA18	2L50XSD1	DSTL5	(T)	0,061 = 0,005 + 0,017 + 0,037	DSTL1	0,001	DSTL5	0,002
IIA19	2L50XSD1	DSTL2	(C)	0,051 = 0,005 + 0,015 + 0,036	DSTL5	0,061 = 0,005 + 0,017 + 0,037	DSTL1	0,001
IIA20	2L50XSD1	DSTL5	(T)	0,061 = 0,005 + 0,017 + 0,037	DSTL1	0,001	DSTL5	0,007
IIA21	2L50XSD1	DSTL2	(C)	0,153 = 0,004 + 0,019 + 0,129	DSTL5	0,141 = 0,003 + 0,030 + 0,108	DSTL3	0,001
IIA22	2L50XSD1	DSTL5	(T)	0,141 = 0,003 + 0,030 + 0,108	DSTL3	0,142 = 0,005 + 0,017 + 0,119	DSTL3	0,006
IIA23	2L50XSD1	DSTL3	(T)	0,142 = 0,005 + 0,017 + 0,119	DSTL3	0,130 = 0,003 + 0,027 + 0,100	DSTL1	0,001
IIA24	2L50XSD1	DSTL1	(C)	0,054 = 0,010 + 0,015 + 0,029	DSTL5	0,054 = 0,005 + 0,017 + 0,038	DSTL1	0,001
IIA25	2L50XSD1	DSTL5	(T)	0,054 = 0,005 + 0,017 + 0,038	DSTL1	0,001	DSTL3	0,000
IIA26	2L50XSD1	DSTL2	(C)	0,054 = 0,010 + 0,015 + 0,029	DSTL5	0,050 = 0,005 + 0,017 + 0,038	DSTL3	0,001
IIA27	2L50XSD1	DSTL5	(T)	0,050 = 0,005 + 0,017 + 0,038	DSTL3	0,142 = 0,005 + 0,017 + 0,119	DSTL1	0,001
IIA28	2L50XSD1	DSTL1	(C)	0,027 = 0,037 + 0,021 + 0,029	DSTL5	0,066 = 0,005 + 0,021 + 0,039	DSTL1	0,001
IIA29	2L50XSD1	DSTL5	(T)	0,066 = 0,005 + 0,021 + 0,039	DSTL1	0,001	DSTL6	0,001
IIA30	2L50XSD1	COMB2	(C)	0,005 = 0,000 + 0,000 + 0,005	DSTL1	0,001	DSTL6	0,001
IIA31	2L50XSD1	DSTL5	(T)	0,063 = 0,001 + 0,018 + 0,044	DSTL1	0,001	DSTL5	0,001
IIA32	2L50XSD1	COMB2	(C)	0,005 = 0,000 + 0,000 + 0,005	DSTL1	0,001	DSTL5	0,001
IIA33	2L50XSD1	DSTL5	(T)	0,063 = 0,001 + 0,019 + 0,044	DSTL1	0,001	DSTL1	0,001
IIA34	2L50XSD1	DSTL6	(C)	0,037 = 0,037 + 0,021 + 0,029	DSTL1	0,001	DSTL2	0,001
IIA35	2L50XSD1	DSTL5	(T)	0,066 = 0,006 + 0,021 + 0,038	DSTL1	0,001	DSTL2	0,001
IIA36	2L50XSD1	DSTL4	(C)	0,058 = 0,038 + 0,021 + 0,026	DSTL1	0,001	DSTL3	0,001
IIA37	2L50XSD1	DSTL3	(T)	0,058 = 0,004 + 0,020 + 0,034	DSTL1	0,001	DSTL3	0,001
IIA38	2L50XSD1	COMB2	(C)	0,005 = 0,000 + 0,000 + 0,005	DSTL1	0,001	DSTL3	0,001
IIA39	2L50XSD1	DSTL3	(T)	0,063 = 0,001 + 0,017 + 0,045	DSTL1	0,001	DSTL3	0,001
IIA40	2L50XSD1	COMB2	(C)	0,005 = 0,000 + 0,000 + 0,005	DSTL1	0,001	DSTL3	0,001
IIA41	2L50XSD1	DSTL3	(T)	0,063 = 0,001 + 0,017 + 0,045	DSTL1	0,001	DSTL3	0,001

K1A2	2L50XSD1	DSTL6	(T)	0,162 = 0,013 + 0,049 + 0,100	DSTL5	0,002	DSTL3	0,004
K1A3	2L50XSD1	DSTL4	(T)	0,162 = 0,013 + 0,049 + 0,100	DSTL1	0,002	DSTL5	0,000
K1A3	2L50XSD1	DSTL5	(C)	0,071 = 0,019 + 0,043 + 0,009				
K1A4	2L50XSD1	COMB1	(T)	0,000 = 0,000 + 0,001 + 0,000	DSTL1	0,002	DSTL4	0,000
K1A4	2L50XSD1	DSTL3	(C)	0,042 = 0,017 + 0,042 + 0,003				
K1A4	2L50XSD1	COMB1	(T)	0,000 = 0,000 + 0,000 + 0,000	DSTL1	0,002	DSTL5	0,001
K1A5	2L50XSD1	DSTL5	(C)	0,173 = 0,033 + 0,037 + 0,043	DSTL1	0,001	DSTL4	0,002
K1A6	2L50XSD1	DSTL3	(C)	0,124 = 0,068 + 0,037 + 0,048	DSTL1	0,001	DSTL5	0,005
K1A7	2L50XSD1	DSTL5	(C)	0,471 = 0,315 + 0,018 + 0,138	DSTL1	0,001	DSTL4	0,005
K1A8	2L50XSD1	DSTL3	(C)	0,467 = 0,311 + 0,019 + 0,136	DSTL1	0,002	DSTL5	0,003
K1A8	2L50XSD1	DSTL6	(C)	0,152 = 0,004 + 0,031 + 0,105	DSTL1	0,002	DSTL5	0,004
K1B1	2L50XSD1	DSTL5	(C)	0,213 = 0,043 + 0,046 + 0,123	DSTL1	0,002	DSTL4	0,004
K1B2	2L50XSD1	DSTL3	(C)	0,320 = 0,048 + 0,047 + 0,123	DSTL5	0,003	DSTL6	0,004
K1B3	2L50XSD1	DSTL2	(C)	0,536 = 0,484 + 0,052 + 0,000	DSTL3	0,003	DSTL4	0,004
K1B4	2L50XSD1	DSTL1	(C)	0,556 = 0,486 + 0,060 + 0,003	DSTL1	0,002	DSTL5	0,000
K1B5	2L50XSD1	DSTL3	(C)	0,378 = 0,332 + 0,026 + 0,000	DSTL1	0,002	DSTL3	0,000
K1B6	2L50XSD1	DSTL5	(C)	0,332 = 0,233 + 0,024 + 0,005	DSTL1	0,002	DSTL5	0,001
K1B7	2L50XSD1	DSTL6	(C)	0,149 = 0,087 + 0,030 + 0,031				
K1B8	2L50XSD1	DSTL9	(T)	0,058 = 0,000 + 0,030 + 0,028	DSTL1	0,002	DSTL6	0,001
K1B8	2L50XSD1	DSTL5	(C)	0,079 = 0,235 + 0,027 + 0,027	DSTL3	0,002	DSTL5	0,010
K1D1	2L50XSD1	DSTL5	(C)	0,168 = 0,065 + 0,024 + 0,102	DSTL5	0,002	DSTL4	0,010
K1D2	2L50XSD1	DSTL3	(C)	0,265 = 0,067 + 0,038 + 0,171	DSTL5	0,002	DSTL5	0,002
K1D3	2L50XSD1	DSTL5	(T)	0,137 = 0,049 + 0,035 + 0,054	DSTL5	0,002	DSTL3	0,002
K1D4	2L50XSD1	DSTL3	(T)	0,138 = 0,047 + 0,033 + 0,057	DSTL1	0,002	DSTL5	0,002
K1D5	2L50XSD1	DSTL5	(T)	0,119 = 0,038 + 0,036 + 0,054	DSTL1	0,002	DSTL3	0,003
K1D5	2L50XSD1	DSTL3	(T)	0,125 = 0,027 + 0,035 + 0,062	DSTL1	0,002	DSTL6	0,002
K1D7	2L50XSD1	DSTL6	(T)	0,092 = 0,005 + 0,027 + 0,058	DSTL1	0,002	DSTL4	0,002
K1D8	2L50XSD1	DSTL4	(T)	0,092 = 0,005 + 0,028 + 0,058	DSTL1	0,002	DSTL5	0,003
K1D9	2L50XSD1	DSTL5	(C)	0,215 = 0,075 + 0,034 + 0,145	DSTL5	0,000	DSTL5	0,002
K1V1	2L50XSD1	DSTL5	(C)	0,134 = 0,071 + 0,013 + 0,051	DSTL3	0,001	DSTL4	0,002
K1V2	2L50XSD1	DSTL2	(C)	0,196 = 0,071 + 0,030 + 0,093	DSTL5	0,000	DSTL5	0,000
K1V3	2L50XSD1	DSTL2	(C)	0,087 = 0,376 + 0,011 + 0,391	DSTL5	0,000	DSTL4	0,000
K1V4	2L50XSD1	DSTL5	(C)	0,083 = 0,065 + 0,015 + 0,003	DSTL6	0,002	DSTL5	0,004
K1V5	2L50XSD1	DSTL6	(C)	0,165 = 0,010 + 0,037 + 0,111	DSTL6	0,002	DSTL3	0,004
K1V6	2L50XSD1	DSTL6	(C)	0,169 = 0,010 + 0,050 + 0,111	DSTL5	0,002	DSTL5	0,004
K2A1	2L50XSD1	DSTL4	(T)	0,162 = 0,013 + 0,049 + 0,100	DSTL1	0,002	DSTL5	0,004
K2A2	2L50XSD1	DSTL6	(T)	0,162 = 0,013 + 0,049 + 0,100	DSTL1	0,002	DSTL4	0,000
K2A3	2L50XSD1	DSTL3	(C)	0,069 = 0,017 + 0,042 + 0,009				
K2A4	2L50XSD1	COMB2	(T)	0,003 = 0,000 + 0,002 + 0,000	DSTL5	0,002	DSTL6	0,000
K2A5	2L50XSD1	DSTL5	(C)	0,070 = 0,019 + 0,043 + 0,008				
K2A6	2L50XSD1	COMB2	(T)	0,003 = 0,000 + 0,002 + 0,000	DSTL1	0,002	DSTL4	0,001
K2A6	2L50XSD1	DSTL3	(C)	0,162 = 0,039 + 0,037 + 0,043	DSTL1	0,002	DSTL6	0,002
K2A7	2L50XSD1	DSTL5	(C)	0,173 = 0,033 + 0,037 + 0,043	DSTL1	0,001	DSTL4	0,005
K2A8	2L50XSD1	DSTL3	(C)	0,467 = 0,310 + 0,019 + 0,136	DSTL1	0,001	DSTL6	0,005
K2A9	2L50XSD1	DSTL5	(C)	0,471 = 0,315 + 0,018 + 0,138	DSTL1	0,002	DSTL5	0,003
K2B1	2L50XSD1	DSTL5	(C)	0,163 = 0,024 + 0,033 + 0,106	DSTL1	0,002	DSTL4	0,004

K2A2	2L50XSD1	DSTL3	(C)	$0.000 = 0.048 + 0.047 + 0.105$	DSTL1	0.002	DSTL3	0.004
K2A3	2L50XSD1	DSTL5	(C)	$0.119 = 0.048 + 0.046 + 0.125$	DSTL3	0.003	DSTL4	0.004
K2B3	2L50XSD1	DSTL2	(C)	$0.035 = 0.048 + 0.050 + 0.001$	DSTL3	0.003	DSTL5	0.004
K2B3	2L50XSD1	DSTL2	(C)	$0.035 = 0.048 + 0.052 + 0.000$	DSTL1	0.000	DSTL3	0.004
K2B3	2L50XSD1	DSTL3	(C)	$0.106 = 0.152 + 0.004 + 0.000$	DSTL1	0.012	DSTL3	0.000
K2B7	2L50XSD1	DSTL3	(C)	$0.078 = 0.140 + 0.006 + 0.001$	DSTL1	0.002	DSTL5	0.000
K2B7	2L50XSD1	DSTL5	(C)	$0.177 = 0.124 + 0.017 + 0.036$	DSTL3	0.002	DSTL5	0.000
K2B8	2L50XSD1	DSTL6	(C)	$0.074 = 0.120 + 0.017 + 0.027$	DSTL3	0.002	DSTL5	0.000
K2B8	2L50XSD1	DSTL6	(T)	$0.068 = 0.000 + 0.000 + 0.068$	DSTL3	0.002	DSTL5	0.001
K2B8	2L50XSD1	DSTL6	(C)	$0.141 = 0.099 + 0.012 + 0.030$	DSTL3	0.002	DSTL5	0.001
K2B8	2L50XSD1	DSTL6	(T)	$0.068 = 0.000 + 0.000 + 0.068$	DSTL3	0.002	DSTL5	0.001
K2D1	2L50XSD1	DSTL3	(C)	$0.084 = 0.048 + 0.026 + 0.101$	DSTL3	0.002	DSTL4	0.010
K2D2	2L50XSD1	DSTL5	(C)	$0.088 = 0.069 + 0.024 + 0.102$	DSTL3	0.002	DSTL5	0.010
K2D3	2L50XSD1	DSTL3	(T)	$0.135 = 0.047 + 0.043 + 0.045$	DSTL5	0.002	DSTL3	0.002
K2D4	2L50XSD1	DSTL5	(T)	$0.107 = 0.048 + 0.036 + 0.023$	DSTL1	0.002	DSTL3	0.001
K2D5	2L50XSD1	DSTL3	(T)	$0.119 = 0.027 + 0.038 + 0.054$	DSTL1	0.002	DSTL5	0.002
K2D6	2L50XSD1	DSTL5	(T)	$0.118 = 0.018 + 0.036 + 0.064$	DSTL1	0.002	DSTL5	0.002
K2D7	2L50XSD1	DSTL4	(T)	$0.090 = 0.008 + 0.028 + 0.054$	DSTL1	0.002	DSTL4	0.001
K2D8	2L50XSD1	DSTL6	(T)	$0.091 = 0.006 + 0.017 + 0.068$	DSTL1	0.002	DSTL5	0.002
K2D9	2L50XSD1	DSTL3	(C)	$0.252 = 0.074 + 0.038 + 0.140$	DSTL5	0.000	DSTL3	0.002
K2V1	2L50XSD1	DSTL3	(C)	$0.112 = 0.079 + 0.012 + 0.021$	DSTL5	0.000	DSTL5	0.002
K2V2	2L50XSD1	DSTL5	(C)	$0.136 = 0.041 + 0.019 + 0.076$	DSTL5	0.000	DSTL4	0.000
K2V3	2L50XSD1	DSTL5	(C)	$0.069 = 0.048 + 0.015 + 0.006$	DSTL5	0.000	DSTL5	0.000
K2V4	2L50XSD1	DSTL2	(C)	$0.027 = 0.075 + 0.011 + 0.001$	DSTL5	0.002	DSTL3	0.004
K2V5	2L50XSD1	DSTL6	(C)	$0.129 = 0.010 + 0.068 + 0.111$	DSTL5	0.002	DSTL5	0.004
K2V6	2L50XSD1	DSTL6	(C)	$0.128 = 0.019 + 0.067 + 0.111$	DSTL2	0.002	DSTL6	0.003
K2A10	2L50XSD1	DSTL5	(C)	$0.163 = 0.034 + 0.028 + 0.101$	DSTL1	0.002	DSTL5	0.001
K2B13	2L50XSD1	DSTL6	(C)	$0.137 = 0.079 + 0.032 + 0.026$	DSTL1	0.002	DSTL5	0.001
K2B13	2L50XSD1	DSTL6	(T)	$0.067 = 0.002 + 0.007 + 0.058$	DSTL1	0.002	DSTL3	0.001
K2B14	2L50XSD1	DSTL5	(C)	$0.141 = 0.083 + 0.032 + 0.026$	DSTL1	0.002	DSTL3	0.001
K2B14	2L50XSD1	DSTL6	(T)	$0.066 = 0.001 + 0.038 + 0.025$	DSTL1	0.002	DSTL3	0.002
K2A10	2L50XSD1	DSTL5	(C)	$0.093 = 0.074 + 0.038 + 0.143$	DSTL1	0.002	DSTL5	0.003
K2B10	2L50XSD1	DSTL6	(C)	$0.162 = 0.024 + 0.062 + 0.106$	DSTL1	0.002	DSTL5	0.001
K2D10	2L50XSD1	DSTL6	(C)	$0.137 = 0.079 + 0.032 + 0.026$	DSTL1	0.002	DSTL5	0.002
K2D10	2L50XSD1	DSTL6	(T)	$0.067 = 0.002 + 0.007 + 0.058$	DSTL1	0.002	DSTL5	0.002
K2D10	2L50XSD1	DSTL5	(C)	$0.233 = 0.075 + 0.034 + 0.124$				

*Crany, Inc

STATIC LOAD CASES

STATIC CASE	CASE TYPE	SELF WT FACTOR
DL	DEAD	1.0000
LL	LIVE	0.7000
WL	WIND	0.1000
WP	WIND	0.0000

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JOINT DATA

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	RESTRAINTS	ANGLE-A	ANGLE-B	ANGLE-C
1	0.00000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
2	4.50000	0.00000	0.00000	0 0 0 0 0	0.000	0.000	0.000
3	0.50000	0.00000	0.00000	1 1 1 0 0	0.000	0.000	0.000
4	0.00000	0.00000	2.00000	0 0 0 0 0	0.000	0.000	0.000
5	1.00000	0.00000	3.00000	0 0 0 0 0	0.000	0.000	0.000
6	1.20010	0.00000	1.84264	0 0 0 0 0	0.000	0.000	0.000
7	2.29999	0.00000	0.99716	0 0 0 0 0	0.000	0.000	0.000
8	2.80000	0.00000	2.00000	0 0 0 0 0	0.000	0.000	0.000
9	0.50000	0.00000	1.00000	0 0 0 0 0	0.000	0.000	0.000
10	1.20000	1.00000	3.00000	0 0 0 0 0	0.000	0.000	0.000
11	1.20000	4.50000	0.00000	0 0 0 0 0	0.000	0.000	0.000
12	1.20000	3.50000	0.00000	1 1 1 0 0	0.000	0.000	0.000
13	1.20000	1.20000	1.84000	0 0 0 0 0	0.000	0.000	0.000
14	1.20000	2.29999	0.95559	0 0 0 0 0	0.000	0.000	0.000
15	1.20000	2.80000	2.00000	0 0 0 0 0	0.000	0.000	0.000
17	1.20000	2.50000	1.00000	0 0 0 0 0	0.000	0.000	0.000
19	-4.50000	0.00000	3.00000	0 0 0 0 0	0.000	0.000	0.000
20	-0.50000	0.00000	0.00000	1 1 1 0 0	0.000	0.000	0.000
21	-1.20000	0.00000	3.00000	0 0 0 0 0	0.000	0.000	0.000
22	-2.20000	0.00000	2.20000	0 0 0 0 0	0.000	0.000	0.000
23	-3.80000	0.00000	1.00000	0 0 0 0 0	0.000	0.000	0.000
24	-1.20000	0.00000	1.84264	0 0 0 0 0	0.000	0.000	0.000
25	-0.29999	0.00000	0.88713	0 0 0 0 0	0.000	0.000	0.000
26	-1.20000	1.20000	3.00000	0 0 0 0 0	0.000	0.000	0.000
27	-1.20000	2.20000	2.00000	0 0 0 0 0	0.000	0.000	0.000
28	-1.20000	3.80000	1.00000	0 0 0 0 0	0.000	0.000	0.000
29	-1.20000	4.50000	0.00000	0 0 0 0 0	0.000	0.000	0.000
30	-1.20000	1.20000	1.84000	0 0 0 0 0	0.000	0.000	0.000
31	-1.20000	2.29999	0.95559	0 0 0 0 0	0.000	0.000	0.000
32	-1.20000	3.80000	0.00000	1 1 1 0 0	0.000	0.000	0.000

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FRAME ELEMENT DATA

FRAME	JNT-1	JNT-2	SECTION	ANGLE	PERMITS	SEGMENTS	P1	P2	FACTOR	LENGTH
FA1	13	14	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.414
FA2	17	11	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.414
FA3	27	28	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.497
FA4	16	17	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.597
FA5	16	17	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.555
FA6	10	15	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.555
FA7	21	25	2L45X45X	0.000	000000	4	0.000	0.000	1.000	1.100
FA8	5	10	2L45X45X	0.000	000000	4	0.000	0.000	1.000	1.200
FB1	12	29	2L45X45X	0.000	000000	4	0.000	0.000	1.000	1.000
FB2	11	11	2L45X45X	0.000	000000	4	0.000	0.000	1.000	1.000
FB3	11	32	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.474
FB4	14	10	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.474
FB5	20	03	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.001
FB6	12	14	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.001
FB7	06	24	2L45X45X	0.000	000000	4	0.000	0.000	1.000	1.200
FB8	12	5	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.200
FB1	31	23	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.209
FB2	14	17	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.202
FB3	30	27	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.204
FB4	10	16	2L45X45X	0.000	000000	2	0.000	0.000	1.000	1.204
FB5	26	24	2L45X45X	0.000	000000	2	0.000	0.000	1.000	0.005
FB6	10	2	2L45X45X	0.000	000000	2	0.000	0.000	1.000	0.048

00000000 07.42 File: 00000000 Kgf-m Unacc PAGE 4
10/25/98 10:19:51

POINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-XX	GLOBAL-YY	GLOBAL-ZZ
1	0.000	0.000	-365.400	0.000	0.000	0.000
5	0.000	0.000	-384.100	0.000	0.000	0.000
10	0.000	0.000	-400.000	0.000	0.000	0.000
5	0.000	0.000	-399.000	0.000	0.000	0.000
15	0.000	0.000	-111.400	0.000	0.000	0.000
9	0.000	0.000	-381.600	0.000	0.000	0.000
17	0.000	0.000	-219.000	0.000	0.000	0.000
2	0.000	0.000	-395.800	0.000	0.000	0.000
11	0.000	0.000	-213.000	0.000	0.000	0.000
19	0.000	0.000	-135.500	0.000	0.000	0.000
21	0.000	0.000	-284.100	0.000	0.000	0.000
22	0.000	0.000	-356.800	0.000	0.000	0.000
13	0.000	0.000	-381.600	0.000	0.000	0.000
35	0.000	0.000	-400.000	0.000	0.000	0.000
27	0.000	0.000	-111.400	0.000	0.000	0.000
23	0.000	0.000	-15.800	0.000	0.000	0.000
29	0.000	0.000	-219.000	0.000	0.000	0.000
14	0.000	0.000	-51.300	0.000	0.000	0.000
31	0.000	0.000	-41.300	0.000	0.000	0.000

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-XX	GLOBAL-YY	GLOBAL-ZZ
1	0,000	0,000	-100,000	0,000	0,000	0,000
2	0,000	0,000	-100,000	0,000	0,000	0,000
3	0,000	0,000	-100,000	0,000	0,000	0,000
4	0,000	0,000	-100,000	0,000	0,000	0,000
5	0,000	0,000	-100,000	0,000	0,000	0,000
6	0,000	0,000	-100,000	0,000	0,000	0,000
7	0,000	0,000	-100,000	0,000	0,000	0,000
8	0,000	0,000	-100,000	0,000	0,000	0,000
9	0,000	0,000	-100,000	0,000	0,000	0,000
10	0,000	0,000	-100,000	0,000	0,000	0,000
11	0,000	0,000	-100,000	0,000	0,000	0,000
12	0,000	0,000	-100,000	0,000	0,000	0,000
13	0,000	0,000	-100,000	0,000	0,000	0,000
14	0,000	0,000	-100,000	0,000	0,000	0,000
15	0,000	0,000	-100,000	0,000	0,000	0,000
16	0,000	0,000	-100,000	0,000	0,000	0,000
17	0,000	0,000	-100,000	0,000	0,000	0,000
18	0,000	0,000	-100,000	0,000	0,000	0,000
19	0,000	0,000	-100,000	0,000	0,000	0,000
20	0,000	0,000	-100,000	0,000	0,000	0,000
21	0,000	0,000	-100,000	0,000	0,000	0,000
22	0,000	0,000	-100,000	0,000	0,000	0,000
23	0,000	0,000	-100,000	0,000	0,000	0,000
24	0,000	0,000	-100,000	0,000	0,000	0,000
25	0,000	0,000	-100,000	0,000	0,000	0,000
26	0,000	0,000	-100,000	0,000	0,000	0,000
27	0,000	0,000	-100,000	0,000	0,000	0,000
28	0,000	0,000	-100,000	0,000	0,000	0,000

18 0,000 0,000 -100,000 0,000 0,000 0,000

SAP2000 v7.42 File: KUDAL Hyd-m Units PAGE 6
10/29/03 10:19:51

sOnny Inc

J O I N T F O R C E S Load Case WL

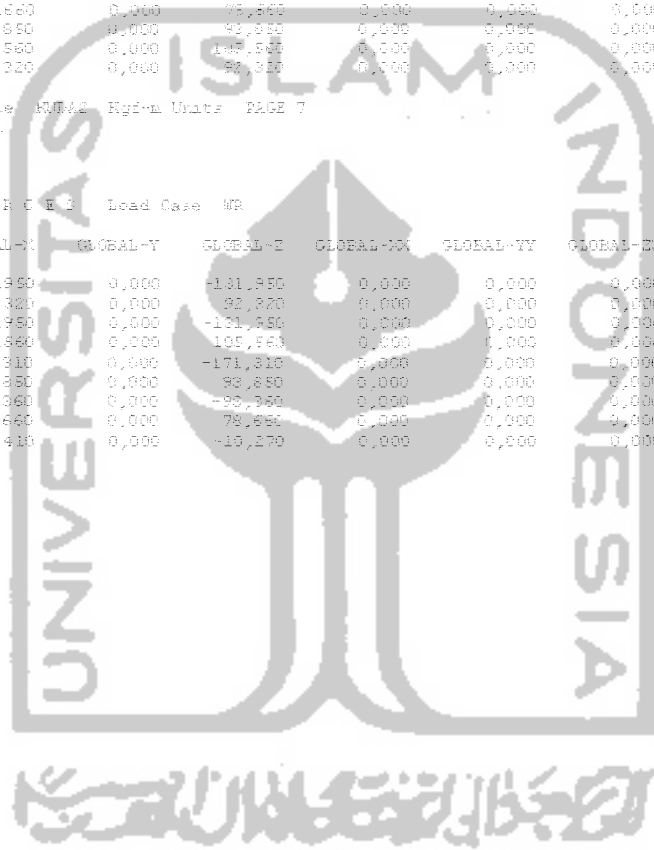
JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-RX	GLOBAL-RY	GLOBAL-RZ
18	115,400	0,000	-115,400	0,000	0,000	0,000
23	121,250	0,000	-121,250	0,000	0,000	0,000
20	171,310	0,000	-171,310	0,000	0,000	0,000
31	98,660	0,000	98,660	0,000	0,000	0,000
1	92,410	0,000	-10,270	0,000	0,000	0,000
5	78,660	0,000	78,660	0,000	0,000	0,000
9	93,850	0,000	93,850	0,000	0,000	0,000
9	105,560	0,000	-105,560	0,000	0,000	0,000
1	92,220	0,000	92,220	0,000	0,000	0,000

SAP2000 v7.42 File: KUDAL Hyd-m Units PAGE 7
10/29/03 10:19:51

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J O I N T F O R C E S Load Case WR

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-RX	GLOBAL-RY	GLOBAL-RZ
2	-121,250	0,000	-121,250	0,000	0,000	0,000
19	-92,320	0,000	92,320	0,000	0,000	0,000
5	-121,250	0,000	-121,250	0,000	0,000	0,000
23	-105,560	0,000	105,560	0,000	0,000	0,000
8	-171,310	0,000	-171,310	0,000	0,000	0,000
22	-93,850	0,000	93,850	0,000	0,000	0,000
5	-98,660	0,000	-98,660	0,000	0,000	0,000
31	-78,660	0,000	78,660	0,000	0,000	0,000
1	-92,410	0,000	-10,270	0,000	0,000	0,000



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LOAD COMBINATION MULTIPLIER

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
DSTL1	AND	DL	1.4000	STATIC (DEAD)	DSTL1
DSTL2	ADD	DL	1.0000	STATIC (DEAD)	DSTL2
		LL	1.0000	STATIC (LIVE)	
DSTL3	ADD	DL	1.0000	STATIC (DEAD)	DSTL3
		LL	0.4000	STATIC (LIVE)	
		WL	1.0000	STATIC (WIND)	
DSTL4	ADD	DL	1.0000	STATIC (DEAD)	DSTL4
		LL	0.6000	STATIC (LIVE)	
		WL	-1.0000	STATIC (WIND)	
DSTL5	ADD	DL	1.0000	STATIC (DEAD)	DSTL5
		LL	0.5000	STATIC (LIVE)	
		WL	1.0000	STATIC (WIND)	
DSTL6	ADD	DL	1.0000	STATIC (DEAD)	DSTL6
		LL	0.5000	STATIC (LIVE)	
		WL	-1.0000	STATIC (WIND)	
DSTL7	AND	DL	0.9000	STATIC (DEAD)	DSTL7
		WL	1.0000	STATIC (WIND)	
DSTL8	ADD	DL	0.9000	STATIC (DEAD)	DSTL8
		WL	-1.0000	STATIC (WIND)	
DSTL9	ADD	DL	0.9000	STATIC (DEAD)	DSTL9
		WL	1.0000	STATIC (WIND)	
DSTL10	ADD	DL	0.9000	STATIC (DEAD)	DSTL10
		WL	-1.0000	STATIC (WIND)	

sOmny, Inc.

JOINT DISPLACEMENTS

JOINT	LOAD	U1	U2	U3	R1	R2	R3
1	Minima	-6.725E-05	-4.476E-04	-4.800E-04	0.0000	0.0000	0.0000
		DSTL8	DSTL8	DSTL8	DSTL10	DSTL10	DSTL10
1	Maxima	6.725E-05	-1.425E-05	-1.051E-05	0.0000	0.0000	0.0000
		DSTL7	WL	WL	DSTL10	DSTL10	DSTL10
2	Minima	-4.602E-05	-2.033E-05	-2.020E-04	0.0000	0.0000	0.0000
		DSTL5	DSTL5	DSTL5	DSTL10	DSTL10	DSTL10
2	Maxima	1.084E-05	1.320E-05	3.974E-05	0.0000	0.0000	0.0000
		WL	WL	WL	DSTL10	DSTL10	DSTL10
3	Minima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DSTL11	DSTL10	DSTL10	DSTL10	DSTL10	DSTL10
3	Maxima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DSTL10	DSTL10	DSTL10	DSTL10	DSTL10	DSTL10
4	Minima	-1.302E-04	-4.064E-04	-4.868E-04	0.0000	0.0000	0.0000
		DSTL3	DSTL2	DSTL2	DSTL10	DSTL10	DSTL10
4	Maxima	1.302E-04	-1.158E-05	-1.062E-05	0.0000	0.0000	0.0000
		DSTL9	WL	WL	DSTL10	DSTL10	DSTL10
5	Minima	-1.701E-04	-4.773E-04	-4.767E-04	0.0000	0.0000	0.0000
		DSTL7	DSTL7	DSTL2	DSTL10	DSTL10	DSTL10

5	Minima	5,846E-04 WL	4,148E-05 WL	7,650E-04 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
6	Minima	-2,121E-04 DSTL9	0,400E-04 DSTL9	-5,192E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
6	Maxima	1,107E-04 DSTL10	1,841E-05 WL	4,767E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
7	Minima	-1,141E-04 DSTL9	-1,740E-04 DSTL9	-3,595E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
7	Maxima	1,167E-04 DSTL9	1,094E-05 WL	5,348E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
8	Minima	-0,640E-04 DSTL9	-1,764E-04 DSTL9	-4,054E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
8	Maxima	1,119E-04 DSTL10	1,901E-05 WL	5,074E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
9	Minima	-0,834E-05 WL	-7,099E-05 DSTL9	-1,160E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
9	Maxima	1,618E-04 DSTL9	4,898E-05 WL	1,478E-04 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
10	Minima	-1,504E-04 DSTL9	-4,764E-04 DSTL9	-4,875E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
10	Maxima	0,796E-05 DSTL10	4,178E-05 WL	1,040E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
11	Minima	-1,132E-05 DSTL9	-3,466E-05 DSTL9	-1,275E-05 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
11	Maxima	7,207E-06 DSTL10	0,0000 WL	0,491E-05 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
12	Minima	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
12	Maxima	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
13	Minima	-1,490E-04 DSTL9	-8,191E-04 DSTL9	-4,872E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
13	Maxima	8,516E-05 DSTL10	1,973E-05 WL	1,960E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
14	Minima	-0,174E-05 DSTL9	-1,647E-04 DSTL9	-4,139E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
14	Maxima	4,603E-05 DSTL10	9,397E-06 WL	1,512E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
16	Minima	-1,207E-04 DSTL9	-3,886E-04 DSTL9	-3,803E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
16	Maxima	7,015E-05 DSTL10	1,697E-05 WL	1,544E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
17	Minima	-4,859E-05 DSTL9	-1,317E-04 DSTL9	-8,081E-05 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
17	Maxima	2,750E-05 DSTL10	1,167E-05 WL	0,0000 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
19	Minima	-1,084E-05 WL	2,031E-05 DSTL9	-2,900E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
19	Maxima	4,857E-05 DSTL9	1,900E-05 WL	2,799E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
20	Minima	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
20	Maxima	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
21	Minima	-0,000E-05 DSTL9	-4,779E-04 DSTL9	-4,760E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
21	Maxima	1,725E-04 DSTL9	1,087E-05 WL	3,570E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
22	Minima	-1,056E-04 DSTL9	-0,764E-04 DSTL9	-4,262E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
22	Maxima	8,647E-04 DSTL9	1,871E-05 WL	5,796E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
23	Minima	-1,060E-04 DSTL9	-7,697E-05 DSTL9	-1,173E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
23	Maxima	9,171E-05 WL	4,924E-06 WL	1,487E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
24	Minima	-1,339E-04 DSTL9	-0,406E-04 DSTL9	-5,186E-04 DSTL9	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
24	Maxima	2,163E-04 DSTL9	1,913E-05 WL	4,693E-05 WL	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10

25	Minima	-1,157E-04 DSTL4	-1,174E-04 DSTL4	-3,509E-04 DSTL3	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
25	Maxima	1,174E-04 DSTL9	1,077E-03 WR	3,488E-03 WR	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
26	Minima	-3,014E-05 DSTL8	-4,955E-04 DSTL2	-4,835E-04 DSTL1	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
26	Maxima	1,508E-04 DSTL3	4,114E-05 WR	1,974E-05 WR	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
27	Minima	-7,009E-05 DSTL10	-3,408E-04 DSTL2	-3,506E-04 DSTL2	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
27	Maxima	1,524E-04 DSTL3	1,517E-05 WR	1,500E-05 WR	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
28	Minima	-2,818E-04 DSTL3	-1,521E-04 DSTL2	-3,891E-05 DSTL2	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
28	Maxima	4,733E-05 DSTL3	1,150E-05 WR	0,0000 WR	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
29	Minima	-7,445E-05 DSTL3	-1,465E-05 DSTL2	-3,541E-05 DSTL4	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
29	Maxima	1,550E-05 DSTL3	0,0000 WR	3,500E-05 DSTL7	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
30	Minima	-3,301E-05 DSTL3	-3,191E-04 DSTL2	-4,307E-04 DSTL2	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
30	Maxima	1,457E-04 DSTL3	1,943E-05 WR	2,345E-05 WR	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
31	Minima	-4,167E-05 DSTL3	-1,647E-04 DSTL1	-3,133E-04 DSTL2	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
31	Maxima	7,078E-05 DSTL3	3,343E-05 WR	1,510E-05 WR	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
32	Minima	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10
32	Maxima	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10	0,0000 DSTL10

SARU000 WP.41 File: HNDAC Kydon Units PAGE 8
15/04/2019 10:20:35

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F R A M E K L E M E N T F O R C E S

	FRAME	LOAD	LOC	P	W2	W3	7	M2	M3
	FA1	Minima		-3,444E-01 WR	-3,92 DSTL3	-1,50 DSTL3	0,00 DSTL10	-3,184E-01 DSTL3	-2,43 DSTL3
	FA1	Maxima		606,20 DSTL2	8,43 DSTL1	7,747E-01 DSTL3	0,00 DSTL10	3,183E-01 DSTL3	5,495E-01 DSTL3
	FA2	Minima		-3,570E-01 WR	-1,93 DSTL3	-7,558E-01 DSTL10	0,00 DSTL10	-3,357E-01 DSTL3	-3,43 DSTL3
	FA2	Maxima		606,20 DSTL2	8,43 DSTL1	1,23 DSTL3	0,00 DSTL10	3,357E-01 DSTL3	5,495E-01 DSTL3
	FA3	Minima		-331,31 DSTL2	-3,08 DSTL1	-1,53 DSTL3	0,00 DSTL10	-1,36 DSTL3	-3,66 DSTL3
	FA3	Maxima		4,142E-01 WR	3,10 DSTL1	3,570E-01 DSTL3	0,00 DSTL10	1,36 DSTL3	1,11 DSTL3
	FA4	Minima		-331,31 DSTL2	-3,08 DSTL1	-3,292E-01 DSTL10	0,00 DSTL10	-1,36 DSTL3	-3,66 DSTL3
	FA4	Maxima		4,358E-01 WR	3,10 DSTL1	1,61 DSTL3	0,00 DSTL10	1,36 DSTL3	1,11 DSTL3
	FA5	Minima		-471,31 DSTL2	-3,68 DSTL1	-1,13 DSTL3	0,00 DSTL10	-3,787E-01 DSTL3	-2,56 DSTL3
	FA5	Maxima		1,13 WR	3,10 DSTL1	5,625E-01 WR	0,00 DSTL10	3,787E-01 DSTL3	5,646E-01 DSTL3
	FA6	Minima		-471,31 DSTL2	-3,68 DSTL1	-5,746E-01 WR	0,00 DSTL10	-3,787E-01 DSTL4	-2,56 DSTL3
	FA6	Maxima		1,13 WR	3,10 DSTL1	1,10 DSTL4	0,00 DSTL10	3,787E-01 DSTL4	5,646E-01 DSTL3
	FA7	Minima		-15,31 DSTL3	-5,06 DSTL1	-7,235E-01 DSTL3	0,00 DSTL10	-4,341E-01 DSTL3	-1,23 DSTL4
	FA7	Maxima		4,13 WR	3,10 DSTL1	2,803E-01 WR	0,00 DSTL10	4,341E-01 DSTL3	5,593E-01 DSTL3

FAS	Minimum	-15,46 DSTL3	-5,76 DSTL1	-1,970E-01 WL	0,00 DSTL10	-4,186E-01 DSTL4	-1,14 DSTL6
FAS	Maxima	4,52 WL	8,41 DSTL1	7,427E-01 DSTL4	0,00 DSTL10	4,456E-01 DSTL4	5,883E-01 DSTL1
FE1	Minimum	-427,39 DSTL3	-4,89 DSTL4	-3,741E-01 DSTL3	0,00 DSTL10	-6,497E-01 DSTL3	-1,24 DSTL3
FE1	Maxima	7,551E-01 WL	1,10 DSTL1	1,16 DSTL3	0,00 DSTL10	6,427E-01 DSTL3	4,040E-01 DSTL3
FE2	Minimum	-427,00 DSTL3	4,88 DSTL3	-1,38 DSTL3	0,00 DSTL10	-6,404E-01 DSTL3	-1,23 DSTL3
FE2	Maxima	7,558E-01 WL	5,10 DSTL1	7,566E-01 DSTL3	0,00 DSTL10	6,404E-01 DSTL3	4,704E-01 DSTL3
FE3	Minimum	-563,15 DSTL3	-1,90 DSTL1	2,40 DSTL3	0,00 DSTL10	-1,77 DSTL3	-4,35 DSTL2
FE3	Maxima	8,77 WL	8,29 DSTL1	1,44 DSTL3	0,00 DSTL10	1,77 DSTL3	1,89 DSTL3
FE4	Minimum	-569,18 DSTL3	-1,90 DSTL1	-1,41 DSTL3	0,00 DSTL10	-1,74 DSTL3	-4,35 DSTL3
FE4	Maxima	8,37 WL	8,19 DSTL1	2,37 DSTL3	0,00 DSTL10	1,74 DSTL3	1,49 DSTL2
FE5	Minimum	-6,91 WL	-1,90 DSTL4	-3,12 DSTL3	0,00 DSTL10	-3,10 DSTL3	-3,55 DSTL2
FE5	Maxima	150,20 DSTL2	8,41 DSTL1	1,90 DSTL3	0,00 DSTL10	3,10 DSTL3	1,57 DSTL2
FE6	Minimum	-8,36 WL	-1,88 DSTL3	-1,36 DSTL3	0,00 DSTL10	-2,37 DSTL3	-3,54 DSTL3
FE6	Maxima	280,23 DSTL2	8,41 DSTL1	3,37 DSTL3	0,00 DSTL10	2,37 DSTL3	1,57 DSTL2
FE7	Minimum	-8,92 WL	-5,70 DSTL3	-4,29 DSTL3	0,00 DSTL10	-4,57 DSTL3	-1,50 DSTL3
FE7	Maxima	310,26 DSTL3	5,62 DSTL4	2,77 DSTL3	0,00 DSTL10	4,57 DSTL3	5,593E-01 DSTL1
FE8	Minimum	-8,36 WL	-5,69 DSTL3	-1,71 DSTL3	0,00 DSTL10	-2,57 DSTL3	-1,50 DSTL3
FE8	Maxima	310,26 DSTL2	5,62 DSTL3	4,22 DSTL3	0,00 DSTL10	2,57 DSTL3	5,593E-01 DSTL1
FE1	Minimum	-8,18 WL	-1,38 DSTL3	-1,51 DSTL3	0,00 DSTL10	-3,145E-01 DSTL3	-4,19 DSTL3
FE1	Maxima	677,15 DSTL2	10,27 DSTL1	6,592E-01 DSTL3	0,00 DSTL10	3,145E-01 DSTL3	2,26 DSTL2
FE2	Minimum	-8,32 WL	-1,34 DSTL3	-8,982E-01 DSTL3	0,00 DSTL10	-3,013E-01 DSTL3	-4,19 DSTL2
FE2	Maxima	677,15 DSTL3	10,27 DSTL1	1,49 DSTL3	0,00 DSTL10	3,013E-01 DSTL3	2,26 DSTL2
FD3	Minimum	-1,52 WL	-2,30 DSTL4	-1,30 DSTL3	0,00 DSTL10	-3,013E-01 DSTL3	-3,10 DSTL3
FD3	Maxima	127,49 DSTL3	8,13 DSTL1	3,013E-01 DSTL3	0,00 DSTL10	3,013E-01 DSTL3	1,19 DSTL3
FD4	Minimum	-1,55 WL	-1,38 DSTL3	-8,306E-01 DSTL3	0,00 DSTL10	-7,888E-01 DSTL3	-3,10 DSTL3
FD4	Maxima	127,49 DSTL2	8,13 DSTL1	1,28 DSTL3	0,00 DSTL10	7,888E-01 DSTL3	1,19 DSTL3
FD5	Minimum	-544,79 DSTL2	-6,04 DSTL1	-5,667E-01 DSTL3	0,00 DSTL10	-6,821E-01 DSTL3	-2,36 DSTL1
FD5	Maxima	9,42 WL	8,19 DSTL1	5,436E-01 DSTL3	0,00 DSTL10	6,821E-01 DSTL3	9,537E-01 DSTL1
FD6	Minimum	-544,79 DSTL3	-6,04 DSTL1	-5,312E-01 DSTL3	0,00 DSTL10	-6,694E-01 DSTL3	-2,36 DSTL1
FD6	Maxima	9,35 WL	8,15 DSTL1	6,543E-01 DSTL3	0,00 DSTL10	6,694E-01 DSTL3	9,537E-01 DSTL1
FW1	Minimum	-1192,73 DSTL3	-1,84 DSTL3	-15,81 DSTL3	0,00 DSTL10	-7,91 DSTL3	-9,216E-01 DSTL3
FW1	Maxima	1,46 WL	1,10 DSTL3	1,20 WL	0,00 DSTL10	7,91 DSTL3	9,216E-01 DSTL3
FW2	Minimum	-1192,73 DSTL2	-1,07 DSTL10	-15,30 DSTL3	0,00 DSTL10	-7,90 DSTL3	-9,064E-01 DSTL3
FW2	Maxima	1,46 WL	1,82 DSTL3	1,21 WL	0,00 DSTL10	7,90 DSTL3	9,064E-01 DSTL3
FW3	Minimum	-480,79 DSTL2	-7,996E-01 DSTL3	-9,50 DSTL3	0,00 DSTL10	-6,39 DSTL3	-5,375E-01 DSTL3

FV3	Maxima	1,55 MP	4,57E+01 DSTL3	7,251E-01 MP	0,00 DSTL10	4,39 DSTL3	4,57E+01 DSTL3
FV4	Minima	-190,79 DSTL1	-4,46E+01 DSTL10	-3,49 DSTL3	0,00 DSTL10	-2,19 DSTL2	-5,501E+01 DSTL3
FV4	Maxima	1,55 VL	7,45E+01 DSTL3	7,250E+01 VL	0,00 DSTL10	4,39 DSTL3	4,57E+01 DSTL3
FV5	Minima	-4,31 VL	-6,014E+01 VL	-3,49 DSTL3	0,00 DSTL10	-4,17 DSTL3	-1,261E+01 DSTL3
FV5	Maxima	108,81 DSTL3	1,454E+01 DSTL3	1,03E+01 MP	0,00 DSTL10	3,37 DSTL3	1,41E+01 DSTL3
FV6	Minima	-4,37 MP	-1,761E+01 DSTL3	-3,49 DSTL3	0,00 DSTL10	-3,24 DSTL3	-1,41E+01 DSTL3
FV6	Maxima	108,81 DSTL3	7,144E-02 VL	5,10E+01 VL	0,00 DSTL10	3,39 DSTL3	1,41E+01 DSTL3
J41	Minima	-133,99 MP	-7,71 DSTL3	-1,37E+01 MP	0,00 DSTL10	-4,49 DSTL3	-3,49 DSTL3
J41	Maxima	889,81 DSTL3	1,79 DSTL3	1,11 DSTL3	0,00 DSTL10	1,49 DSTL3	1,81 DSTL3
J42	Minima	-133,99 VL	-7,71 DSTL3	-1,11 DSTL3	0,00 DSTL10	-4,49 DSTL3	-3,49 DSTL3
J41	Maxima	889,81 DSTL3	3,43 DSTL3	1,37E+01 VL	0,00 DSTL10	1,49 DSTL3	1,70 DSTL3
J43	Minima	-847,98 DSTL3	-3,37 DSTL3	-3,394E+01 MP	0,00 DSTL10	-4,47 DSTL3	-3,77 DSTL3
J43	Maxima	80,13 MP	7,68 DSTL3	4,39 DSTL3	0,00 DSTL10	4,47 DSTL3	1,33 DSTL3
J44	Minima	-833,44 DSTL3	-3,49 DSTL3	-4,33 DSTL3	0,00 DSTL10	-4,57 DSTL3	-3,79 DSTL3
J44	Maxima	80,13 VL	7,68 DSTL3	3,39E+01 VL	0,00 DSTL10	4,57 DSTL3	1,08 DSTL3
J45	Minima	-1096,46 DSTL3	-4,71 DSTL3	-6,42E+01 MP	0,00 DSTL10	-4,49 DSTL3	-1,25 DSTL3
J45	Maxima	48,81 MP	5,48 DSTL3	5,79 DSTL3	0,00 DSTL10	4,49 DSTL3	6,64E+01 DSTL3
J46	Minima	-1096,46 DSTL3	-4,71 DSTL3	-5,79 DSTL3	0,00 DSTL10	-4,49 DSTL3	-1,23 DSTL3
J46	Maxima	48,81 VL	5,48 DSTL3	6,42E+01 VL	0,00 DSTL10	4,49 DSTL3	6,64E+01 DSTL3
J47	Minima	-489,01 DSTL3	-1,39 DSTL3	-1,39 DSTL3	0,00 DSTL10	-1,57 DSTL3	-2,16 DSTL3
J47	Maxima	57,80 VL	5,33 DSTL3	1,48 DSTL3	0,00 DSTL10	1,57 DSTL3	7,91E+01 DSTL3
J48	Minima	-487,99 DSTL3	-1,56 DSTL3	-1,44 DSTL3	0,00 DSTL10	-1,56 DSTL3	-2,16 DSTL3
J48	Maxima	57,47 MP	5,33 DSTL3	1,04 DSTL3	0,00 DSTL10	1,56 DSTL3	7,91E+01 DSTL3
J51	Minima	-754,81 DSTL3	-1,48 VL	-1,11 DSTL3	0,00 DSTL10	-1,08 DSTL2	-6,35 DSTL2
J51	Maxima	187,55 MP	15,37 DSTL3	1,35E+01 MP	0,00 DSTL10	1,08 DSTL2	9,02 DSTL2
J52	Minima	-797,89 DSTL3	-1,16 MP	-1,39E+01 MP	0,00 DSTL10	-1,06 DSTL2	-6,35 DSTL2
J52	Maxima	187,80 VL	15,37 DSTL3	1,11 DSTL3	0,00 DSTL10	1,06 DSTL2	9,02 DSTL2
J53	Minima	-2218,04 DSTL3	-4,30 DSTL3	-3,54E+01 MP	0,00 DSTL10	-4,24 DSTL2	-4,43 DSTL3
J53	Maxima	308,98 MP	9,11 DSTL3	5,74 DSTL3	0,00 DSTL10	4,24 DSTL2	2,08 DSTL3
J54	Minima	-1123,26 DSTL3	-4,17 DSTL3	-5,74 DSTL3	0,00 DSTL10	-4,24 DSTL2	-4,41 DSTL3
J54	Maxima	388,48 MP	9,17 DSTL3	3,53E+01 VL	0,00 DSTL10	4,24 DSTL2	2,05 DSTL3
J55	Minima	-1166,06 DSTL3	-3,54 DSTL3	-3,56E+01 MP	0,00 DSTL10	-4,29 DSTL3	-3,01 DSTL3
J55	Maxima	418,33 VL	7,71 DSTL3	5,10 DSTL3	0,00 DSTL10	4,29 DSTL3	1,04 DSTL3
J56	Minima	-1164,72 DSTL3	-3,54 DSTL3	-7,10 DSTL3	0,00 DSTL10	-4,29 DSTL3	-3,01 DSTL3
J56	Maxima	408,46 MP	7,71 DSTL3	3,53E+01 VL	0,00 DSTL10	4,29 DSTL3	1,04 DSTL3

J57	Minima	-781,82 DSTL5	-8,40 DSTL5	-0,418E-01 WL	0,00 DSTL10	-2,74 DSTL5	-2,16 DSTL5
J57	Maxima	269,28 WL	5,88 DSTL4	3,18 DSTL5	0,00 DSTL10	3,84 DSTL5	6,878E-01 DSTL5
J58	Minima	-708,98 DSTL5	-8,19 DSTL5	-8,19 DSTL5	0,00 DSTL10	-8,35 DSTL5	-2,94 DSTL5
J58	Maxima	269,28 WL	5,88 DSTL5	7,809E-01 WL	0,00 DSTL10	3,85 DSTL5	6,875E-01 DSTL5
J59	Minima	-78,61 WL	-3,11 DSTL4	-3,479E-01 WL	0,00 DSTL10	-8,80 DSTL5	-4,15 DSTL5
J59	Maxima	1132,86 DSTL5	10,94 DSTL5	8,77 DSTL5	0,00 DSTL10	3,50 DSTL5	1,28 DSTL5
J60	Minima	-38,70 WL	-0,56 DSTL5	-8,78 DSTL5	0,00 DSTL10	-3,80 DSTL5	-4,10 DSTL5
J62	Maxima	1123,90 DSTL5	9,98 DSTL5	8,501E-01 WL	0,00 DSTL10	3,80 DSTL5	2,17 DSTL5
J63	Minima	-194,84 WL	-8,38 DSTL1	-2,381E-02 WL	0,00 DSTL10	-2,22 DSTL1	-2,50 DSTL5
J63	Maxima	480,68 DSTL4	0,87 DSTL1	1,60 DSTL2	0,00 DSTL10	2,88 DSTL2	6,818E-01 DSTL2
J64	Minima	-182,47 WL	-2,88 DSTL1	-3,60 DSTL2	0,00 DSTL10	-2,12 DSTL2	-3,50 DSTL2
J64	Maxima	444,08 DSTL6	7,37 DSTL1	1,328E-02 WL	0,00 DSTL10	2,82 DSTL2	6,818E-01 DSTL2
J65	Minima	-807,09 DSTL5	-8,11 DSTL5	-4,07 DSTL5	0,00 DSTL10	-3,15 DSTL5	-2,03 DSTL5
J65	Maxima	187,82 WL	8,07 DSTL1	1,88 WL	0,00 DSTL10	3,15 DSTL5	6,722E-01 DSTL1
J66	Minima	-802,18 DSTL5	-8,12 DSTL4	-1,07 WL	0,00 DSTL10	-3,10 DSTL5	-2,04 DSTL5
J66	Maxima	186,88 WL	8,07 DSTL1	4,35 DSTL5	0,00 DSTL10	3,13 DSTL5	6,722E-01 DSTL5
J71	Minima	-2088,86 DSTL5	-3,87 WL	-8,00 DSTL2	0,00 DSTL10	-4,00 DSTL2	-3,88 DSTL4
J71	Maxima	147,81 WL	8,48 DSTL4	4,120E-01 WL	0,00 DSTL10	4,00 DSTL2	3,13 DSTL4
J72	Minima	-2048,03 DSTL5	-8,30 DSTL5	-8,00 DSTL2	0,00 DSTL10	-4,00 DSTL2	-3,15 DSTL5
J72	Maxima	247,42 WL	8,48 WL	5,187E-01 WL	0,00 DSTL10	4,00 DSTL2	3,15 DSTL5
J73	Minima	-816,15 DSTL2	-3,48 DSTL3	-4,49 DSTL3	0,00 DSTL10	-3,02 DSTL2	-1,81 DSTL3
J73	Maxima	20,91 WL	5,897E-01 WL	3,400E-01 WL	0,00 DSTL10	3,02 DSTL2	1,81 DSTL3
J74	Minima	-916,15 DSTL5	-6,091E-01 WL	-4,48 DSTL4	0,00 DSTL10	-3,01 DSTL5	-1,60 DSTL5
J74	Maxima	31,02 WL	1,89 DSTL5	3,412E-01 WL	0,00 DSTL10	3,01 DSTL5	1,60 DSTL5
J75	Minima	-137,13 DSTL5	-3,213E-01 DSTL4	-3,52 DSTL5	0,00 DSTL10	-2,92 DSTL5	-3,169E-01 DSTL7
J75	Maxima	446,14 DSTL3	3,827E-01 DSTL7	5,061E-01 WL	0,00 DSTL10	2,92 DSTL5	3,170E-01 DSTL7
J76	Minima	-139,08 DSTL10	-3,743E-01 DSTL5	-3,52 DSTL5	0,00 DSTL10	-2,91 DSTL5	-3,100E-01 DSTL5
J76	Maxima	439,09 DSTL5	3,729E-01 DSTL5	5,138E-01 WL	0,00 DSTL10	2,91 DSTL5	3,096E-01 DSTL5
J77	Minima	1,80 WL	-3,093E-01 DSTL5	-5,477E-01 DSTL7	0,00 DSTL10	-5,477E-01 DSTL5	-3,093E-01 DSTL5
J77	Maxima	45,69 DSTL2	3,093E-01 DSTL5	-3,680E-02 WL	0,00 DSTL10	5,477E-01 DSTL2	3,093E-01 DSTL5

SAP2000 v7.12 File: KUDAS N-Frame Unit Page 1
10/19/00 10:23:00

gday, Inc

M A T E R I A L P R O P E R T Y D A T A

MAT LABEL	MODULUS OF ELASTICITY	POISSON'S RATIO	THERMAL COEFF	DENSITY PER UNIT VOL	WELD PER UNIT VOL
STEEL	299900.000	0.300	1.170E-05	7.850E-05	7.850E-05
BAJA	299900.000	0.300	1.170E-05	7.850E-05	7.850E-05

SAP2000 v7.12 File: KUDAS N-Frame Unit Page 1
10/19/00 10:23:00

gday, Inc

M A T E R I A L D E S I G N P A T A

MAT LABEL	DESIGN CODE	STEEL TYPE	CONCRETE FC	REBAR FYS	CONCRETE FCD	REBAR FWD
STEEL	S	A490				
BAJA	S	A490				

SAP2000 v7.12 File: KUDAS N-Frame Unit Page 3
10/19/00 10:23:00

gday, Inc

F R A M E S E C T I O N P R O P E R T Y D A T A

SECTION LABEL	MAT LABEL	SECTION TYPE	DEPTH	FLANGE WIDTH	FLANGE THICK	WEB THICK	FLANGE RADIUS	FLANGE THICK
FS001	STEEL		500.000	300.000	0.000	0.000	0.000	0.000
AL45X45X	BAJA	AL45X45X-10	41.000	400.000	8.000	5.000	0.000	0.000
AL45X55X	BAJA	AL45X55X-10	51.000	420.000	8.000	5.000	0.000	0.000
AL45X65X	BAJA	AL45X65X-10	61.000	440.000	8.000	5.000	0.000	0.000
AL50X50L	BAJA	AL50X50L-10	50.000	400.000	8.000	5.000	0.000	0.000
AL60X60L	BAJA	AL60X60L-10	60.000	420.000	8.000	5.000	0.000	0.000
AL65X65X	STEEL	AL65X65X-10	65.000	440.000	8.000	5.000	0.000	0.000
AL75X75X	STEEL	AL75X75X-10	75.000	460.000	8.000	5.000	0.000	0.000
AL85X85X	STEEL	AL85X85X-10	85.000	480.000	8.000	5.000	0.000	0.000
AL95X95X	STEEL	AL95X95X-10	95.000	500.000	8.000	5.000	0.000	0.000

SAP2000 v7.12 File: KUDAS N-Frame Unit Page 4
10/19/00 10:23:00

gday, Inc

F R A M E S E C T I O N P R O P E R T Y D A T A

SECTION LABEL	AREA	MOYENNA	MOMENTS OF INERTIA	MOYENNA	MOYENNA	MOYENNA
FS001	150000.000	2.817E+09	3.135E+09	1.125E+09	125000.000	125000.000
AL45X45X	850.000	0.000	151000.000	470000.000	450.000	450.000
AL55X55X	1050.000	0.000	200000.000	740000.000	550.000	550.000
AL65X65X	1250.000	0.000	250000.000	1170000.000	650.000	650.000
AL50X50L	750.000	1400.000	220000.000	500000.000	450.000	450.000
AL60X60L	1125.000	9000.750	320000.000	840000.000	600.000	600.000
AL65X65X	1450.000	0.000	340000.000	1010000.000	750.000	750.000
AL75X75X	2000.000	0.000	510000.000	1270000.000	1000.000	1000.000
AL85X85X	2700.000	0.000	700000.000	1600000.000	1300.000	1300.000
AL95X95X	3500.000	0.000	900000.000	2000000.000	1600.000	1600.000
AL95X95X	3500.000	0.000	900000.000	2000000.000	1600.000	1600.000

SAP2000 v7.12 File: KUDAS N-Frame Unit Page 5
10/19/00 10:23:00

gday, Inc

F R A M E S E C T I O N P R O P E R T Y D A T A

SECTION LABEL	SECTION MODULI	SECTION MODULI	SECTION MODULI	SECTION MODULI	SECTION MODULI	SECTION MODULI
FS001	115000000.0	75000000.0	187500000.0	112500000.0	144.000	66.667
AL45X45X	5999.999	6700.000	6000.000	0.000	27.000	27.000
AL55X55X	10412.379	13475.000	7700.000	0.000	12.987	26.700
AL65X65X	14800.001	15300.000	10700.000	0.000	20.000	20.000
AL50X50L	6550.000	9875.000	11000.000	17000.000	18.000	23.000
AL60X60L	2101.442	10517.500	15561.141	27001.150	11.567	27.414
AL65X65X	1707.500	2275.000	1405.000	0.000	7.000	15.000
AL75X75X	4000.000	5740.000	1900.000	0.000	10.000	10.000
AL85X85X	5701.750	6966.000	4170.000	0.000	10.000	22.500
AL95X95X	4500.000	4700.000	4700.000	0.000	10.000	10.000

*Drury, Inc.

LOAD COMBINATION MULTIPLE LOADS

COMBO	TYPE	CAVE	FACTOR	TYPE	TITLE
DS1L1	ADD	DL	1.4000	STATIC(DEAD)	DS1L1
DS1L2	ADD	DL	1.2000	STATIC(DEAD)	DS1L2
		LL	1.4000	STATIC(LIVE)	
DS1L3	ADD	DL	1.4000	STATIC(DEAD)	DS1L3
		LL	0.9000	STATIC(LIVE)	
		WL	1.3000	STATIC(WIND)	
DS1L4	ADD	DL	1.2000	STATIC(DEAD)	DS1L4
		LL	0.9000	STATIC(LIVE)	
		WE	1.3000	STATIC(WIND)	
DS1L5	ADD	DL	1.2000	STATIC(DEAD)	DS1L5
		LL	0.9000	STATIC(LIVE)	
		WE	1.3000	STATIC(WIND)	
DS1L6	ADD	DL	1.4000	STATIC(DEAD)	DS1L6
		LL	0.9000	STATIC(LIVE)	
		WE	1.3000	STATIC(WIND)	
DS1L7	ADD	DL	0.9000	STATIC(DEAD)	DS1L7
		WL	1.3000	STATIC(WIND)	
DS1L8	ADD	DL	0.9000	STATIC(DEAD)	DS1L8
		WL	1.3000	STATIC(WIND)	
DS1L9	ADD	DL	0.9000	STATIC(DEAD)	DS1L9
		WE	1.3000	STATIC(WIND)	
DS1L10	ADD	DL	0.9000	STATIC(DEAD)	DS1L10
		WE	1.3000	STATIC(WIND)	

*Drury, Inc.

CODE PREFERENCES

Code: AISC-LRFD90

Phi_bending : 0.9
Phi_tension : 0.9
Phi_compression : 0.85
Phi_shear : 0.9

*Drury, Inc.

STEEL STEERS CHECK ELEMENT INFORMATION (AISC-LRFD90)

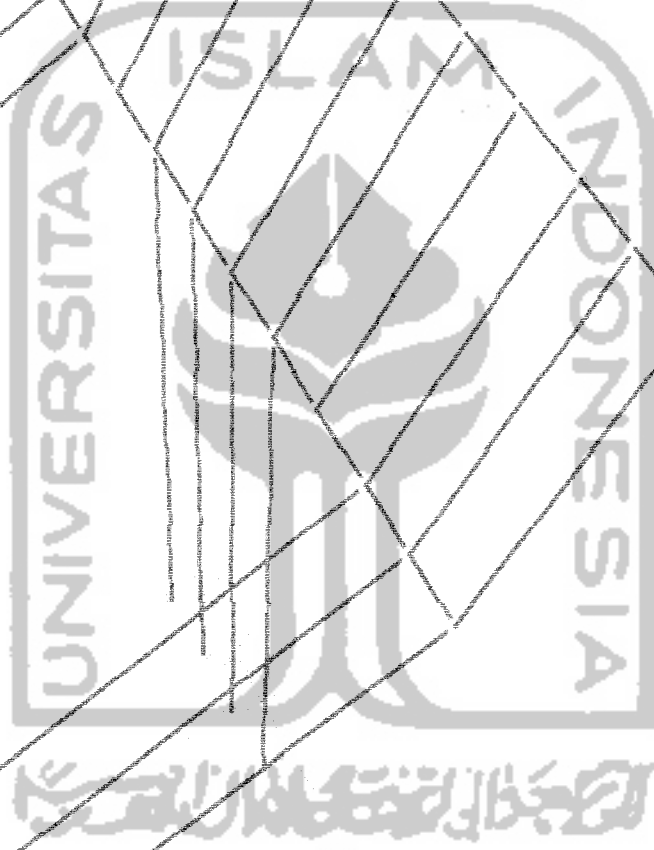
FRAME ID	SECTION ID	FRAMING TYPE	LEF L_ratio	L_ratio MAJOR	L_ratio MINOR	K MAJOR	K MINOR
FA1	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FA2	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FA3	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FA4	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FA5	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FA6	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FA7	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FA8	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FE1	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FE2	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FE3	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FE4	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000
FE5	2L45X45X5-10	MOMENT	1.000	1.000	1.000	1.000	1.000

[illegible]

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FRAME ID	SECTION ID	-----MOMENT INTERACTION CHECK-----				-----SHEAR1-----		-----SHEAR2-----				
		COMBO	RATIO	=	MXL +	MYZ +	MYX	COMBO	RATIO	COMBO	RATIO	
FA1	2L45X45X5-10	BSTL3	(T)	0.006	=	0.012	+ 0.002	+ 0.003	BSTL1	0.001	BSTL3	0.000
FA2	2L45X45X5-10	BSTL3	(T)	0.008	=	0.012	+ 0.012	+ 0.001	BSTL1	0.001	BSTL5	0.000
FA3	2L45X45X5-10	BSTL3	(T)	0.007	=	0.012	+ 0.012	+ 0.001	BSTL1	0.001	BSTL3	0.000
FA4	2L45X45X5-10	BSTL2	(C)	0.007	=	0.017	+ 0.000	+ 0.007	BSTL1	0.001	BSTL5	0.000
FA5	2L45X45X5-10	BSTL2	(C)	0.007	=	0.020	+ 0.000	+ 0.000	BSTL1	0.001	BSTL3	0.000
FA6	2L45X45X5-10	BSTL3	(C)	0.049	=	0.011	+ 0.020	+ 0.001	BSTL1	0.001	BSTL4	0.000
FA7	2L45X45X5-10	BSTL3	(C)	0.049	=	0.021	+ 0.019	+ 0.001	BSTL1	0.001	BSTL5	0.000
FA8	2L45X45X5-10	BSTL1	(C)	0.012	=	0.000	+ 0.011	+ 0.001	BSTL1	0.001	BSTL5	0.000
FA9	2L45X45X5-10	BSTL3	(T)	0.009	=	0.000	+ 0.000	+ 0.000	BSTL1	0.001	BSTL4	0.000
FB1	2L45X45X5-10	BSTL1	(C)	0.013	=	0.000	+ 0.011	+ 0.001	BSTL1	0.001	BSTL9	0.000
FB2	2L45X45X5-10	BSTL10	(T)	0.009	=	0.000	+ 0.009	+ 0.000	BSTL1	0.001	BSTL3	0.000
FB3	2L45X45X5-10	BSTL5	(C)	0.025	=	0.013	+ 0.011	+ 0.000	BSTL1	0.001	BSTL3	0.000
FB4	2L45X45X5-10	BSTL5	(C)	0.025	=	0.012	+ 0.011	+ 0.000	BSTL1	0.000	BSTL3	0.000
FB5	2L45X45X5-10	BSTL2	(C)	0.070	=	0.029	+ 0.009	+ 0.000	BSTL1	0.002	BSTL5	0.000
FB6	2L45X45X5-10	BSTL3	(C)	0.070	=	0.029	+ 0.009	+ 0.000	BSTL1	0.002	BSTL5	0.000
FB7	2L45X45X5-10	BSTL3	(C)	0.047	=	0.005	+ 0.002	+ 0.011	BSTL1	0.001	BSTL5	0.001
FB8	2L45X45X5-10	BSTL3	(T)	0.047	=	0.005	+ 0.002	+ 0.011	BSTL1	0.001	BSTL5	0.001
FB9	2L45X45X5-10	BSTL3	(T)	0.000	=	0.007	+ 0.010	+ 0.010	BSTL3	0.001	BSTL5	0.001
FB10	2L45X45X5-10	BSTL3	(T)	0.000	=	0.007	+ 0.010	+ 0.010	BSTL1	0.002	BSTL3	0.000
FB11	2L45X45X5-10	BSTL2	(T)	0.007	=	0.015	+ 0.000	+ 0.001	BSTL1	0.002	BSTL3	0.000
FB12	2L45X45X5-10	BSTL3	(T)	0.007	=	0.010	+ 0.000	+ 0.001	BSTL1	0.002	BSTL5	0.000

F00	2L45X45X5-10	BSTL1	(T)	0.000	= 0.000 + 0.000 + 0.000	BSTL1	0.001	BSTL2	0.000
F04	2L45X45X5-10	BSTL1	(T)	0.001	= 0.000 + 0.000 + 0.001	BSTL1	0.001	BSTL3	0.000
F05	2L45X45X5-10	BSTL1	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL1	0.001	BSTL3	0.000
F06	2L45X45X5-10	BSTL1	(C)	0.001	= 0.000 + 0.001 + 0.000	BSTL1	0.001	BSTL3	0.000
F01	2L45X45X5-10	BSTL1	(C)	0.117	= 0.075 + 0.001 + 0.040	BSTL3	0.000	BSTL3	0.000
F02	2L45X45X5-10	BSTL1	(T)	0.117	= 0.075 + 0.001 + 0.040	BSTL3	0.000	BSTL3	0.000
F03	2L45X45X5-10	BSTL1	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.000
F06	2L45X45X5-10	BSTL3	(C)	0.007	= 0.001 + 0.001 + 0.005	BSTL3	0.000	BSTL4	0.001
F05	2L45X45X5-10	BSTL3	(T)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
F06	2L45X45X5-10	BSTL3	(T)	0.000	= 0.000 + 0.000 + 0.000	BSTL4	0.000	BSTL3	0.001
JA1	2L45X45X5-10	BSTL3	(T)	0.004	= 0.001 + 0.001 + 0.002	BSTL4	0.001	BSTL3	0.000
JA2	2L45X45X5-10	BSTL3	(T)	0.004	= 0.001 + 0.001 + 0.002	BSTL6	0.001	BSTL3	0.000
JA3	2L45X45X5-10	BSTL3	(C)	0.103	= 0.071 + 0.024 + 0.008	BSTL1	0.001	BSTL3	0.001
JA4	2L45X45X5-10	BSTL3	(C)	0.104	= 0.051 + 0.004 + 0.049	BSTL1	0.001	BSTL2	0.001
JA5	2L45X45X5-10	BSTL3	(C)	0.004	= 0.000 + 0.000 + 0.004	BSTL1	0.001	BSTL3	0.001
JA6	2L45X45X5-10	BSTL3	(C)	0.004	= 0.000 + 0.000 + 0.004	BSTL1	0.001	BSTL3	0.001
JA7	2L45X45X5-10	BSTL3	(C)	0.004	= 0.000 + 0.000 + 0.004	BSTL1	0.001	BSTL3	0.000
JA8	2L45X45X5-10	BSTL3	(C)	0.001	= 0.000 + 0.000 + 0.001	BSTL1	0.001	BSTL3	0.000
JB1	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL1	0.001	BSTL3	0.000
JB2	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL2	0.000	BSTL3	0.000
JB3	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB4	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB5	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL1	0.001	BSTL3	0.001
JB6	2L45X45X5-10	BSTL3	(C)	0.116	= 0.072 + 0.022 + 0.022	BSTL1	0.001	BSTL3	0.001
JB7	2L45X45X5-10	BSTL3	(C)	0.116	= 0.072 + 0.022 + 0.022	BSTL1	0.001	BSTL3	0.001
JB8	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.001	BSTL3	0.001
JB9	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB10	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB11	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB12	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB13	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB14	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB15	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB16	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB17	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB18	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB19	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB20	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB21	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB22	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB23	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB24	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB25	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB26	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB27	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB28	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB29	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB30	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB31	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB32	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB33	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB34	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB35	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB36	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB37	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB38	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB39	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB40	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB41	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB42	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB43	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB44	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB45	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB46	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB47	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB48	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB49	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB50	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB51	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB52	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB53	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB54	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB55	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB56	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB57	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB58	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB59	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB60	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB61	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB62	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB63	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB64	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB65	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB66	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB67	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB68	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB69	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB70	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB71	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB72	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB73	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB74	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB75	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB76	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB77	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB78	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB79	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB80	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB81	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB82	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB83	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB84	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB85	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB86	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB87	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB88	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB89	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB90	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BSTL3	0.001
JB91	2L45X45X5-10	BSTL3	(C)	0.000	= 0.000 + 0.000 + 0.000	BSTL3	0.000	BST	



SAP2000 v7.42 File: TANOGA-3 KN-m Units PAGE 1
10/24/03 23:13:36

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STATIC LOAD CASES

STATIC CASE	LOAD TYPE	SELF WT FACTOR
LP	DEAD	1.0000
LL	LIVE	0.0000

SAP2000 v7.42 File: TANOGA-3 KN-m Units PAGE 2
10/24/03 23:13:36

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FRAME ELEMENT DATA

FRAME	JOINT-1	JOINT-2	SECTION	ANGLE	RELEASES	SEGMENTS	R1	R2	FACTOR	LENGTH
1	11	1	TG45X25	0.000	000000	2	0.000	0.000	1.000	4.151
2	10	2	TG45X25	0.000	000000	2	0.000	0.000	1.000	4.151
3	20	3	TG45X25	0.000	000000	2	0.000	0.000	1.000	4.151
4	14	4	TG45X25	0.000	000000	2	0.000	0.000	1.000	4.151
5	5	5	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
6	6	6	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
7	7	7	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
8	8	8	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
9	9	9	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
10	10	10	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
11	11	11	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
12	12	12	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
13	13	13	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
14	14	14	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
15	15	15	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
16	16	16	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
17	17	17	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
18	18	18	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
19	19	19	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
20	20	20	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
21	21	21	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
22	22	22	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
23	23	23	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
24	24	24	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
25	25	25	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
26	26	26	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
27	27	27	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
28	28	28	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
29	29	29	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
30	30	30	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
31	31	31	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
32	32	32	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
33	33	33	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
34	34	34	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
35	35	35	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
36	36	36	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
37	37	37	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
38	38	38	BBR25X25	0.000	000000	4	0.000	0.000	1.000	0.400
39	39	39	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
40	40	40	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
41	41	41	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
42	42	42	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
43	43	43	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778
44	44	44	TG40X25	0.000	000000	4	0.000	0.000	1.000	1.778

SAP2000 v7.42 File: TANOGA-3 KN-m Units PAGE 3
10/24/03 23:13:36

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JOINT FORCE S Load Case LD

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-XX	GLOBAL-VY	GLOBAL-TZ
9	0.000	0.000	-2.466	0.000	0.000	0.000
10	0.000	0.000	-2.466	0.000	0.000	0.000
11	0.000	0.000	-2.466	0.000	0.000	0.000
12	0.000	0.000	-2.466	0.000	0.000	0.000

SAP2000 v7.42 File: TANOGA-3 KN-m Units PAGE 4
10/24/03 23:13:36

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W E I G H T F O R C E S Load Case LL

JOINT	GLOBAL-X	GLOBAL-Y	GLOBAL-Z	GLOBAL-XX	GLOBAL-YY	GLOBAL-ZZ
9	0,000	0,000	-0,500	0,000	0,000	0,000
10	0,000	0,000	-0,500	0,000	0,000	0,000
11	0,000	0,000	-0,500	0,000	0,000	0,000
12	0,000	0,000	-0,500	0,000	0,000	0,000

SAP2000 v9.42 File: TANOGA-3 KN-m Units PAGE 5
10/24/03 23:13:36

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Kampus D3 Ekonomi UIN Block E

F R A M E S P A N D I S T R I B U T E D L O A D S Load Case LL

FRAME	TYPE	DIRECTION	DISTANCE-A	VALUE-A	DISTANCE-B	VALUE-B
4	FORCE	GLOBAL-Z	0,0000	-2,4000	1,0000	-0,4000
5	FORCE	GLOBAL-Z	0,0000	-2,4000	1,0000	-2,4000
2	FORCE	GLOBAL-Z	0,0000	-2,4000	1,0000	-2,4000
1	FORCE	GLOBAL-Z	0,0000	-2,4000	1,0000	-2,4000
40	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
43	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
41	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
39	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
44	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
42	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
17	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
26	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
16	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
18	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
25	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
27	FORCE	GLOBAL-Z	0,0000	-2,1320	1,0000	-2,1320
20	FORCE	GLOBAL-Z	0,0000	-2,4000	1,0000	-2,4000
21	FORCE	GLOBAL-Z	0,0000	-2,4000	1,0000	-2,4000
22	FORCE	GLOBAL-Z	0,0000	-2,4000	1,0000	-2,4000
23	FORCE	GLOBAL-Z	0,0000	-2,4000	1,0000	-2,4000
19	FORCE	GLOBAL-Z	0,0000	-2,6700	1,0000	-2,6700
24	FORCE	GLOBAL-Z	0,0000	-2,6700	1,0000	-2,6700

SAP2000 v9.42 File: TANOGA-3 KN-m Units PAGE 6
10/24/03 23:13:36

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Kampus D3 Ekonomi UIN Block E

F R A M E S P A N D I S T R I B U T E D L O A D S Load Case LL

FRAME	TYPE	DIRECTION	DISTANCE-A	VALUE-A	DISTANCE-B	VALUE-B
20	FORCE	GLOBAL-Z	0,0000	-1,4000	1,0000	-1,4000
21	FORCE	GLOBAL-Z	0,0000	-1,4000	1,0000	-1,4000
22	FORCE	GLOBAL-Z	0,0000	-1,4000	1,0000	-1,4000
23	FORCE	GLOBAL-Z	0,0000	-1,4000	1,0000	-1,4000
19	FORCE	GLOBAL-Z	0,0000	-1,4000	1,0000	-1,4000
24	FORCE	GLOBAL-Z	0,0000	-1,4000	1,0000	-1,4000
40	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
17	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
43	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
26	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
16	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
18	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
25	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
27	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
41	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
39	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
44	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
42	FORCE	GLOBAL-Z	0,0000	-1,2000	1,0000	-1,2000
4	FORCE	GLOBAL-Z	0,0000	-1,3500	1,0000	-1,3500
5	FORCE	GLOBAL-Z	0,0000	-1,3500	1,0000	-1,3500
2	FORCE	GLOBAL-Z	0,0000	-1,3500	1,0000	-1,3500
1	FORCE	GLOBAL-Z	0,0000	-1,3500	1,0000	-1,3500

SAP2000 v7.40 File: TANOGA-3 N-mm Units PAGE 1
10/24/03 23:16:30

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LOAD COMBINATION MULTIPLIED

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
DCOM1	ADD	LD	1.4000	STATIC(DEAD)	DCOM1
DCOM2	ADD	LD	1.2000	STATIC(DEAD)	DCOM2
		LL	1.6000	STATIC(LIVE)	

SAP2000 v7.40 File: TANOGA-3 N-mm Units PAGE 2
10/24/03 23:16:30

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JOINT DISPLACEMENTS

JOINT	LOAD	U1	U2	U3	SL	SL	SL
1	Minima	0.0000	0.0013	0.0000	0.0000	0.0000	0.0000
		DCOM2	DCOM2	DCOM2	DCOM2	DCOM2	DCOM2
1	Maxima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DCOM2	DCOM2	DCOM2	DCOM2	DCOM2	DCOM2
2	Minima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DCOM2	DCOM2	DCOM2	DCOM2	DCOM2	DCOM2
2	Maxima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DCOM2	DCOM2	DCOM2	DCOM2	DCOM2	DCOM2
3	Minima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DCOM2	DCOM2	DCOM2	DCOM2	DCOM2	DCOM2
3	Maxima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DCOM2	DCOM2	DCOM2	DCOM2	DCOM2	DCOM2
4	Minima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DCOM2	DCOM2	DCOM2	DCOM2	DCOM2	DCOM2
4	Maxima	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		DCOM2	DCOM2	DCOM2	DCOM2	DCOM2	DCOM2
5	Minima	-0.1086	0.1089	-0.1089	0.809E-04	-0.809E-04	-0.108E-04
		DCOM2	LL	DCOM2	LL	DCOM2	DCOM2
5	Maxima	-0.0207	0.0211	-0.0211	0.448E-03	-1.001E-03	0.301E-03
		LL	DCOM2	LL	DCOM2	LL	LL
6	Minima	-0.1285	0.1285	-0.1285	0.980E-04	-0.244E-04	-0.314E-04
		DCOM2	LL	DCOM2	LL	DCOM2	DCOM2
6	Maxima	-0.0209	0.0206	-0.0206	0.492E-03	-4.218E-03	-0.127E-03
		LL	DCOM2	LL	DCOM2	LL	LL
7	Minima	-0.1214	0.0774	-0.4609	0.262E-04	-0.103E-04	-4.660E-04
		DCOM2	LL	DCOM2	LL	DCOM2	DCOM2
7	Maxima	-0.0122	0.0304	-0.0304	1.511E-03	-2.751E-03	-0.078E-03
		LL	DCOM2	LL	DCOM2	LL	LL
8	Minima	-0.1617	0.0155	-0.0746	0.273E-04	-1.613E-04	-0.662E-04
		DCOM2	LL	DCOM2	LL	DCOM2	DCOM2
8	Maxima	-0.0150	0.1101	-0.0110	0.510E-03	-1.035E-03	-0.048E-03
		LL	DCOM2	LL	DCOM2	LL	LL
9	Minima	-0.0669	-0.0205	-0.0169	4.206E-04	-9.500E-05	-0.070E-04
		DCOM2	DCOM2	DCOM2	LL	DCOM2	DCOM2
9	Maxima	-0.0106	-0.0293	-0.0487	1.686E-03	-1.009E-03	-4.713E-03
		LL	LL	LL	DCOM2	LL	LL
10	Minima	-0.0231	-0.0359	-0.0446	0.365E-04	-0.445E-04	-0.055E-03
		DCOM2	DCOM2	DCOM2	LL	DCOM2	DCOM2
10	Maxima	-0.009E-03	-0.0652	-0.0492	1.107E-03	1.501E-03	-1.578E-03
		LL	LL	LL	DCOM2	LL	LL
11	Minima	0.679E-03	-0.0359	-0.0446	4.358E-04	-1.106E-04	1.571E-03
		LL	DCOM2	DCOM2	LL	LL	LL
11	Maxima	0.0231	-0.0652	-0.0492	1.107E-03	2.445E-03	0.055E-03
		DCOM2	LL	LL	DCOM2	DCOM2	DCOM2
12	Minima	0.0106	-0.0293	-0.0487	4.206E-04	1.009E-03	4.713E-03
		LL	DCOM2	LL	LL	LL	LL
12	Maxima	0.009E-03	-0.0652	-0.0492	1.107E-03	1.501E-03	-1.578E-03
		DCOM2	LL	LL	DCOM2	DCOM2	DCOM2
13	Minima	0.0160	0.0155	-0.0746	0.273E-04	1.035E-03	0.048E-03
		LL	LL	DCOM2	LL	LL	LL
13	Maxima	0.1617	0.1101	-0.0110	0.510E-03	1.012E-04	0.602E-04
		LL	LL	LL	LL	LL	LL

		DOON1	DOON2	DOON1	DOON2	DOON2	DOON2
33 Minima	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	
	DOON1	DOON2	DOON2	DOON2	DOON2	DOON2	
33 Maxima	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	
	DOON1	DOON2	DOON2	DOON2	DOON2	DOON2	
34 Minima	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	
	DOON1	DOON2	DOON2	DOON2	DOON2	DOON2	
34 Maxima	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	
	DOON1	DOON2	DOON2	DOON2	DOON2	DOON2	

SAP2000 V7.42 File: TANGGA-3 N-mm Units PAGE 3
10/12/03 12:16:00

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FRAME ELEMENT FORCES

FRAME	LOAD	LOC	P	V2	V3	T	M2	M3
1	Minima		-141535,89 DOON2	-19304,84 DOON2	-3658,86 DOON2	-166306,80 DOON2	-9941440,80 DOON2	-23875677,1 DOON2
1	Maxima		-19689,58 LL	10573,49 DOON2	-553,26 LL	-42411,86 LL	9264840,36 DOON2	717364,20 DOON2
2	Minima		-76369,36 DOON2	-18792,09 DOON2	-752,12 DOON2	-179076,16 DOON2	-2061723,27 DOON2	-22470983,6 DOON2
2	Maxima		-9827,72 LL	11116,26 DOON2	-111,87 LL	-33581,75 LL	1126066,36 DOON2	995681,93 DOON2
3	Minima		-76369,36 DOON2	-18792,49 DOON2	111,87 LL	33581,75 LL	-1126066,36 DOON2	-22470983,6 DOON2
3	Maxima		-9827,72 LL	11116,26 DOON2	752,12 DOON2	179076,16 DOON2	2061723,27 DOON2	995681,93 DOON2
4	Minima		-141535,89 DOON2	-19304,84 DOON2	553,26 LL	42411,86 LL	-9264840,36 DOON2	-23875677,1 DOON2
4	Maxima		-19689,58 LL	10573,49 DOON2	-3658,86 DOON2	-166306,80 DOON2	-9941440,80 DOON2	-23875677,1 DOON2
5	Minima		1039,19 LL	-1518,68 DOON2	3351,80 LL	94497,12 LL	-2514636,51 DOON2	-974909,09 DOON2
5	Maxima		5677,40 DOON2	-380,35 LL	21523,45 DOON2	555356,17 DOON2	5084749,87 DOON2	-80538,14 LL
6	Minima		3482,93 LL	-3842,81 DOON2	7465,29 LL	91103,22 LL	-7313216,84 DOON2	-1934672,30 DOON2
6	Maxima		22264,95 DOON2	-546,37 LL	47516,99 DOON2	444182,44 DOON2	11693577,55 DOON2	-109490,69 LL
7	Minima		7949,74 LL	-5942,83 DOON2	13423,19 LL	-228914,99 DOON2	-20943509,8 DOON2	-3344365,20 DOON2
7	Maxima		50560,86 DOON2	-1066,28 LL	84619,01 DOON2	-9391,43 LL	18192789,78 DOON2	215308,46 DOON2
8	Minima		15249,34 LL	-1406,33 DOON2	13050,59 LL	290190,85 LL	-19784841,6 DOON2	-1573013,64 DOON2
8	Maxima		96502,89 DOON2	357,76 DOON2	91993,04 DOON2	1744178,88 DOON2	18118437,35 DOON2	-55105,03 LL
9	Minima		19270,31 LL	-736,83 DOON2	4676,55 LL	33401,35 LL	-9836168,80 DOON2	-1069322,73 DOON2
9	Maxima		121548,25 DOON2	484,90 DOON2	30183,91 DOON2	517144,88 DOON2	3746687,21 DOON2	9052,14 LL
10	Minima		30433,65 LL	-463,84 DOON2	0,00 DOON2	0,00 DOON2	-2950963,12 DOON2	-741977,40 DOON2
10	Maxima		128727,85 DOON2	463,84 DOON2	0,00 LL	0,00 LL	-455121,40 LL	43380,31 LL
11	Minima		19070,31 LL	-484,90 DOON2	-30183,91 DOON2	-517144,88 DOON2	-9036168,80 DOON2	-1065722,73 DOON2
11	Maxima		121548,25 DOON2	736,83 DOON2	-4376,95 LL	-98431,65 LL	3746687,21 DOON2	9052,14 LL
12	Minima		15249,34 LL	-357,76 DOON2	-91993,04 DOON2	-1744178,88 DOON2	-19784841,6 DOON2	-1573013,64 DOON2
12	Maxima		96502,89 DOON2	1406,33 DOON2	-13050,59 LL	-290190,85 LL	18118437,35 DOON2	-55105,03 LL

13	Minima	7849,74 LL DCOM2	1668,38 LL DCOM2	-84519,01 LL DCOM2	9391,43 LL DCOM2	-30943732,8 LL DCOM2	-2340365,33 LL DCOM2
13	Maxima	5954,90 DCOM2	7849,74 DCOM2	-16403,19 LL DCOM1	33914,39 DCOM1	18193783,76 DCOM2	313238,45 DCOM2
14	Minima	2482,93 LL DCOM2	646,70 LL DCOM2	-47516,99 LL DCOM2	-444183,44 LL DCOM2	-7313319,84 LL DCOM2	-1934671,50 LL DCOM2
14	Maxima	22184,93 DCOM2	3841,31 DCOM2	-7468,35 LL DCOM2	-91193,33 LL DCOM2	11693577,15 LL DCOM2	-109490,39 LL DCOM2
15	Minima	1039,13 LL DCOM2	260,33 LL DCOM2	-31523,43 LL DCOM2	-305336,17 LL DCOM2	-3544635,51 LL DCOM2	-974909,39 LL DCOM2
15	Maxima	6677,40 DCOM2	1911,68 DCOM2	-3331,80 LL DCOM2	-94497,31 LL DCOM2	8064743,87 LL DCOM2	-80136,13 LL DCOM2
16	Minima	3151,80 LL DCOM2	-14903,03 LL DCOM2	-6677,40 LL DCOM2	-974909,39 LL DCOM2	-5817673,85 LL DCOM2	-15435413,6 LL DCOM2
16	Maxima	21523,45 DCOM2	-320,33 LL DCOM2	-1079,18 LL DCOM2	-164375,41 LL DCOM2	8064743,87 LL DCOM2	-34497,13 LL DCOM2
17	Minima	4116,48 LL DCOM2	-15635,19 LL DCOM2	-15537,55 LL DCOM2	-1873374,43 LL DCOM2	-10466444,4 LL DCOM2	-16173049,5 LL DCOM2
17	Maxima	25993,54 DCOM2	-385,03 LL DCOM2	-443,75 LL DCOM2	-267803,51 LL DCOM2	14248214,23 LL DCOM2	65033,88 LL DCOM2
18	Minima	5954,90 LL DCOM2	-15796,18 LL DCOM2	-18295,91 LL DCOM2	-1815457,05 LL DCOM2	-34804127,9 LL DCOM2	-15966930,6 LL DCOM2
18	Maxima	37102,02 DCOM2	-419,31 LL DCOM2	-4466,81 LL DCOM2	-333164,80 LL DCOM2	23506000,83 LL DCOM2	651135,87 LL DCOM2
19	Minima	-3666,97 DCOM2	-11343,82 DCOM2	-43943,03 DCOM2	-1786321,13 DCOM2	-41633978, DCOM2	-9629379,54 DCOM2
19	Maxima	-372,59 LL DCOM2	3719,37 DCOM2	-7239,49 LL DCOM2	-339754,66 LL DCOM2	39081947,02 LL DCOM2	-183951,88 LL DCOM2
20	Minima	-31789,13 DCOM2	-15434,35 DCOM2	-25045,37 DCOM2	-363661,00 LL DCOM2	-30999167,8 LL DCOM2	-20208037,3 DCOM2
20	Maxima	-8173,84 LL DCOM2	-696,89 LL DCOM2	-4020,37 LL DCOM2	137728,76 DCOM2	23531499,12 DCOM2	1237034,00 DCOM2
21	Minima	-30183,91 DCOM2	-19743,61 DCOM2	-7179,59 DCOM2	54528,17 LL DCOM2	-5730198,48 LL DCOM2	-21466725,7 DCOM2
21	Maxima	-4876,35 LL DCOM2	-756,84 LL DCOM2	-1163,34 LL DCOM2	382741,09 DCOM2	6385118,80 DCOM2	517144,88 DCOM2
22	Minima	-30183,91 DCOM2	-19743,61 DCOM2	1163,34 LL DCOM2	-382741,09 DCOM2	-6385118,80 DCOM2	-21466725,7 DCOM2
22	Maxima	-4876,35 LL DCOM2	-756,84 LL DCOM2	7179,59 DCOM2	-24538,17 LL DCOM2	5730198,48 LL DCOM2	517144,88 DCOM2
23	Minima	-51769,13 DCOM2	-19434,95 DCOM2	4020,37 LL DCOM2	-137728,76 DCOM2	-33314299,1 DCOM2	-20208037,3 DCOM2
23	Maxima	-8173,84 LL DCOM2	-696,89 LL DCOM2	25045,37 DCOM2	38266,00 LL DCOM2	30999167,78 LL DCOM2	1237034,00 DCOM2
24	Minima	-2566,97 DCOM2	-12243,82 DCOM2	7239,49 LL DCOM2	339754,66 LL DCOM2	-39061948, DCOM2	-9529279,54 DCOM2
24	Maxima	-372,59 LL DCOM2	3719,37 DCOM2	45940,03 DCOM2	1786321,13 DCOM2	41633977,99 DCOM2	-183951,88 LL DCOM2
25	Minima	5954,90 LL DCOM2	-15796,18 LL DCOM2	4466,81 LL DCOM2	333164,80 LL DCOM2	-23506000,6 LL DCOM2	-15966930,6 DCOM2
25	Maxima	37102,02 DCOM2	-419,31 LL DCOM2	-18295,91 DCOM2	1815457,05 DCOM2	34804127,94 DCOM2	651135,87 DCOM2
26	Minima	4116,48 LL DCOM2	-15635,19 LL DCOM2	2443,75 LL DCOM2	287802,51 LL DCOM2	-14248214,2 LL DCOM2	-16173049,5 DCOM2
26	Maxima	25993,54 DCOM2	-385,03 LL DCOM2	15537,55 DCOM2	1873374,43 DCOM2	10466444,41 DCOM2	65033,88 DCOM2
27	Minima	3351,80 LL DCOM2	-14903,03 LL DCOM2	1039,13 LL DCOM2	164376,41 LL DCOM2	-6054743,87 LL DCOM2	-15435413,6 DCOM2
27	Maxima	21523,45 DCOM2	-260,33 LL DCOM2	6677,40 DCOM2	974909,39 DCOM2	5817673,85 DCOM2	-94497,13 LL DCOM2
28	Minima	-6714,51 DCOM2	1296,71 LL DCOM2	3636,12 LL DCOM2	67420,13 LL DCOM2	-3174089,61 LL DCOM2	-508734,59 DCOM2
28	Maxima	-1038,87 LL DCOM2	7893,08 DCOM2	23142,25 DCOM2	357553,29 DCOM2	6083089,34 DCOM2	2479739,41 DCOM2
29	Minima	-31905,03 DCOM2	2282,93 LL DCOM2	7493,85 LL DCOM2	223136,52 LL DCOM2	-7271793,13 LL DCOM2	-3308293,14 DCOM2

49	Maxima	-3411,59 LL DCOM1	14054,85 LL DCOM2	47525,61 LL DCOM1	1301105,10 LL DCOM2	11738854,70 LL DCOM1	1172286,36 LL DCOM2
50	Minima	-48863,19 LL DCOM2	533,26 LL DCOM1	15253,22 LL DCOM2	791644,83 LL DCOM1	-31360146,1 LL DCOM2	-2787139,36 LL DCOM1
50	Maxima	-7806,73 LL DCOM1	3330,46 LL DCOM2	55863,87 LL DCOM1	4617375,83 LL DCOM2	11575331,73 LL DCOM1	-334119,34 LL DCOM2
51	Minima	-34545,12 LL DCOM1	2362,28 LL DCOM2	15875,46 LL DCOM1	-4601639,63 LL DCOM2	-25909708,1 LL DCOM1	-7925413,56 LL DCOM2
51	Maxima	-14309,30 LL DCOM2	15391,11 LL DCOM1	98536,21 LL DCOM2	-724930,23 LL DCOM1	20762835,55 LL DCOM2	-148470,04 LL DCOM1
52	Minima	-115939,70 LL DCOM2	-8112,89 LL DCOM1	5770,43 LL DCOM2	-1094289,15 LL DCOM1	-2435151,55 LL DCOM2	-3552518,13 LL DCOM1
52	Maxima	-16376,04 LL DCOM1	-1285,86 LL DCOM2	31376,10 LL DCOM1	-148652,32 LL DCOM2	4458057,13 LL DCOM1	301534,30 LL DCOM2
53	Minima	-121381,20 LL DCOM2	-463,34 LL DCOM1	0,00 LL DCOM2	0,00 LL DCOM1	-2034663,27 LL DCOM2	182907,47 LL DCOM1
53	Maxima	-19428,31 LL DCOM1	461,84 LL DCOM2	0,00 LL DCOM1	0,00 LL DCOM2	-381699,74 LL DCOM1	321143,23 LL DCOM2
54	Minima	-115930,73 LL DCOM2	1265,69 LL DCOM1	-31378,20 LL DCOM2	-148641,38 LL DCOM1	-2655153,55 LL DCOM2	-3552518,13 LL DCOM1
54	Maxima	-16376,04 LL DCOM1	5817,69 LL DCOM2	-5032,43 LL DCOM1	1004259,29 LL DCOM2	4458028,18 LL DCOM1	301534,30 LL DCOM2
55	Minima	-84545,31 LL DCOM2	-15391,31 LL DCOM1	-96535,22 LL DCOM2	724930,23 LL DCOM1	-25309708,2 LL DCOM2	-7928413,56 LL DCOM1
55	Maxima	-14908,33 LL DCOM1	-2362,28 LL DCOM2	-15865,88 LL DCOM1	4671939,63 LL DCOM2	30261830,55 LL DCOM1	-148470,04 LL DCOM2
56	Minima	-48863,19 LL DCOM2	-1330,46 LL DCOM1	-25869,35 LL DCOM2	-4657379,69 LL DCOM1	-31360146,0 LL DCOM2	-2787139,36 LL DCOM1
56	Maxima	-7806,73 LL DCOM1	-333,20 LL DCOM2	-15230,29 LL DCOM1	-791844,83 LL DCOM2	21979381,73 LL DCOM1	-334119,34 LL DCOM2
57	Minima	-31906,03 LL DCOM2	-14054,85 LL DCOM1	-47525,62 LL DCOM2	-1301105,10 LL DCOM1	-7271782,13 LL DCOM2	-3308299,14 LL DCOM1
57	Maxima	-3411,59 LL DCOM1	-3182,83 LL DCOM2	-7498,83 LL DCOM1	-222136,32 LL DCOM2	11738854,70 LL DCOM1	2172286,36 LL DCOM2
58	Minima	-5714,31 LL DCOM2	-7899,58 LL DCOM1	-13142,95 LL DCOM2	-357553,39 LL DCOM1	-3174089,91 LL DCOM2	-538734,59 LL DCOM1
58	Maxima	-1036,87 LL DCOM1	-1396,71 LL DCOM2	-3638,12 LL DCOM1	-67430,15 LL DCOM2	5893389,54 LL DCOM1	1475783,41 LL DCOM2
59	Minima	6681,88 LL DCOM2	-14766,57 LL DCOM1	-6,018E-01 LL DCOM2	233530,71 LL DCOM1	59280,13 LL DCOM2	-15813965,9 LL DCOM1
59	Maxima	57465,41 LL DCOM2	11803,90 LL DCOM1	44,19 LL DCOM2	1446502,98 LL DCOM1	492534,95 LL DCOM2	1046811,75 LL DCOM1
40	Minima	7730,68 LL DCOM2	-11313,46 LL DCOM1	-395,83 LL DCOM2	261500,40 LL DCOM1	-923381,63 LL DCOM2	-17116601,5 LL DCOM1
40	Maxima	63658,05 LL DCOM2	15357,00 LL DCOM1	-70,74 LL DCOM2	1633422,51 LL DCOM1	719558,50 LL DCOM2	1277013,45 LL DCOM1
41	Minima	14182,73 LL DCOM2	-16340,80 LL DCOM1	-1596,75 LL DCOM2	272531,18 LL DCOM1	-4092100,43 LL DCOM2	-19443204,8 LL DCOM1
41	Maxima	103136,89 LL DCOM2	10229,66 LL DCOM1	-269,66 LL DCOM2	1787548,44 LL DCOM1	2543714,04 LL DCOM2	583610,79 LL DCOM1
42	Minima	14182,73 LL DCOM2	-16340,80 LL DCOM1	269,66 LL DCOM2	-1787548,44 LL DCOM1	-2543714,04 LL DCOM2	-19443204,8 LL DCOM1
42	Maxima	103136,89 LL DCOM2	10229,66 LL DCOM1	1898,75 LL DCOM2	-272531,18 LL DCOM1	4092100,43 LL DCOM2	583610,79 LL DCOM1
43	Minima	7730,68 LL DCOM2	-11313,46 LL DCOM1	70,74 LL DCOM2	-1633422,51 LL DCOM1	-719558,50 LL DCOM2	-17116601,5 LL DCOM1
43	Maxima	63658,05 LL DCOM2	15357,00 LL DCOM1	395,83 LL DCOM2	-261500,40 LL DCOM1	923381,63 LL DCOM2	1277013,45 LL DCOM1
44	Minima	5651,88 LL DCOM2	-14766,57 LL DCOM1	-44,19 LL DCOM2	-1446502,98 LL DCOM1	-492534,95 LL DCOM2	-15813965,9 LL DCOM1
44	Maxima	57465,41 LL DCOM2	11803,90 LL DCOM1	6,018E-01 LL DCOM2	-223530,71 LL DCOM1	-59280,13 LL DCOM2	1046811,75 LL DCOM1

SAP2000 v7.42 File: TANGGA-3 N-mm Units PAGE 1
10/22/03 22:18:35

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Kampus D3 Ekonomi UII Block B

MATERIAL PROPERTY DATA

MAT LABEL	MODULUS OF ELASTICITY	POISSON'S RATIO	THERMAL WEIGHT PER COEFF	UNIT VOL	MASS PER UNIT VOL
CONC	19995,756	0.200	9.800E-06	1.358E-05	2.401E-09

SAP2000 v7.42 File: TANGGA-3 N-mm Units PAGE 1
10/22/03 22:18:35

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MATERIAL DESIGN DATA

MAT LABEL	DESIGN CODE	STEEL FY	CONCRETE FC	REBAR FY	CONCRETE FCR	REBAR FTR
CONC	0		30,000	240,000	20,000	240,000

SAP2000 v7.42 File: TANGGA-3 N-mm Units PAGE 3
10/22/03 22:18:35

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CONCRETE BEAM PROPERTY DATA

SECTION LABEL	MAT LABEL	BEAM DEPTH	BEAM WIDTH	TOP COVER	BOTTOM COVER	REBAR AT-1	REBAR AT-2	REBAR AB-1	REBAR AB-2
T430X25	CONC	250.000	500.000	15.000	15.000	0.000	0.000	0.000	0.000
T440X25	CONC	250.000	450.000	20.000	10.000	0.000	0.000	0.000	0.000
T440X25	CONC	250.000	400.000	20.000	10.000	0.000	0.000	0.000	0.000
BE25X25	CONC	250.000	250.000	20.000	20.000	0.000	0.000	0.000	0.000

SAP2000 v7.42 File: TANGGA-3 N-mm Units PAGE 4
10/22/03 22:18:35

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LOAD COMBINATION MULTIPLIERS

COMBO	TYPE	CASE	FACTOR	TYPE	TITLE
DCOM1	ADD	LD	1.0000	STATIC(READ)	DCOM1
DCOM2	ADD	LD	1.0000	STATIC(READ)	DCOM2
		LL	1.5000	STATIC(LIVE)	

SAP2000 v7.42 File: TANGGA-3 N-mm Units PAGE 5
10/22/03 22:18:35

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CODE PREFERENCES

Code: ACI 318-99

Phi_bending	: 0.6
Phi_tension	: 0.6
Phi_compression(Tied)	: 0.65
Phi_compression(Spiral)	: 0.7
Phi_shear	: 0.6

SAP2000 v7.42 File: TANGGA-3 N-mm Units PAGE 6
10/22/03 22:18:36

SCony & Oche, Engineer
Kampus D3 Ekonomi UII Block B

CONCRETE DESIGN ELEMENT INFORMATION (ACI 318-99)

FRAME ID	SECTION ID	ELEMENT TYPE	FRAMING TYPE	DEF FACTOR	U _{static} MAJOR	U _{static} MINOR	M MAJOR	M MINOR
1	TC45X25	BEAM SWYSPEC		1,000	1,000	1,000		
2	TC45X25	BEAM SWYSPEC		1,000	1,000	1,000		
3	TC45X25	BEAM SWYSPEC		1,000	1,000	1,000		
4	TC45X25	BEAM SWYSPEC		1,000	1,000	1,000		
5	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
6	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
7	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
8	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
9	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
10	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
11	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
12	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
13	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
14	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
15	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
16	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
17	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
18	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
19	TC50X25	BEAM SWYSPEC		1,000	1,000	1,000		
20	TC45X25	BEAM SWYSPEC		1,000	1,000	1,000		
21	TC45X25	BEAM SWYSPEC		1,000	1,000	1,000		
22	TC45X25	BEAM SWYSPEC		1,000	1,000	1,000		
23	TC45X25	BEAM SWYSPEC		1,000	1,000	1,000		
24	TC50X25	BEAM SWYSPEC		1,000	1,000	1,000		
25	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
26	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
27	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
28	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
29	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
30	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
31	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
32	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
33	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
34	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
35	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
36	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
37	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
38	BER25X25	BEAM SWYSPEC		1,000	1,000	1,000		
39	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
40	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
41	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
42	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
43	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		
44	TC40X25	BEAM SWYSPEC		1,000	1,000	1,000		

SAS1600 v7.42 File: TANCA-3 N-mm Units PAGE: 7
10/20/97 02:16:39

gGony & Goh, Engineer
Kampus D3 Ekonomi UII Blok B

CONCRETE DESIGN OUTPUT (ACI 318-99)

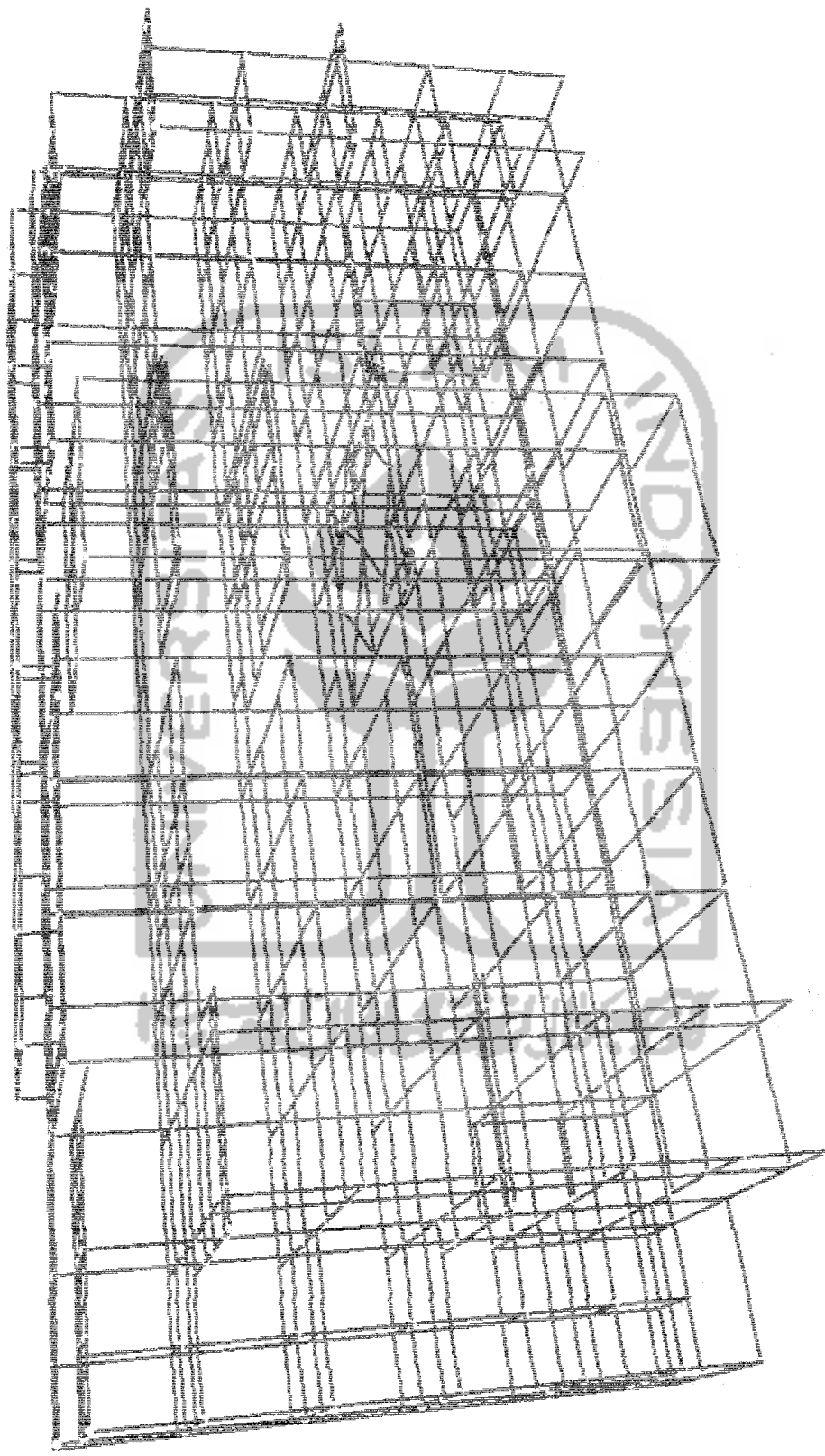
FLEXURAL AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

ELEM ID	SECTION ID	STATION ID	REQUIRED REINFORCING				SHEAR	COMB2
			TOP	COMB2	BOTTOM	COMB2		
1	TC45X25	0,000	581,301	DCOM2	330,647	DCOM1	0,000	DCOM2
1	TC45X25	2075,317	164,357	DCOM1	164,357	DCOM1	0,000	DCOM2
1	TC45X25	4150,635	133,566	DCOM1	76,572	DCOM1	0,000	DCOM1
2	TC45X25	0,000	568,818	DCOM1	310,741	DCOM1	0,000	DCOM2
2	TC45X25	2075,317	154,500	DCOM1	154,500	DCOM1	0,000	DCOM2
2	TC45X25	4150,635	177,101	DCOM1	88,269	DCOM1	0,000	DCOM2
3	TC45X25	0,000	568,818	DCOM1	310,741	DCOM1	0,000	DCOM2
3	TC45X25	2075,317	154,500	DCOM1	154,500	DCOM1	0,000	DCOM2
3	TC45X25	4150,635	177,101	DCOM1	88,269	DCOM1	0,000	DCOM2
4	TC45X25	0,000	581,301	DCOM2	330,647	DCOM1	0,000	DCOM2
4	TC45X25	2075,317	164,357	DCOM1	164,357	DCOM1	0,000	DCOM2
4	TC45X25	4150,635	133,566	DCOM1	76,572	DCOM1	0,000	DCOM2
5	BER25X25	0,000	25,079	DCOM1	10,329	DCOM1	0,349	DCOM2
5	BER25X25	100,000	19,876	DCOM1	6,252	DCOM1	0,244	DCOM2
5	BER25X25	200,000	15,328	DCOM1	6,262	DCOM1	0,358	DCOM2
5	BER25X25	300,000	11,438	DCOM1	8,262	DCOM1	0,233	DCOM3
5	BER25X25	400,000	11,081	DCOM2	5,509	DCOM2	0,237	DCOM2

5	BRP25X25	0,000	49,350	DCOM1	14,536	DCOM1	0,480	DCOM2
5	BRP25X25	100,000	19,374	DCOM1	13,303	DCOM1	0,475	DCOM2
5	BRP25X25	200,000	38,896	DCOM1	13,303	DCOM1	0,468	DCOM2
5	BRP25X25	300,000	51,111	DCOM1	13,303	DCOM1	0,464	DCOM2
5	BRP25X25	400,000	13,337	DCOM1	6,516	DCOM1	0,458	DCOM2
7	BRP25X25	0,000	60,987	DCOM1	20,165	DCOM1	0,530	DCOM2
7	BRP25X25	115,625	45,764	DCOM1	15,078	DCOM1	0,444	DCOM2
7	BRP25X25	231,250	21,953	DCOM1	15,078	DCOM1	0,538	DCOM2
7	BRP25X25	346,875	15,078	DCOM1	15,078	DCOM1	0,531	DCOM2
7	BRP25X25	462,500	0,100	DCOM2	0,795	DCOM2	0,525	DCOM2
8	BRP25X25	0,000	40,993	DCOM1	20,489	DCOM1	0,550	DCOM2
8	BRP25X25	115,625	38,896	DCOM1	10,324	DCOM1	0,346	DCOM2
8	BRP25X25	231,250	37,538	DCOM1	10,228	DCOM1	0,339	DCOM2
8	BRP25X25	346,875	37,273	DCOM1	10,228	DCOM1	0,333	DCOM2
8	BRP25X25	462,500	37,780	DCOM1	18,867	DCOM1	0,327	DCOM2
9	BRP25X25	0,000	33,413	DCOM1	16,888	DCOM1	0,256	DCOM2
9	BRP25X25	115,625	32,343	DCOM1	8,415	DCOM1	0,250	DCOM2
9	BRP25X25	231,250	31,905	DCOM1	8,415	DCOM1	0,343	DCOM2
9	BRP25X25	346,875	32,347	DCOM1	8,415	DCOM1	0,241	DCOM2
9	BRP25X25	462,500	33,413	DCOM1	16,888	DCOM1	0,248	DCOM2
10	BRP25X25	0,000	33,456	DCOM1	11,719	DCOM1	0,177	DCOM2
10	BRP25X25	115,625	32,347	DCOM1	5,857	DCOM1	0,170	DCOM2
10	BRP25X25	231,250	31,894	DCOM1	5,857	DCOM1	0,153	DCOM2
10	BRP25X25	346,875	32,347	DCOM1	5,857	DCOM1	0,170	DCOM2
10	BRP25X25	462,500	33,456	DCOM1	11,719	DCOM1	0,177	DCOM2
11	BRP25X25	0,000	33,313	DCOM1	16,888	DCOM1	0,248	DCOM2
11	BRP25X25	115,625	32,347	DCOM1	8,415	DCOM1	0,241	DCOM2
11	BRP25X25	231,250	31,905	DCOM1	8,415	DCOM1	0,243	DCOM2
11	BRP25X25	346,875	32,347	DCOM1	8,415	DCOM1	0,250	DCOM2
11	BRP25X25	462,500	33,313	DCOM1	16,888	DCOM1	0,256	DCOM2
12	BRP25X25	0,000	37,780	DCOM1	18,867	DCOM1	0,327	DCOM2
12	BRP25X25	115,625	37,273	DCOM1	10,228	DCOM1	0,333	DCOM2
12	BRP25X25	231,250	37,538	DCOM1	10,228	DCOM1	0,339	DCOM2
12	BRP25X25	346,875	38,878	DCOM1	10,228	DCOM1	0,346	DCOM2
12	BRP25X25	462,500	40,993	DCOM1	20,489	DCOM1	0,352	DCOM2
13	BRP25X25	0,000	0,000	DCOM2	6,795	DCOM2	0,525	DCOM2
13	BRP25X25	115,625	15,078	DCOM1	15,078	DCOM1	0,531	DCOM2
13	BRP25X25	231,250	28,951	DCOM1	15,078	DCOM1	0,538	DCOM2
13	BRP25X25	346,875	43,164	DCOM1	15,078	DCOM1	0,544	DCOM2
13	BRP25X25	462,500	60,487	DCOM1	30,135	DCOM1	0,550	DCOM2
14	BRP25X25	0,000	13,337	DCOM1	6,516	DCOM1	0,458	DCOM2
14	BRP25X25	100,000	21,121	DCOM1	12,308	DCOM1	0,464	DCOM2
14	BRP25X25	200,000	39,866	DCOM1	12,308	DCOM1	0,469	DCOM2
14	BRP25X25	300,000	39,274	DCOM1	12,308	DCOM1	0,475	DCOM2
14	BRP25X25	400,000	49,350	DCOM1	24,636	DCOM1	0,480	DCOM2
15	BRP25X25	0,000	11,081	DCOM2	5,539	DCOM2	0,227	DCOM2
15	BRP25X25	100,000	11,435	DCOM1	6,253	DCOM1	0,235	DCOM2
15	BRP25X25	200,000	15,328	DCOM1	5,539	DCOM1	0,238	DCOM2
15	BRP25X25	300,000	19,876	DCOM1	6,253	DCOM1	0,244	DCOM2
15	BRP25X25	400,000	20,079	DCOM1	12,529	DCOM1	0,249	DCOM2
16	TG40X25	0,000	432,852	DCOM1	214,131	DCOM1	1,044	DCOM2
16	TG40X25	444,500	265,736	DCOM1	106,597	DCOM1	0,841	DCOM2
16	TG40X25	889,000	141,230	DCOM1	106,597	DCOM1	0,839	DCOM2
16	TG40X25	1333,500	166,890	DCOM1	106,597	DCOM1	0,736	DCOM2
16	TG40X25	1778,000	13,049	DCOM1	6,523	DCOM1	0,634	DCOM2
17	TG40X25	0,000	451,780	DCOM1	223,806	DCOM1	1,068	DCOM2
17	TG40X25	177,800	376,300	DCOM1	111,396	DCOM1	1,027	DCOM2
17	TG40X25	355,600	308,113	DCOM1	111,396	DCOM1	0,986	DCOM2
17	TG40X25	533,400	246,503	DCOM1	111,396	DCOM1	0,943	DCOM2
17	TG40X25	711,200	191,568	DCOM1	111,396	DCOM1	0,904	DCOM2
17	TG40X25	889,000	143,220	DCOM1	111,396	DCOM1	0,863	DCOM2
17	TG40X25	1066,800	111,396	DCOM1	111,396	DCOM1	0,820	DCOM2
17	TG40X25	1244,600	111,396	DCOM1	111,396	DCOM1	0,781	DCOM2
17	TG40X25	1422,400	111,396	DCOM1	111,396	DCOM1	0,740	DCOM2
17	TG40X25	1600,200	111,396	DCOM1	111,396	DCOM1	0,699	DCOM2
17	TG40X25	1778,000	0,000	DCOM2	2,653	DCOM2	0,658	DCOM2
18	TG40X25	0,000	445,164	DCOM1	219,548	DCOM1	1,095	DCOM2
18	TG40X25	444,500	265,736	DCOM1	109,286	DCOM1	0,993	DCOM2
18	TG40X25	889,000	130,899	DCOM1	109,286	DCOM1	0,890	DCOM2
18	TG40X25	1333,500	109,286	DCOM1	109,286	DCOM1	0,788	DCOM2
18	TG40X25	1778,000	0,000	DCOM2	18,071	DCOM1	0,685	DCOM2

19	TG50X25	0,000	257,832	DCON1	128,390	DCON1	0,707	DCON1
19	TG50X25	444,500	137,717	DCON1	64,065	DCON1	0,600	DCON1
19	TG50X25	889,000	64,065	DCON1	64,065	DCON1	0,492	DCON1
19	TG50X25	1333,500	64,065	DCON1	64,065	DCON1	0,384	DCON1
19	TG50X25	1778,000	50,085	DCON1	26,521	DCON1	0,472	DCON1
20	TG45X25	0,000	563,716	DCON1	378,966	DCON1	1,303	DCON2
20	TG45X25	444,500	343,963	DCON1	138,784	DCON1	1,286	DCON2
20	TG45X25	889,000	172,258	DCON1	138,784	DCON1	1,070	DCON2
20	TG45X25	1333,500	138,784	DCON1	138,784	DCON1	0,953	DCON2
20	TG45X25	1778,000	0,000	DCON2	13,634	DCON1	0,837	DCON2
21	TG45X25	0,000	563,816	DCON1	378,316	DCON1	1,326	DCON2
21	TG45X25	444,500	378,316	DCON1	147,367	DCON1	1,170	DCON2
21	TG45X25	889,000	189,641	DCON1	147,367	DCON1	1,053	DCON2
21	TG45X25	1333,500	147,367	DCON1	147,367	DCON1	0,937	DCON2
21	TG45X25	1778,000	0,000	DCON2	13,546	DCON1	0,820	DCON2
22	TG45X25	0,000	563,816	DCON1	378,316	DCON1	1,326	DCON2
22	TG45X25	444,500	378,316	DCON1	147,367	DCON1	1,170	DCON2
22	TG45X25	889,000	189,641	DCON1	147,367	DCON1	1,053	DCON2
22	TG45X25	1333,500	147,367	DCON1	147,367	DCON1	0,937	DCON2
22	TG45X25	1778,000	0,000	DCON2	13,546	DCON1	0,820	DCON2
23	TG45X25	0,000	563,716	DCON1	378,966	DCON1	1,303	DCON2
23	TG45X25	444,500	343,963	DCON1	138,784	DCON1	1,286	DCON2
23	TG45X25	889,000	172,258	DCON1	138,784	DCON1	1,070	DCON2
23	TG45X25	1333,500	138,784	DCON1	138,784	DCON1	0,953	DCON2
23	TG45X25	1778,000	0,000	DCON2	13,634	DCON1	0,837	DCON2
24	TG50X25	0,000	257,832	DCON1	128,390	DCON1	0,707	DCON1
24	TG50X25	444,500	137,717	DCON1	64,065	DCON1	0,600	DCON1
24	TG50X25	889,000	64,065	DCON1	64,065	DCON1	0,492	DCON1
24	TG50X25	1333,500	64,065	DCON1	64,065	DCON1	0,384	DCON1
24	TG50X25	1778,000	50,085	DCON1	26,521	DCON1	0,472	DCON1
25	TG40X25	0,000	443,104	DCON1	319,548	DCON1	1,095	DCON2
25	TG40X25	444,500	263,864	DCON1	109,286	DCON1	0,993	DCON2
25	TG40X25	889,000	130,899	DCON1	109,286	DCON1	0,890	DCON2
25	TG40X25	1333,500	109,286	DCON1	109,286	DCON1	0,788	DCON2
25	TG40X25	1778,000	0,000	DCON2	18,071	DCON1	0,685	DCON2
26	TG40X25	0,000	431,780	DCON1	323,806	DCON1	1,068	DCON2
26	TG40X25	177,320	376,500	DCON1	111,396	DCON1	1,027	DCON2
26	TG40X25	353,600	308,113	DCON1	111,396	DCON1	0,986	DCON2
26	TG40X25	533,400	246,503	DCON1	111,396	DCON1	0,945	DCON2
26	TG40X25	711,200	191,500	DCON1	111,396	DCON1	0,904	DCON2
26	TG40X25	889,000	143,230	DCON1	111,396	DCON1	0,863	DCON2
26	TG40X25	1066,800	111,396	DCON1	111,396	DCON1	0,822	DCON2
26	TG40X25	1244,600	111,396	DCON1	111,396	DCON1	0,781	DCON2
26	TG40X25	1422,400	111,396	DCON1	111,396	DCON1	0,740	DCON2
26	TG40X25	1600,200	111,396	DCON1	111,396	DCON1	0,699	DCON2
26	TG40X25	1778,000	0,000	DCON2	2,653	DCON1	0,658	DCON2
27	TG40X25	0,000	431,652	DCON1	314,121	DCON1	1,044	DCON2
27	TG40X25	444,500	265,736	DCON1	106,597	DCON1	0,941	DCON2
27	TG40X25	889,000	131,368	DCON1	106,597	DCON1	0,839	DCON2
27	TG40X25	1333,500	106,597	DCON1	106,597	DCON1	0,736	DCON2
27	TG40X25	1778,000	13,048	DCON1	6,523	DCON1	0,634	DCON2
28	BR25X25	0,000	0,000	DCON2	67,509	DCON1	0,722	DCON2
28	BR25X25	100,000	16,822	DCON1	48,192	DCON1	0,727	DCON2
28	BR25X25	200,000	16,822	DCON1	38,270	DCON1	0,733	DCON2
28	BR25X25	300,000	16,822	DCON1	16,822	DCON1	0,735	DCON2
28	BR25X25	400,000	13,393	DCON1	6,893	DCON1	0,744	DCON2
29	BR25X25	0,000	0,000	DCON2	60,106	DCON1	1,319	DCON2
29	BR25X25	100,000	32,069	DCON1	23,881	DCON1	1,304	DCON2
29	BR25X25	200,000	22,069	DCON1	22,069	DCON1	1,330	DCON2
29	BR25X25	300,000	50,330	DCON1	22,069	DCON1	1,336	DCON2
29	BR25X25	400,000	86,654	DCON1	44,200	DCON1	1,341	DCON2
30	BR25X25	0,000	60,383	DCON1	35,151	DCON1	0,440	DCON2
30	BR25X25	115,625	65,028	DCON1	18,490	DCON1	0,449	DCON2
30	BR25X25	231,250	60,542	DCON1	18,490	DCON1	0,455	DCON2
30	BR25X25	346,875	66,945	DCON1	18,490	DCON1	0,462	DCON2
30	BR25X25	462,500	74,327	DCON1	37,035	DCON1	0,466	DCON2
31	BR25X25	0,000	29,089	DCON1	14,032	DCON1	1,575	DCON2
31	BR25X25	115,625	35,483	DCON1	55,592	DCON1	1,581	DCON2
31	BR25X25	231,250	124,054	DCON1	55,592	DCON1	1,588	DCON2
31	BR25X25	346,875	173,824	DCON1	55,592	DCON1	1,594	DCON2

31	BBR20X15	450,500	274,613	DC0W1	111,586	DC0W1	1,501	DC0W2
32	BBR20X25	0,000	54,189	DC0W1	47,535	DC0W1	0,602	DC0W1
32	BBR20X25	110,500	54,581	DC0W1	33,931	DC0W1	0,754	DC0W2
32	BBR20X25	225,000	43,513	DC0W1	33,531	DC0W1	0,768	DC0W2
32	BBR20X25	337,500	21,831	DC0W1	11,511	DC0W1	0,782	DC0W2
32	BBR20X15	450,500	0,000	DC0W2	9,524	DC0W2	0,795	DC0W2
33	BBR20X25	0,000	0,000	DC0W1	44,547	DC0W2	0,118	DC0W1
33	BBR20X25	111,500	4,109	DC0W2	35,494	DC0W1	0,131	DC0W1
33	BBR20X25	225,000	3,179	DC0W2	17,487	DC0W1	0,115	DC0W2
33	BBR20X25	337,500	1,479	DC0W2	23,617	DC0W1	0,121	DC0W1
33	BBR20X25	450,000	0,000	DC0W2	14,547	DC0W2	0,128	DC0W1
34	BBR20X25	0,000	1,000	DC0W2	9,504	DC0W2	0,275	DC0W1
34	BBR20X25	111,500	23,913	DC0W2	33,874	DC0W1	0,782	DC0W2
34	BBR20X25	225,000	43,613	DC0W1	33,931	DC0W1	0,788	DC0W2
34	BBR20X25	337,500	59,831	DC0W1	23,431	DC0W1	0,794	DC0W2
34	BBR20X25	450,000	54,189	DC0W1	47,535	DC0W1	0,801	DC0W2
35	BBR25X25	0,000	334,818	DC0W1	111,586	DC0W1	1,501	DC0W2
35	BBR25X25	111,500	171,824	DC0W1	33,931	DC0W1	1,594	DC0W2
35	BBR25X25	221,150	114,354	DC0W1	33,931	DC0W1	1,598	DC0W2
35	BBR25X25	346,815	73,463	DC0W1	33,532	DC0W1	1,581	DC0W2
35	BBR25X25	462,500	29,039	DC0W1	14,032	DC0W1	1,575	DC0W2
36	BBR25X25	0,000	74,217	DC0W1	37,023	DC0W1	0,468	DC0W2
36	BBR25X25	110,825	66,542	DC0W1	18,490	DC0W1	0,462	DC0W2
36	BBR25X25	221,150	66,542	DC0W1	18,490	DC0W1	0,455	DC0W2
36	BBR25X25	346,875	73,033	DC0W1	18,890	DC0W1	0,449	DC0W2
36	BBR25X25	462,500	30,382	DC0W1	25,151	DC0W1	0,443	DC0W2
37	BBR25X25	0,000	86,652	DC0W1	44,100	DC0W1	1,341	DC0W2
37	BBR25X25	100,000	50,330	DC0W1	32,069	DC0W1	1,236	DC0W2
37	BBR25X25	200,000	22,009	DC0W1	32,069	DC0W1	1,020	DC0W2
37	BBR25X25	300,000	22,069	DC0W1	23,861	DC0W1	1,324	DC0W2
37	BBR25X25	400,000	0,000	DC0W2	60,106	DC0W1	1,313	DC0W2
38	BBR25X25	0,000	14,893	DC0W1	6,655	DC0W1	0,744	DC0W2
38	BBR25X25	100,000	16,822	DC0W1	16,822	DC0W1	0,739	DC0W2
38	BBR25X25	200,000	16,822	DC0W1	23,270	DC0W1	0,733	DC0W2
38	BBR25X25	300,000	16,822	DC0W1	48,193	DC0W1	0,727	DC0W1
38	BBR25X25	400,000	0,000	DC0W2	67,509	DC0W1	0,722	DC0W2
39	TG40X25	0,000	441,580	DC0W1	218,806	DC0W1	0,000	DC0W2
39	TG40X25	2075,317	108,916	DC0W1	108,916	DC0W1	0,000	DC0W2
39	TG40X25	4150,635	264,807	DC0W1	131,690	DC0W1	0,000	DC0W2
40	TG40X25	0,000	332,723	DC0W1	115,816	DC0W1	0,000	DC0W2
40	TG40X25	415,063	170,772	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	830,127	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	1245,190	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	1660,254	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	2075,317	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	2490,381	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	2905,444	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	3320,508	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	3735,571	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
40	TG40X25	4150,635	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
41	TG40X25	0,000	565,616	DC0W1	389,220	DC0W1	0,000	DC0W2
41	TG40X25	2075,317	133,875	DC0W1	133,875	DC0W1	0,000	DC0W2
41	TG40X25	4150,635	183,761	DC0W1	31,540	DC0W1	0,000	DC0W2
42	TG40X25	0,000	895,818	DC0W1	189,120	DC0W1	0,000	DC0W2
42	TG40X25	2075,317	133,875	DC0W1	133,875	DC0W1	0,000	DC0W2
42	TG40X25	4150,635	183,761	DC0W1	31,540	DC0W1	0,000	DC0W2
43	TG40X25	0,000	332,723	DC0W1	115,816	DC0W1	0,000	DC0W2
43	TG40X25	415,063	170,772	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	830,127	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	1245,190	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	1660,254	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	2075,317	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	2490,381	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	2905,444	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	3320,508	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	3735,571	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
43	TG40X25	4150,635	117,863	DC0W1	117,863	DC0W1	0,000	DC0W2
44	TG40X25	0,000	441,580	DC0W1	218,806	DC0W1	0,000	DC0W2
44	TG40X25	2075,317	108,916	DC0W1	108,916	DC0W1	0,000	DC0W2
44	TG40X25	4150,635	264,807	DC0W1	131,690	DC0W1	0,000	DC0W2



SAP2000 v7.42 File: STR N-mm Units PAGE 1
10/20/03 19:00:51

Sonnet A and
Kampus D3 Ekonomi III

M A T E R I A L P R O P E R T Y D A T A

MAT LABEL	MODULUS OF ELASTICITY	POISSON'S RATIO	THERMAL EXPANSION COEFF	UNIT VOL	WLEN DEF UNIT VOL
CONC	35741,850	0,200	9,000E-06	0,366E-05	2,401E-03

SAP2000 v7.42 File: STR N-mm Units PAGE 2
10/20/03 19:00:51

Sonnet A and
Kampus D3 Ekonomi III

M A T E R I A L P R O P E R T Y D A T A

MAT LABEL	SECTION CODE	STEEL FV	CONCRETE FC	REBAR FV	CONCRETE FCR	REBAR FYS
CONC	C		30,000	390,000	30,000	240,000

SAP2000 v7.42 File: STR N-mm Units PAGE 3
10/20/03 19:00:51

Sonnet A and
Kampus D3 Ekonomi III

C O N C R E T E C O L U M N P R O P E R T Y D A T A

SECTION LABEL	MAT LABEL	COLUMN DEPTH	COLUMN WIDTH	REBAR PATTERN	CONCRETE COVER	BAR AREA
KESOK45	CONC	450,000	500,000	RR-7-6	65,000	0,000
MD00	CONC	700,000	700,000	RR-12	40,000	0,000
3FBR45K45	CONC	450,000	450,000	RR-5-5	61,500	0,000
4FBR30K30	CONC	300,000	300,000	RR-4-4	51,500	0,000
KEAZ50K25	CONC	250,000	250,000	RR-3-3	40,000	0,000
MD00	CONC	400,000	400,000	RR-2-2	41,500	0,000
KESOK70	CONC	700,000	600,000	RR-7-6	64,500	0,000
1K50K50	CONC	500,000	500,000	RR-6-6	64,500	0,000
KEOK25	CONC	250,000	300,000	RR-4-3	61,500	0,000
4K50K50	CONC	500,000	300,000	RR-4-3	64,500	0,000

SAP2000 v7.42 File: STR N-mm Units PAGE 4
10/20/03 19:00:51

Sonnet A and
Kampus D3 Ekonomi III

C O N C R E T E B E A M P R O P E R T Y D A T A

SECTION LABEL	MAT LABEL	BEAM DEPTH	BEAM WIDTH	TOP COVER	BOTTOM COVER	REBAR AT-1	REBAR AT-2	REBAR AB-1	REBAR AB-2
B100K50	CONC	500,000	300,000	51,000	53,000	0,000	0,000	0,000	0,000
B25K40	CONC	400,000	1125,000	20,000	20,000	0,000	0,000	0,000	0,000
B25K40	CONC	400,000	350,000	48,000	48,000	0,000	0,000	0,000	0,000
B15K20	CONC	200,000	150,000	20,000	20,000	0,000	0,000	0,000	0,000
T100K20	CONC	200,000	750,000	20,000	20,000	0,000	0,000	0,000	0,000
B145K70	CONC	700,000	450,000	64,500	64,500	0,000	0,000	0,000	0,000
B50K70	CONC	700,000	500,000	64,500	64,500	0,000	0,000	0,000	0,000
B60K30	CONC	300,000	600,000	64,500	64,500	0,000	0,000	0,000	0,000
B100K30	CONC	300,000	200,000	48,000	48,000	0,000	0,000	0,000	0,000
B45K20	CONC	250,000	450,000	64,500	64,500	0,000	0,000	0,000	0,000
B45K50	CONC	500,000	450,000	48,000	48,000	0,000	0,000	0,000	0,000
B30K50	CONC	500,000	300,000	53,000	53,000	0,000	0,000	0,000	0,000
B20K50	CONC	500,000	300,000	48,000	48,000	0,000	0,000	0,000	0,000
B30K30	CONC	300,000	300,000	48,000	48,000	0,000	0,000	0,000	0,000

SAP2000 v7.42 File: STR N-mm Units PAGE 5
10/20/03 19:00:51

Sonnet A and
Kampus D3 Ekonomi III

L O A D C O M B I N A T I O N M U L T I P L I E R S

COMBO	TYPE	CHRG	FACTOR	TYPE	TYPE
EM	ADD	LDKT	1,0000	STATIC (DEAD)	EM
		MDKA	1,0000	STATIC (DEAD)	
		LD	1,0000	STATIC (DEAD)	
DCONE	ADD	LDKT	1,2000	STATIC (DEAD)	DCONE

		LDKX	1,0000	STATIC (DEAD)	
		LD	1,0000	STATIC (DEAD)	
		LDKA	1,0000	STATIC (LIVE)	
		LLMT	1,0000	STATIC (LIVE)	
		LY	1,0000	STATIC (LIVE)	
DOCON3	ADD				DOCON3
		LDKX	1,0000	STATIC (DEAD)	
		LDKA	1,0000	STATIC (DEAD)	
		LD	1,0000	STATIC (DEAD)	
		LDKA	0,9450	STATIC (LIVE)	
		LLMT	0,9450	STATIC (LIVE)	
		LY	0,9450	STATIC (LIVE)	
		LEK	1,0000	STATIC (QUAKE)	
DOCON4	ADD				DOCON4
		LDKX	1,0000	STATIC (DEAD)	
		LDKA	1,0000	STATIC (DEAD)	
		LD	1,0000	STATIC (DEAD)	
		LDKA	0,9450	STATIC (LIVE)	
		LLMT	0,9450	STATIC (LIVE)	
		LL	0,9450	STATIC (LIVE)	
		LEK	-1,0000	STATIC (QUAKE)	
DOCON5	ADD				DOCON5
		LDKX	1,0000	STATIC (DEAD)	
		LDKA	1,0000	STATIC (DEAD)	
		LD	1,0000	STATIC (DEAD)	
		LDKA	0,9450	STATIC (LIVE)	
		LLMT	0,9450	STATIC (LIVE)	
		LL	0,9450	STATIC (LIVE)	
		LEY	1,0000	STATIC (QUAKE)	
DOCON6	ADD				DOCON6
		LDKX	1,0000	STATIC (DEAD)	
		LDKA	1,0000	STATIC (DEAD)	
		LD	1,0000	STATIC (DEAD)	
		LDKA	0,9450	STATIC (LIVE)	
		LLMT	0,9450	STATIC (LIVE)	
		LL	0,9450	STATIC (LIVE)	
		LEY	-1,0000	STATIC (QUAKE)	
DOCON7	ADD				DOCON7
		LDKX	0,9000	STATIC (DEAD)	
		LDKA	0,9000	STATIC (DEAD)	
		LD	0,9000	STATIC (DEAD)	
		LEK	1,0000	STATIC (QUAKE)	
DOCON8	ADD				DOCON8
		LDKX	0,9000	STATIC (DEAD)	
		LDKA	0,9000	STATIC (DEAD)	
		LD	0,9000	STATIC (DEAD)	
		LEK	-1,0000	STATIC (QUAKE)	
DOCON9	ADD				DOCON9
		LDKX	0,9000	STATIC (DEAD)	
		LDKA	0,9000	STATIC (DEAD)	
		LD	0,9000	STATIC (DEAD)	
		LEY	1,0000	STATIC (QUAKE)	
DOCON10	ADD				DOCON10
		LDKX	0,9000	STATIC (DEAD)	
		LDKA	0,9000	STATIC (DEAD)	
		LD	0,9000	STATIC (DEAD)	
		LEY	-1,0000	STATIC (QUAKE)	
BN	ADD				BN
		LLKA	1,0000	STATIC (LIVE)	
		LLMT	1,0000	STATIC (LIVE)	
		LL	1,0000	STATIC (LIVE)	
DOCON11	ADD				DOCON11
		LDKX	1,4000	STATIC (DEAD)	
		LDKA	1,4000	STATIC (DEAD)	
		LD	1,4000	STATIC (DEAD)	

SAP2000 v7.42 File: STK N-nn.bak Page: 6
10/26/03 19:00:51

Sonnet & ana
Kampus P3 Ekowisata ITY

C O D E P R E F E R E N C E S

Code: ANI 318-99

Phi_bending : 0,8
Phi_tension : 0,8
Phi_compression(Tied): 0,65
Phi_compression(Spiral): 0,7

Memorandum - 0,25

SARASO 17.41 File: DFR Nam Units PAGE 7
05/06/03 14:06:31

Scanned and
Manpower D3 Remount UI7

CONTRACTOR DESIGN RETURN YH TAC MATTI ON FACT 010-09

FRAME ID	SECTION ID	ELEMENT TYPE	FRAMING TYPE	LOEFF FACTOR	L ₁ ratio MAJOR	L ₂ ratio MINOR	R RATIO	R MINOR
1B1	B130X50	BEAM	SWYSPFC	1,000	0,945	0,945		
1B2	B130X50	BEAM	SWYSPFC	1,000	0,945	0,945		
1B3	B130X50	BEAM	SWYSPFC	1,000	0,945	0,945		
1B4	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
1B5	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
1B6	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
1B7	B130X50	BEAM	SWYSPFC	1,000	0,904	0,904		
1B8	B130X50	BEAM	SWYSPFC	1,000	4,033	0,750		
1B9	B130X50	BEAM	SWYSPFC	1,000	1,133	0,855		
1C1	B25X40	BEAM	SWYSPFC	1,000	0,840	0,840		
1C2	B25X40	BEAM	SWYSPFC	1,000	0,840	0,840		
1C3	B25X40	BEAM	SWYSPFC	1,000	0,840	0,840		
1C4	B25X40	BEAM	SWYSPFC	1,000	0,840	0,840		
1C5	B25X40	BEAM	SWYSPFC	1,000	0,855	0,855		
1C6	B25X40	BEAM	SWYSPFC	1,000	0,831	0,831		
1C7	B25X40	BEAM	SWYSPFC	1,000	0,855	0,855		
1C8	B25X40	BEAM	SWYSPFC	1,000	0,844	0,844		
1C9	B25X40	BEAM	SWYSPFC	1,000	0,855	0,855		
2A1	B145X70	BEAM	SWYSPFC	1,000	1,500	0,917		
2A2	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
2A3	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
2A4	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
2A5	B145X70	BEAM	SWYSPFC	1,000	1,283	0,917		
2A6	B145X70	BEAM	SWYSPFC	1,000	0,925	0,925		
2A7	B145X70	BEAM	SWYSPFC	1,000	1,283	0,917		
2A8	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
2A9	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
3B1	B130X50	BEAM	SWYSPFC	1,000	0,936	0,936		
3B2	B130X50	BEAM	SWYSPFC	1,000	0,955	0,955		
3B3	B130X50	BEAM	SWYSPFC	1,000	0,955	0,955		
3B4	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
3B5	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
3B6	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
3B7	B130X50	BEAM	SWYSPFC	1,000	0,894	0,894		
3B8	B130X50	BEAM	SWYSPFC	1,000	4,025	0,750		
3B9	B130X50	BEAM	SWYSPFC	0,900	1,130	0,936		
3C1	B25X40	BEAM	SWYSPFC	1,000	0,840	0,840		
3C2	B25X40	BEAM	SWYSPFC	1,000	0,840	0,840		
3C3	B25X40	BEAM	SWYSPFC	1,000	0,840	0,840		
3C4	B25X40	BEAM	SWYSPFC	1,000	0,840	0,840		
3C5	B25X40	BEAM	SWYSPFC	1,000	1,000	1,000		
3C6	B25X40	BEAM	SWYSPFC	1,000	1,000	1,000		
3C7	B25X40	BEAM	SWYSPFC	1,000	1,000	1,000		
3C8	B25X40	BEAM	SWYSPFC	1,000	1,000	1,000		
3C9	B25X40	BEAM	SWYSPFC	1,000	1,000	1,000		
3A1	B145X70	BEAM	SWYSPFC	1,000	1,500	0,917		
3A2	B145X70	BEAM	SWYSPFC	1,000	0,917	0,917		
3A3	B145X70	BEAM	SWYSPFC	1,000	0,917	0,917		
3A4	B145X70	BEAM	SWYSPFC	1,000	0,917	0,917		
3A5	B145X70	BEAM	SWYSPFC	1,000	1,283	0,917		
3A6	B145X70	BEAM	SWYSPFC	1,000	0,925	0,925		
3A7	B145X70	BEAM	SWYSPFC	1,000	1,283	0,917		
3A8	B145X70	BEAM	SWYSPFC	1,000	0,917	0,917		
3A9	B145X70	BEAM	SWYSPFC	1,000	0,917	0,917		
3B1	B130X50	BEAM	SWYSPFC	1,000	0,936	0,936		
3B2	B130X50	BEAM	SWYSPFC	1,000	0,955	0,955		
3B3	B130X50	BEAM	SWYSPFC	1,000	0,955	0,955		
3B5	B130X50	BEAM	SWYSPFC	1,000	0,955	0,955		
3B6	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
3B7	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
3B8	B130X50	BEAM	SWYSPFC	1,000	0,900	0,900		
3B9	B130X50	BEAM	SWYSPFC	1,000	0,894	0,894		
3E1	B15X20	BEAM	SWYSPFC	1,000	1,000	1,000		
3E2	B15X20	BEAM	SWYSPFC	1,000	1,000	1,000		
4A1	B145X70	BEAM	SWYSPFC	1,000	1,500	0,917		
4A2	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
4A3	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
4A4	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
4A5	B145X70	BEAM	SWYSPFC	1,000	1,283	0,917		
4A6	B145X70	BEAM	SWYSPFC	1,000	0,925	0,925		
4A7	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
4A8	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
4A9	B145X70	BEAM	SWYSPFC	1,000	3,167	0,917		
4B1	B20X50	BEAM	SWYSPFC	1,000	0,933	0,933		
4B2	B20X50	BEAM	SWYSPFC	1,000	0,933	0,933		
4B3	B20X50	BEAM	SWYSPFC	1,000	0,840	0,840		
4B4	B20X50	BEAM	SWYSPFC	1,000	0,840	0,840		

2A12	BT4 SX70	BEAM SWYSPFC	1,000	3,880	0,880
2A13	BT4 SX70	BEAM SWYSPFC	1,000	3,080	0,880
2A14	BT4 SX70	BEAM SWYSPFC	1,000	3,250	0,875
2A15	BT4 SX70	BEAM SWYSPFC	1,000	3,250	0,875
2A16	BT4 SX70	BEAM SWYSPFC	1,000	3,375	1,000
2A17	BT4 SX70	BEAM SWYSPFC	1,000	3,375	1,000
2A18	BT4 SX70	BEAM SWYSPFC	1,000	3,375	1,000
2A19	BT4 SX70	BEAM SWYSPFC	1,000	1,000	1,000
2A20	BT4 SX70	BEAM SWYSPFC	1,000	2,375	1,000
2A21	BT4 SX70	BEAM SWYSPFC	1,000	2,375	1,000
2A22	BT4 SX70	BEAM SWYSPFC	1,000	3,375	1,000
2A24	BT4 SX70	BEAM SWYSPFC	1,000	0,845	0,845
2A25	BT4 SX70	BEAM SWYSPFC	1,000	1,550	0,875
2A26	BT4 SX70	BEAM SWYSPFC	1,000	0,875	0,875
2A27	BT4 SX70	BEAM SWYSPFC	1,000	0,875	0,875
2A29	BT4 SX70	BEAM SWYSPFC	1,000	1,087	1,833
2A30	BT4 SX70	BEAM SWYSPFC	1,000	0,917	0,917
2A31	BT4 SX70	BEAM SWYSPFC	1,000	3,167	0,917
2A32	BT4 SX70	BEAM SWYSPFC	1,000	3,167	0,917
2A33	BT4 SX70	BEAM SWYSPFC	1,000	3,167	0,917
2A34	BT4 SX70	BEAM SWYSPFC	1,000	0,917	0,917
2A35	BT4 SX70	BEAM SWYSPFC	1,000	0,825	0,825
2A36	BT4 SX70	BEAM SWYSPFC	1,000	0,917	0,917
2A37	BT4 SX70	BEAM SWYSPFC	1,000	3,167	0,917
2A38	BT4 SX70	BEAM SWYSPFC	1,000	0,917	0,917
2A39	BT4 SX70	BEAM SWYSPFC	1,000	3,167	0,917
2A40	BT4 SX70	BEAM SWYSPFC	1,000	0,917	0,917
2A42	BT4 SX70	BEAM SWYSPFC	1,000	0,733	1,833
2B10	BT30X50	BEAM SWYSPFC	1,000	1,150	0,934
2B11	BT30X50	BEAM SWYSPFC	1,000	4,025	0,750
2B12	BT30X50	BEAM SWYSPFC	1,000	0,894	0,894
2B13	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B14	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B15	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B16	BT30X50	BEAM SWYSPFC	1,000	0,910	0,910
2B17	BT30X50	BEAM SWYSPFC	1,000	0,910	0,910
2B18	BT4 SX70	BEAM SWYSPFC	1,000	0,845	0,875
2B19	BT4 SX70	BEAM SWYSPFC	1,000	1,500	0,917
2B20	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B21	BT30X50	BEAM SWYSPFC	1,000	0,850	0,850
2B22	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B23	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B24	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B25	BT30X50	BEAM SWYSPFC	1,000	0,894	0,894
2B26	BT30X50	BEAM SWYSPFC	1,000	0,894	0,894
2B27	BT30X50	BEAM SWYSPFC	1,000	0,894	0,894
2B28	BT30X50	BEAM SWYSPFC	1,000	0,894	0,894
2B29	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B30	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B31	BT30X50	BEAM SWYSPFC	1,000	0,900	0,900
2B32	BT30X50	BEAM SWYSPFC	1,000	0,910	0,910
2C10	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C11	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C12	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C13	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C14	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C15	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C16	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C17	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C18	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C19	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C20	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C21	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C22	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C23	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C24	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C25	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C26	B2 SX40	BEAM SWYSPFC	1,000	1,000	1,000
2C27	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C28	B2 SX40	BEAM SWYSPFC	1,000	0,891	0,891
2C29	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C30	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C31	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C32	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C33	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C34	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C35	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C36	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C37	B2 SX40	BEAM SWYSPFC	1,000	0,855	0,855
2C38	B2 SX40	BEAM SWYSPFC	1,000	0,900	0,900
2C39	B2 SX40	BEAM SWYSPFC	1,000	0,900	0,900
2C40	B2 SX40	BEAM SWYSPFC	1,000	0,944	0,944
2C41	B2 SX40	BEAM SWYSPFC	1,000	0,944	0,944
2C42	B2 SX40	BEAM SWYSPFC	1,000	0,944	0,944
2C43	B2 SX40	BEAM SWYSPFC	1,000	0,944	0,944
2C44	B2 SX40	BEAM SWYSPFC	1,000	0,950	0,950
3A10	BT4 SX70	BEAM SWYSPFC	1,000	0,917	0,917
3A11	BT4 SX70	BEAM SWYSPFC	1,000	1,500	0,917
3A12	BT4 SX70	BEAM SWYSPFC	1,000	3,080	0,880
3A13	BT4 SX70	BEAM SWYSPFC	1,000	3,080	0,880
3A14	BT4 SX70	BEAM SWYSPFC	1,000	1,000	1,000

4F06	B20X50	BEAM SWYSPEC	1,000	0,950	0,950
4F08	B20X50	BEAM SWYSPEC	1,000	0,950	0,950
4F10	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
4F11	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
4F12	B20X50	BEAM SWYSPEC	1,000	0,915	0,915
4F13	B20X50	BEAM SWYSPEC	1,000	0,934	0,934
4F14	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
4F15	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
4F16	B20X50	BEAM SWYSPEC	1,000	0,934	0,934
5A10	B145X70	BEAM SWYSPEC	1,000	1,500	0,917
5A11	B145X70	BEAM SWYSPEC	1,000	3,020	0,420
5A12	B145X70	BEAM SWYSPEC	1,000	3,020	0,880
5A13	B145X70	BEAM SWYSPEC	1,000	1,500	0,925
5A14	B145X70	BEAM SWYSPEC	1,000	2,150	0,875
5A15	B145X70	BEAM SWYSPEC	1,000	2,375	1,000
5A16	B145X70	BEAM SWYSPEC	1,000	2,375	1,000
5A17	B145X70	BEAM SWYSPEC	1,000	1,375	1,000
5A18	B145X70	BEAM SWYSPEC	1,000	2,375	1,000
5A19	B145X70	BEAM SWYSPEC	1,000	2,375	1,000
5A20	B145X70	BEAM SWYSPEC	1,000	2,375	1,000
5A21	B145X70	BEAM SWYSPEC	1,000	0,945	0,945
5A22	B145X70	BEAM SWYSPEC	1,000	0,945	0,945
5A23	B145X70	BEAM SWYSPEC	1,000	0,950	0,950
5A24	B145X70	BEAM SWYSPEC	1,000	0,975	0,945
5A25	B145X70	BEAM SWYSPEC	1,000	0,905	0,925
5A26	B145X70	BEAM SWYSPEC	1,000	2,250	0,875
5A27	B145X70	BEAM SWYSPEC	1,000	1,500	0,917
5A28	B145X70	BEAM SWYSPEC	1,000	0,917	0,917
5A29	B145X70	BEAM SWYSPEC	1,000	3,147	0,917
5A30	B145X70	BEAM SWYSPEC	1,000	3,147	0,917
5A31	B145X70	BEAM SWYSPEC	1,000	3,147	0,917
5A32	B145X70	BEAM SWYSPEC	1,000	0,917	0,917
5A33	B145X70	BEAM SWYSPEC	1,000	0,917	0,917
5A34	B145X70	BEAM SWYSPEC	1,000	3,147	0,917
5A35	B145X70	BEAM SWYSPEC	1,000	3,147	0,917
5A36	B145X70	BEAM SWYSPEC	1,000	3,147	0,917
5A37	B145X70	BEAM SWYSPEC	1,000	0,917	0,917
5A38	B145X70	BEAM SWYSPEC	1,000	1,500	0,917
5A39	B145X70	BEAM SWYSPEC	1,000	0,900	1,700
5A40	B145X70	BEAM SWYSPEC	1,000	1,000	2,125
5A41	B145X70	BEAM SWYSPEC	1,000	1,000	2,125
5A42	B145X70	BEAM SWYSPEC	1,000	0,900	1,700
5B10	B130X50	BEAM SWYSPEC	1,000	0,894	0,894
5B11	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B12	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B13	B130X50	BEAM SWYSPEC	1,000	0,910	0,910
5B14	B130X50	BEAM SWYSPEC	1,000	0,910	0,910
5B15	B130X50	BEAM SWYSPEC	1,000	0,860	0,860
5B16	B130X50	BEAM SWYSPEC	1,000	0,860	0,860
5B17	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B18	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B19	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B20	B130X50	BEAM SWYSPEC	1,000	0,894	0,894
5B21	B130X50	BEAM SWYSPEC	1,000	0,894	0,894
5B22	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B23	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B24	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B25	B130X50	BEAM SWYSPEC	1,000	0,910	0,910
5B26	B130X50	BEAM SWYSPEC	1,000	0,936	0,936
5B27	B130X50	BEAM SWYSPEC	1,000	0,936	0,936
5B28	B130X50	BEAM SWYSPEC	1,000	0,955	0,955
5B29	B130X50	BEAM SWYSPEC	1,000	1,000	1,000
5B30	B130X50	BEAM SWYSPEC	1,000	0,955	0,955
5B31	B130X50	BEAM SWYSPEC	1,000	0,750	0,750
5B32	B130X50	BEAM SWYSPEC	1,000	1,000	1,000
5B33	B130X50	BEAM SWYSPEC	1,000	1,000	1,000
5B34	B130X50	BEAM SWYSPEC	1,000	0,750	0,750
5B35	B130X50	BEAM SWYSPEC	1,000	0,882	0,882
5B36	B130X50	BEAM SWYSPEC	1,000	0,922	0,922
5B37	B130X50	BEAM SWYSPEC	1,000	0,922	0,922
5B38	B130X50	BEAM SWYSPEC	1,000	0,922	0,922
5B39	B130X50	BEAM SWYSPEC	1,000	0,944	0,944
5B40	B130X50	BEAM SWYSPEC	1,000	0,944	0,944
5BK1	B30X50	BEAM SWYSPEC	1,000	0,855	0,855
5BK2	B30X50	BEAM SWYSPEC	1,000	0,891	0,891
5BK3	B30X50	BEAM SWYSPEC	1,000	0,909	0,909
5BK4	B30X50	BEAM SWYSPEC	1,000	0,909	0,909
5BK5	B30X50	BEAM SWYSPEC	1,000	0,909	0,909
5BK6	B30X50	BEAM SWYSPEC	1,000	0,855	0,855
5BK7	B30X50	BEAM SWYSPEC	1,000	0,855	0,855
5BK8	B30X50	BEAM SWYSPEC	1,000	1,000	1,000
5BK9	B30X50	BEAM SWYSPEC	1,000	0,855	0,855
5C10	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C11	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C12	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C13	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C14	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C15	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C16	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C17	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C18	B25X40	BEAM SWYSPEC	1,000	1,000	1,000

5A10	B15X40	BEAM SWYSPEC	1,000	1,000	1,000
5A20	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5A10	B20X50	BEAM SWYSPEC	1,000	0,975	0,975
5A11	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
5A12	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
5A13	B20X50	BEAM SWYSPEC	1,000	0,975	0,975
5A14	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
5A15	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
5A16	B20X50	BEAM SWYSPEC	1,000	1,000	1,000
5A17	B20X50	BEAM SWYSPEC	1,000	0,950	0,950
5A18	B20X50	BEAM SWYSPEC	1,000	0,950	0,950
5A19	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A21	B145X70	BEAM SWYSPEC	1,000	3,167	1,000
5A12	B15X40	BEAM SWYSPEC	1,000	3,167	1,000
5A13	B145X70	BEAM SWYSPEC	1,000	1,000	0,917
5A14	B145X70	BEAM SWYSPEC	1,000	1,000	0,917
5A15	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A16	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A17	B145X70	BEAM SWYSPEC	1,000	4,750	1,000
5A18	B145X70	BEAM SWYSPEC	1,000	4,750	1,000
5A19	B145X70	BEAM SWYSPEC	1,000	0,975	1,000
5A20	B145X70	BEAM SWYSPEC	1,000	3,167	1,000
5A21	B145X70	BEAM SWYSPEC	1,000	3,167	1,000
5A22	B145X70	BEAM SWYSPEC	1,000	3,167	1,000
5A23	B145X70	BEAM SWYSPEC	1,000	1,045	1,455
5A24	B145X70	BEAM SWYSPEC	1,000	1,345	1,455
5A25	B145X70	BEAM SWYSPEC	1,000	2,250	0,875
5A26	B145X70	BEAM SWYSPEC	1,000	0,875	0,875
5A27	B145X70	BEAM SWYSPEC	1,000	4,750	1,000
5A28	B145X70	BEAM SWYSPEC	1,000	4,750	1,000
5A29	B145X70	BEAM SWYSPEC	1,000	0,975	0,975
5A30	B145X70	BEAM SWYSPEC	1,000	2,250	0,875
5A31	B145X70	BEAM SWYSPEC	1,000	1,500	0,917
5A32	B145X70	BEAM SWYSPEC	1,000	0,917	0,917
5A33	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A34	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A35	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A36	B145X70	BEAM SWYSPEC	1,000	1,783	0,917
5A37	B145X70	BEAM SWYSPEC	1,000	1,783	0,917
5A38	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A39	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A40	B145X70	BEAM SWYSPEC	1,000	3,167	0,917
5A41	B145X70	BEAM SWYSPEC	1,000	0,917	0,917
5A42	B145X70	BEAM SWYSPEC	1,000	1,000	0,917
5A44	B145X70	BEAM SWYSPEC	1,000	0,900	0,900
5A46	B145X70	BEAM SWYSPEC	1,000	1,000	1,000
5A47	B145X70	BEAM SWYSPEC	1,000	1,000	2,125
5A49	B145X70	BEAM SWYSPEC	1,000	0,900	1,000
5B10	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B11	B130X50	BEAM SWYSPEC	1,000	0,894	0,894
5B12	B130X50	BEAM SWYSPEC	1,000	0,894	0,894
5B13	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B14	B130X50	BEAM SWYSPEC	1,000	0,900	0,896
5B15	B130X50	BEAM SWYSPEC	1,000	0,775	0,775
5B16	B130X50	BEAM SWYSPEC	1,000	1,138	0,944
5B17	B130X50	BEAM SWYSPEC	1,000	4,550	0,775
5B18	B130X50	BEAM SWYSPEC	1,000	4,550	0,775
5B19	B130X50	BEAM SWYSPEC	1,000	1,138	0,944
5B20	B130X50	BEAM SWYSPEC	1,000	0,860	0,860
5B21	B130X50	BEAM SWYSPEC	1,000	0,860	0,860
5B22	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B23	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B24	B130X50	BEAM SWYSPEC	1,000	1,800	0,900
5B25	B130X50	BEAM SWYSPEC	1,000	1,800	0,900
5B26	B130X50	BEAM SWYSPEC	1,000	0,894	0,894
5B27	B130X50	BEAM SWYSPEC	1,000	0,894	0,894
5B28	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B29	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B30	B130X50	BEAM SWYSPEC	1,000	0,900	0,900
5B31	B130X50	BEAM SWYSPEC	1,000	0,910	0,910
5B32	B130X50	BEAM SWYSPEC	1,000	0,850	0,850
5B33	B130X50	BEAM SWYSPEC	1,000	0,850	0,850
5B34	B130X50	BEAM SWYSPEC	1,000	0,850	0,850
5B35	B130X50	BEAM SWYSPEC	1,000	0,850	0,850
5B36	B130X50	BEAM SWYSPEC	1,000	0,850	0,850
5B37	B130X50	BEAM SWYSPEC	1,000	0,850	0,850
5B38	B130X50	BEAM SWYSPEC	1,000	0,850	0,850
5B39	B130X50	BEAM SWYSPEC	1,000	0,775	0,775
5C10	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C11	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C12	B25X40	BEAM SWYSPEC	1,000	0,950	0,950
5C13	B25X40	BEAM SWYSPEC	1,000	0,950	0,950
5C14	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C15	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C16	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C17	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C18	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C19	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C20	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C21	B25X40	BEAM SWYSPEC	1,000	1,000	1,000
5C22	B25X40	BEAM SWYSPEC	1,000	1,000	1,000



8F12	B20X30	BEAM SWYSPFC	1,000	1,000	1,000		
8F13	B20X30	BEAM SWYSPFC	1,000	0,975	0,975		
8F14	B20X30	BEAM SWYSPFC	1,000	1,000	0,900		
8F15	B20X30	BEAM SWYSPFC	1,000	1,000	0,889		
8F16	B20X30	BEAM SWYSPFC	1,000	0,975	0,975		
8F17	B20X30	BEAM SWYSPFC	1,000	0,830	0,830		
8F18	B20X30	BEAM SWYSPFC	1,000	1,000	0,889		
8F19	B20X30	BEAM SWYSPFC	1,000	1,000	0,800		
8F20	B20X30	BEAM SWYSPFC	1,000	0,500	0,400		
8F21	B20X30	BEAM SWYSPFC	1,000	1,157	0,936		
8F22	B20X30	BEAM SWYSPFC	1,000	4,050	0,778		
8F23	B20X30	BEAM SWYSPFC	1,000	0,500	0,550		
8F24	B20X30	BEAM SWYSPFC	1,000	0,914	0,914		
8F25	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F26	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F27	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F28	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F29	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F30	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F31	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F32	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F33	B20X30	BEAM SWYSPFC	1,000	0,914	0,914		
8F34	B20X30	BEAM SWYSPFC	1,000	0,850	0,850		
8F35	B20X30	BEAM SWYSPFC	1,000	0,910	0,910		
8F36	B20X30	BEAM SWYSPFC	1,000	0,900	0,900		
8F37	B20X30	BEAM SWYSPFC	1,000	4,050	0,778		
8F38	B20X30	BEAM SWYSPFC	1,000	1,157	0,936		
8F39	B20X30	BEAM SWYSPFC	1,000	0,900	0,900		
8F40	B20X30	BEAM SWYSPFC	1,000	0,844	0,844		
8F41	B20X30	BEAM SWYSPFC	1,000	0,894	0,894		
8F42	B20X30	BEAM SWYSPFC	1,000	0,900	0,900		
8F43	B20X30	BEAM SWYSPFC	1,000	1,157	0,936		
8F44	B20X30	BEAM SWYSPFC	1,000	4,050	0,778		
8F45	B20X30	BEAM SWYSPFC	1,000	0,800	0,800		
8F46	B20X30	BEAM SWYSPFC	1,000	0,910	0,910		
8F47	B20X30	BEAM SWYSPFC	1,000	0,914	0,914		
8F48	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F49	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F50	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F51	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F52	B20X30	BEAM SWYSPFC	1,000	0,914	0,914		
8F53	B20X30	BEAM SWYSPFC	1,000	0,914	0,914		
8F54	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F55	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F56	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F57	B20X30	BEAM SWYSPFC	1,000	0,933	0,933		
8F58	B20X30	BEAM SWYSPFC	1,000	0,914	0,914		
K1H1	1K50X50	COLUMN SWYSPFC	1,000	0,778	0,778	1,000	1,000
K1H2	1K50X50	COLUMN SWYSPFC	1,000	0,788	0,788	1,000	1,000
K1H3	1K50X50	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K1H4	1K50X50	COLUMN SWYSPFC	1,000	0,400	0,400	1,000	1,000
K1H5	1K50X50	COLUMN SWYSPFC	1,000	0,800	0,800	1,000	1,000
K1H6	1K50X50	COLUMN SWYSPFC	1,000	0,400	0,400	1,000	1,000
K1H7	1K50X50	COLUMN SWYSPFC	1,000	0,800	0,800	1,000	1,000
K1H8	1K50X50	COLUMN SWYSPFC	1,000	1,000	1,000	1,000	1,000
K1H9	1K50X50	COLUMN SWYSPFC	1,000	0,858	0,858	1,000	1,000
K1J1	1K50X50	COLUMN SWYSPFC	1,000	0,778	0,778	1,000	1,000
K1J2	1K50X50	COLUMN SWYSPFC	1,000	0,788	0,788	1,000	1,000
K1J3	1K50X50	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K1J4	1K50X50	COLUMN SWYSPFC	1,000	0,400	0,400	1,000	1,000
K1J5	1K50X50	COLUMN SWYSPFC	1,000	0,800	0,800	1,000	1,000
K1J6	1K50X50	COLUMN SWYSPFC	1,000	0,400	0,400	1,000	1,000
K1J7	1K50X50	COLUMN SWYSPFC	1,000	0,800	0,800	1,000	1,000
K1J8	1K50X50	COLUMN SWYSPFC	1,000	1,000	1,000	1,000	1,000
K1J9	1K50X50	COLUMN SWYSPFC	1,000	0,858	0,858	1,000	1,000
K2A1	KB50X45	COLUMN SWYSPFC	1,000	0,778	0,778	1,000	1,000
K2A2	KB50X45	COLUMN SWYSPFC	1,000	0,778	0,778	1,000	1,000
K2A3	KB50X45	COLUMN SWYSPFC	1,000	0,788	0,788	1,000	1,000
K2A4	KB50X45	COLUMN SWYSPFC	1,000	0,788	0,788	1,000	1,000
K2A5	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2A6	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2A7	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2A8	KB50X45	COLUMN SWYSPFC	1,000	0,814	0,814	1,000	1,000
K2A9	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2C1	KB50X45	COLUMN SWYSPFC	1,000	0,778	0,778	1,000	1,000
K2C2	KB50X45	COLUMN SWYSPFC	1,000	0,788	0,788	1,000	1,000
K2C3	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2C4	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2C5	KB50X45	COLUMN SWYSPFC	1,000	0,836	0,836	1,000	1,000
K2C6	KB50X45	COLUMN SWYSPFC	1,000	0,778	0,778	1,000	1,000
K2C7	KB50X45	COLUMN SWYSPFC	1,000	0,788	0,788	1,000	1,000
K2C8	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2C9	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2D1	KB50X45	COLUMN SWYSPFC	1,000	0,778	0,778	1,000	1,000
K2D2	KB50X45	COLUMN SWYSPFC	1,000	0,788	0,788	1,000	1,000
K2D3	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000
K2D4	KB50X45	COLUMN SWYSPFC	1,000	0,825	0,825	1,000	1,000

K2017	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2018	KB50X45	COLUMN SWYSPRC	1,000	0,824	0,824	1,000	1,000
K2019	KB50X45	COLUMN SWYSPRC	1,000	0,848	0,848	1,000	1,000
K2020	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2021	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2022	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2023	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2024	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2025	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2026	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2027	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2028	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2029	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2030	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2031	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2032	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2033	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2034	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2035	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2036	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2037	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2038	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2039	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2040	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2041	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2042	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2043	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2044	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2045	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2046	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2047	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2048	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2049	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2050	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2051	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2052	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2053	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2054	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2055	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2056	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2057	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2058	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2059	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2060	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2061	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2062	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2063	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2064	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2065	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2066	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2067	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2068	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2069	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2070	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2071	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000
K2072	KB50X45	COLUMN SWYSPRC	1,000	0,825	0,825	1,000	1,000

SAP1000 v7.42 File: STP - N-ma Units PAGE 8
10/20/03 19:50:41

Sched 4 ans
Rampup D3 Economic UI3

CONCRETE SECTION OUTPUT (REV 012-99)

BIAXIAL P-M INTERACTION AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

ELEM ID	SECTION ID	STATION ID	LONGITUDINAL COMBO	DESIGNED REINFORCING			
				SHEAR22 COMBO	SHEAR33 COMBO		
K1H1	1K50X50	250,000	2500,000	DCCM1	3,945	BH	3,945
K1H1	1K50X50	1500,000	2500,000	DCCM1	3,945	BH	3,945
K1H1	1K50X50	2250,000	2500,000	DCCM1	3,945	BH	3,945
K1H2	1K50X50	350,000	2500,000	DCCM1	3,150	BH	3,150
K1H2	1K50X50	1650,000	2500,000	DCCM1	3,150	BH	3,150
K1H2	1K50X50	2350,000	2500,000	DCCM1	3,150	BH	3,150
K1H3	1K50X50	250,000	2500,000	DCCM1	2,438	BH	2,438
K1H3	1K50X50	2000,000	2500,000	DCCM1	2,438	BH	2,438
K1H3	1K50X50	2650,000	2500,000	DCCM1	2,438	BH	2,438
K1H4	1K50X50	250,000	2500,000	DCCM1	0,000	DCCM1	0,000
K1H4	1K50X50	450,000	2500,000	DCCM1	0,000	DCCM1	0,000
K1H4	1K50X50	650,000	2500,000	DCCM1	0,000	DCCM1	0,000
K1H5	1K50X50	350,000	2500,000	DCCM1	3,976	BH	3,976
K1H5	1K50X50	1650,000	2500,000	DCCM1	3,976	BH	3,976
K1H5	1K50X50	2750,000	3989,387	DCCM2	3,976	BH	3,976
K1H6	1K50X50	250,000	2500,000	DCCM1	0,000	DCCM1	0,000
K1H6	1K50X50	450,000	2500,000	DCCM1	0,000	DCCM1	0,000
K1H6	1K50X50	650,000	2500,000	DCCM1	0,000	DCCM1	0,000
K1H7	1K50X50	350,000	2500,000	DCCM1	3,846	DCCM3	3,846
K1H7	1K50X50	1650,000	2500,000	DCCM1	3,846	DCCM3	3,846
K1H7	1K50X50	2750,000	2500,000	DCCM1	3,846	DCCM3	3,846
K1H8	1K50X50	0,000	2500,000	DCCM1	0,000	DCCM1	0,000
K1H8	1K50X50	250,000	2500,000	DCCM1	0,000	DCCM1	0,000
K1H8	1K50X50	500,000	2500,000	DCCM1	0,000	DCCM1	0,000

K1H5	1K50X50	200,000	2500,000	DCCM1	2,490	DCCM2	2,490	DCCM2
K1H9	1K50X50	1408,000	2500,000	DCCM1	2,509	DCCM2	2,509	DCCM2
K1H9	1K50X50	2610,000	2500,000	DCCM1	2,531	DCCM1	2,531	DCCM1
K1J1	1K50X50	250,000	2500,000	DCCM1	2,945	BH	2,945	BH
K1J1	1K50X50	1300,000	2500,000	DCCM1	2,945	BH	2,945	BH
K1J1	1K50X50	2360,000	2500,000	DCCM1	2,945	BH	2,945	BH
K1J3	1K50X50	250,000	2500,000	DCCM1	2,149	BH	2,149	BH
K1J3	1K50X50	1650,000	2500,000	DCCM1	2,149	BH	2,149	BH
K1J3	1K50X50	2950,000	2500,000	DCCM1	2,149	BH	2,149	BH
K1J3	1K50X50	250,000	2500,000	DCCM1	2,439	BH	2,439	BH
K1J3	1K50X50	2200,000	2500,000	DCCM1	2,439	BH	2,439	BH
K1J3	1K50X50	2950,000	2500,000	DCCM1	2,439	BH	2,439	BH
K1J4	1K50X50	250,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J4	1K50X50	480,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J4	1K50X50	850,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J5	1K50X50	250,000	2500,000	DCCM1	2,961	BH	2,961	BH
K1J5	1K50X50	1550,000	2500,000	DCCM1	2,961	BH	2,961	BH
K1J5	1K50X50	2750,000	2500,000	DCCM1	2,961	BH	2,961	BH
K1J6	1K50X50	250,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J6	1K50X50	450,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J6	1K50X50	650,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J7	1K50X50	250,000	2500,000	DCCM1	2,848	DCCM4	2,848	DCCM4
K1J7	1K50X50	1550,000	2500,000	DCCM1	2,861	DCCM4	2,861	DCCM4
K1J7	1K50X50	2750,000	2500,000	DCCM1	2,863	DCCM6	2,863	DCCM6
K1J9	1K50X50	0,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J9	1K50X50	250,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J9	1K50X50	500,000	2500,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K1J9	1K50X50	700,000	2500,000	DCCM1	2,492	DCCM2	2,492	DCCM2
K1J9	1K50X50	1408,000	2500,000	DCCM1	2,507	DCCM2	2,507	DCCM2
K1J9	1K50X50	2610,000	2500,000	DCCM1	2,529	DCCM1	2,529	DCCM1
K2A1	KB50X45	250,000	2250,000	DCCM1	2,978	DCCM7	2,944	DCCM7
K2A1	KB50X45	1300,000	2250,000	DCCM1	2,967	DCCM7	2,934	DCCM7
K2A1	KB50X45	2350,000	2250,000	DCCM1	2,967	DCCM7	2,924	DCCM7
K2A2	KB50X45	250,000	2250,000	DCCM1	2,394	BH	2,366	BH
K2A2	KB50X45	1300,000	2250,000	DCCM1	2,394	BH	2,366	BH
K2A2	KB50X45	2350,000	2250,000	DCCM1	2,394	BH	2,366	BH
K2A3	KB50X45	250,000	2250,000	DCCM1	2,188	DCCM5	2,162	DCCM5
K2A3	KB50X45	1300,000	2250,000	DCCM1	2,200	DCCM5	2,174	DCCM5
K2A3	KB50X45	2350,000	2250,000	DCCM1	2,213	DCCM5	2,185	DCCM5
K2A4	KB50X45	250,000	2250,000	DCCM1	2,167	DCCM7	2,142	DCCM7
K2A4	KB50X45	1300,000	2250,000	DCCM1	2,178	DCCM7	2,152	DCCM7
K2A4	KB50X45	2350,000	2250,000	DCCM1	2,188	DCCM7	2,162	DCCM7
K2A5	KB50X45	250,000	2250,000	DCCM1	2,482	DCCM5	2,460	DCCM5
K2A5	KB50X45	2000,000	2250,000	DCCM1	2,494	DCCM5	2,474	DCCM5
K2A5	KB50X45	3650,000	2250,000	DCCM1	2,506	DCCM5	2,486	DCCM5
K2A6	KB50X45	250,000	2250,000	DCCM1	2,465	DCCM7	2,444	DCCM7
K2A6	KB50X45	2000,000	2250,000	DCCM1	2,478	DCCM7	2,457	DCCM7
K2A6	KB50X45	3650,000	2250,000	DCCM1	2,490	DCCM7	2,470	DCCM7
K2A7	KB50X45	250,000	2250,000	DCCM1	2,485	BH	2,465	BH
K2A7	KB50X45	2000,000	2250,000	DCCM1	2,497	BH	2,477	BH
K2A7	KB50X45	3650,000	2250,000	DCCM1	2,508	BH	2,488	BH
K2A8	KB50X45	250,000	2250,000	DCCM1	2,522	DCCM3	2,501	DCCM3
K2A8	KB50X45	2000,000	2250,000	DCCM1	2,534	DCCM3	2,510	DCCM3
K2A8	KB50X45	3650,000	2250,000	DCCM1	2,502	DCCM10	2,482	DCCM10
K2A9	KB50X45	250,000	2250,000	DCCM1	2,401	DCCM1	2,380	DCCM1
K2A9	KB50X45	2000,000	2250,000	DCCM1	2,421	DCCM1	2,400	DCCM1
K2A9	KB50X45	3650,000	2250,000	DCCM1	2,442	DCCM1	2,420	DCCM1
K2C1	KB50X45	250,000	2250,000	DCCM1	2,364	BH	2,336	BH
K2C1	KB50X45	1300,000	2250,000	DCCM1	2,364	BH	2,336	BH
K2C1	KB50X45	2350,000	2250,000	DCCM1	2,364	BH	2,336	BH
K2C2	KB50X45	250,000	2250,000	DCCM1	2,199	DCCM9	2,172	DCCM9
K2C2	KB50X45	1300,000	2250,000	DCCM1	2,209	DCCM9	2,182	DCCM9
K2C2	KB50X45	2350,000	2250,000	DCCM1	2,220	DCCM9	2,192	DCCM9
K2C3	KB50X45	250,000	2250,000	DCCM1	2,446	DCCM7	2,424	DCCM7
K2C3	KB50X45	2000,000	2250,000	DCCM1	2,458	DCCM7	2,436	DCCM7
K2C3	KB50X45	3650,000	2250,000	DCCM1	2,471	DCCM7	2,449	DCCM7
K2C4	KB50X45	250,000	2250,000	DCCM1	2,479	DCCM2	2,457	DCCM2
K2C4	KB50X45	2000,000	2250,000	DCCM1	2,493	DCCM2	2,473	DCCM2

K204	KB50X45	3450,000	2250,000	DCCN1	2,507	DCCN2	2,480	DCCN3
K205	KB50X45	350,000	2250,000	DCCN1	2,221	DCCN2	2,207	DCCN2
K206	KB50X45	2000,000	2250,000	DCCN1	2,238	DCCN2	2,219	DCCN2
K207	KB50X45	3450,000	2250,000	DCCN1	2,255	DCCN2	2,236	DCCN3
K208	KB50X45	350,000	2250,000	DCCN1	3,773	EH	3,740	EH
K209	KB50X45	1300,000	2250,000	DCCN1	3,773	EH	3,740	EH
K210	KB50X45	3450,000	2250,000	DCCN1	3,773	EH	3,740	EH
K211	KB50X45	350,000	2250,000	DCCN1	2,943	EH	2,918	EH
K212	KB50X45	1050,000	2250,000	DCCN1	2,943	EH	2,918	EH
K213	KB50X45	3450,000	2250,000	DCCN1	2,943	EH	2,918	EH
K214	KB50X45	350,000	2250,000	DCCN1	2,238	EH	2,219	EH
K215	KB50X45	2000,000	2250,000	DCCN1	2,238	EH	2,219	EH
K216	KB50X45	3450,000	2250,000	DCCN1	2,238	EH	2,219	EH
K217	KB50X45	350,000	2250,000	DCCN1	2,147	EH	2,147	EH
K218	KB50X45	2000,000	2250,000	DCCN1	2,147	EH	2,147	EH
K219	KB50X45	3450,000	2250,000	DCCN1	2,147	EH	2,147	EH
K220	KB50X45	350,000	2250,000	DCCN1	3,853	EH	3,821	EH
K221	KB50X45	1400,000	2250,000	DCCN1	3,853	EH	3,821	EH
K222	KB50X45	3450,000	2250,000	DCCN1	3,853	EH	3,821	EH
K223	KB50X45	350,000	2250,000	DCCN1	2,996	EH	2,970	EH
K224	KB50X45	1650,000	2250,000	DCCN1	2,996	EH	2,970	EH
K225	KB50X45	3450,000	2250,000	DCCN1	2,996	EH	2,970	EH
K226	KB50X45	350,000	2250,000	DCCN1	2,270	EH	2,251	EH
K227	KB50X45	2100,000	2250,000	DCCN1	2,270	EH	2,251	EH
K228	KB50X45	3450,000	2250,000	DCCN1	2,270	EH	2,251	EH
K229	KB50X45	350,000	2250,000	DCCN1	2,181	EH	2,163	EH
K230	KB50X45	2000,000	2250,000	DCCN1	2,181	EH	2,163	EH
K231	KB50X45	3450,000	2250,000	DCCN1	2,181	EH	2,163	EH
K232	KB50X45	350,000	2250,000	DCCN1	2,498	EH	2,478	EH
K233	KB50X45	2000,000	2250,000	DCCN1	2,498	EH	2,478	EH
K234	KB50X45	3450,000	2250,000	DCCN1	2,498	EH	2,478	EH
K235	KB50X45	350,000	2250,000	DCCN1	2,188	DCCN2	2,168	DCCN2
K236	KB50X45	1580,000	2250,000	DCCN1	2,188	DCCN2	2,168	DCCN2
K237	KB50X45	2450,000	2250,000	DCCN1	2,188	DCCN2	2,168	DCCN2
K238	KB50X45	350,000	2250,000	DCCN1	0,000	DCCN3	0,000	DCCN1
K239	KB50X45	200,000	2250,000	DCCN1	0,000	DCCN3	0,000	DCCN1
K240	KB50X45	340,000	2250,000	DCCN1	0,000	DCCN3	0,000	DCCN1
K241	KB50X45	350,000	2250,000	DCCN1	3,446	DCCN5	3,591	DCCN1
K242	KB50X45	1400,000	2250,000	DCCN1	3,446	DCCN5	3,593	DCCN1
K243	KB50X45	2450,000	2250,000	DCCN1	3,446	DCCN5	3,594	DCCN1
K244	KB50X45	350,000	2250,000	DCCN1	2,148	DCCN1	2,143	DCCN2
K245	KB50X45	1650,000	2250,000	DCCN1	2,147	DCCN1	2,143	DCCN2
K246	KB50X45	2450,000	2250,000	DCCN1	2,148	DCCN1	2,143	DCCN2
K247	KB50X45	250,000	2250,000	DCCN1	3,898	EH	3,864	EH
K248	KB50X45	1300,000	2250,000	DCCN1	3,898	EH	3,864	EH
K249	KB50X45	2450,000	2250,000	DCCN1	3,898	EH	3,864	EH
K250	KB50X45	350,000	2250,000	DCCN1	3,029	EH	3,003	EH
K251	KB50X45	1650,000	2250,000	DCCN1	3,029	EH	3,003	EH
K252	KB50X45	2450,000	2250,000	DCCN1	3,029	EH	3,003	EH
K253	KB50X45	350,000	2250,000	DCCN1	2,292	EH	2,273	EH
K254	KB50X45	2000,000	2250,000	DCCN1	2,292	EH	2,273	EH
K255	KB50X45	3450,000	2250,000	DCCN1	2,292	EH	2,273	EH
K256	KB50X45	350,000	2250,000	DCCN1	2,203	EH	2,184	EH
K257	KB50X45	2000,000	2250,000	DCCN1	2,203	EH	2,184	EH
K258	KB50X45	3450,000	2250,000	DCCN1	2,203	EH	2,184	EH
K259	KB50X45	350,000	2250,000	DCCN1	2,532	DCCN10	2,511	DCCN10
K260	KB50X45	2000,000	2250,000	DCCN1	2,532	DCCN10	2,511	DCCN10
K261	KB50X45	3450,000	2250,000	DCCN1	2,532	DCCN10	2,511	DCCN10
K262	KB50X45	350,000	2250,000	DCCN1	2,179	DCCN2	2,161	DCCN2
K263	KB50X45	2050,000	2250,000	DCCN1	2,162	DCCN2	2,143	DCCN2
K264	KB50X45	2750,000	2250,000	DCCN1	2,144	DCCN2	2,126	DCCN2
K265	KB50X45	250,000	2250,000	DCCN1	3,421	DCCN4	3,597	DCCN1
K266	KB50X45	1300,000	2250,000	DCCN1	3,423	DCCN5	3,595	DCCN1
K267	KB50X45	2450,000	2250,000	DCCN1	3,423	DCCN5	3,594	DCCN1
K268	KB50X45	350,000	2250,000	DCCN1	2,181	DCCN1	2,163	DCCN1
K269	KB50X45	1650,000	2250,000	DCCN1	2,181	DCCN1	2,163	DCCN2
K270	KB50X45	2450,000	2250,000	DCCN1	2,181	DCCN1	2,163	DCCN2
K271	KB50X45	350,000	2250,000	DCCN1	2,485	EH	2,463	EH

K2F9	KR50X45	1000,000	2250,000	DCON1	2,463	BH	2,463	BH
K2F9	KR50X45	3650,000	2250,000	DCON1	2,463	BH	2,463	BH
K2G1	KR50X45	250,000	2250,000	DCON1	2,845	BH	2,845	BH
K2G1	KR50X45	1300,000	2250,000	DCON1	2,845	BH	2,845	BH
K2G1	KR50X45	2350,000	2250,000	DCON1	2,845	BH	2,845	BH
K2G2	KR50X45	350,000	2250,000	DCON1	2,997	BH	2,971	BH
K2G2	KR50X45	1650,000	2250,000	DCON1	2,997	BH	2,971	BH
K2G2	KR50X45	2950,000	2250,000	DCON1	2,997	BH	2,971	BH
K2G3	KR50X45	250,000	2250,000	DCON1	2,278	BH	2,258	BH
K2G3	KR50X45	1000,000	2250,000	DCON1	2,278	BH	2,258	BH
K2G3	KR50X45	3650,000	2250,000	DCON1	2,278	BH	2,258	BH
K2G4	KR50X45	350,000	2250,000	DCON1	2,193	BH	2,175	BH
K2G4	KR50X45	2000,000	2250,000	DCON1	2,193	BH	2,175	BH
K2G4	KR50X45	3650,000	2250,000	DCON1	2,193	BH	2,175	BH
K2G5	KR50X45	350,000	2250,000	DCON1	2,537	DCON10	2,518	DCON10
K2G5	KR50X45	2000,000	2250,000	DCON1	2,537	DCON10	2,518	DCON10
K2G5	KR50X45	3650,000	2250,000	DCON1	2,537	DCON10	2,518	DCON10
K2G6	KR50X45	250,000	2250,000	DCON1	2,141	DCON1	2,123	DCON1
K2G6	KR50X45	1650,000	2250,000	DCON1	2,141	DCON1	2,123	DCON1
K2G6	KR50X45	2650,000	2250,000	DCON1	2,141	DCON1	2,123	DCON1
K2G7	KR50X45	250,000	2250,000	DCON1	3,409	DCON1	3,554	DCON1
K2G7	KR50X45	1300,000	2250,000	DCON1	3,409	DCON1	3,554	DCON1
K2G7	KR50X45	2350,000	2250,000	DCON1	3,409	DCON1	3,554	DCON1
K2G8	KR50X45	350,000	2250,000	DCON1	3,156	BH	3,129	BH
K2G8	KR50X45	1650,000	2250,000	DCON1	3,156	BH	3,129	BH
K2G8	KR50X45	2950,000	2250,000	DCON1	3,156	BH	3,129	BH
K2G9	KR50X45	350,000	2250,000	DCON1	2,384	BH	2,363	BH
K2G9	KR50X45	2000,000	2250,000	DCON1	2,384	BH	2,363	BH
K2G9	KR50X45	3650,000	2250,000	DCON1	2,384	BH	2,363	BH
K2H1	KR50X45	250,000	2250,000	DCON1	3,844	BH	3,811	BH
K2H1	KR50X45	1300,000	2250,000	DCON1	3,844	BH	3,811	BH
K2H1	KR50X45	2350,000	2250,000	DCON1	3,844	BH	3,811	BH
K2H2	KR50X45	350,000	2250,000	DCON1	2,997	BH	2,971	BH
K2H2	KR50X45	1650,000	2250,000	DCON1	2,997	BH	2,971	BH
K2H2	KR50X45	2950,000	2250,000	DCON1	2,997	BH	2,971	BH
K2H3	KR50X45	350,000	2250,000	DCON1	2,277	BH	2,258	BH
K2H3	KR50X45	2000,000	2250,000	DCON1	2,277	BH	2,258	BH
K2H3	KR50X45	3650,000	2250,000	DCON1	2,277	BH	2,258	BH
K2H4	KR50X45	350,000	2250,000	DCON1	2,193	BH	2,174	BH
K2H4	KR50X45	2000,000	2250,000	DCON1	2,193	BH	2,174	BH
K2H4	KR50X45	3650,000	2250,000	DCON1	2,193	BH	2,174	BH
K2K5	KR50X45	350,000	2250,000	DCON1	2,513	BH	2,492	BH
K2K5	KR50X45	2000,000	2250,000	DCON1	2,513	BH	2,492	BH
K2K5	KR50X45	3650,000	2250,000	DCON1	2,513	BH	2,492	BH
K2K6	KR50X45	250,000	2250,000	DCON1	2,142	DCON2	2,124	DCON2
K2K6	KR50X45	1300,000	2250,000	DCON1	2,142	DCON2	2,124	DCON2
K2K6	KR50X45	3650,000	2250,000	DCON1	2,142	DCON2	2,124	DCON2
K2K7	KR50X45	350,000	2250,000	DCON1	3,409	DCON1	3,575	DCON2
K2K7	KR50X45	1300,000	2250,000	DCON1	3,409	DCON1	3,575	DCON2
K2K7	KR50X45	2350,000	2250,000	DCON1	3,409	DCON1	3,575	DCON2
K2K8	KR50X45	350,000	2250,000	DCON1	3,156	BH	3,129	BH
K2K8	KR50X45	1650,000	2250,000	DCON1	3,156	BH	3,129	BH
K2K8	KR50X45	2950,000	2250,000	DCON1	3,156	BH	3,129	BH
K2K9	KR50X45	350,000	2250,000	DCON1	2,384	BH	2,363	BH
K2K9	KR50X45	2000,000	2250,000	DCON1	2,384	BH	2,363	BH
K2K9	KR50X45	3650,000	2250,000	DCON1	2,384	BH	2,363	BH
K2L2	KR50X45	250,000	2250,000	DCON1	3,898	BH	3,864	BH
K2L2	KR50X45	1300,000	2250,000	DCON1	3,898	BH	3,864	BH
K2L2	KR50X45	2350,000	2250,000	DCON1	3,898	BH	3,864	BH
K2L3	KR50X45	350,000	2250,000	DCON1	3,029	BH	3,003	BH
K2L3	KR50X45	1650,000	2250,000	DCON1	3,029	BH	3,003	BH
K2L3	KR50X45	2950,000	2250,000	DCON1	3,029	BH	3,003	BH
K2L4	KR50X45	350,000	2250,000	DCON1	2,293	BH	2,273	BH
K2L4	KR50X45	2000,000	2250,000	DCON1	2,293	BH	2,273	BH
K2L4	KR50X45	3650,000	2250,000	DCON1	2,293	BH	2,273	BH
K2L5	KR50X45	350,000	2250,000	DCON1	2,203	BH	2,185	BH
K2L5	KR50X45	2000,000	2250,000	DCON1	2,203	BH	2,185	BH
K2L5	KR50X45	3650,000	2250,000	DCON1	2,203	BH	2,185	BH

K21A	KB50X45	240,000	2250,000	DCCM1	2,513	EH	2,503	EH
K21B	KB50X45	2000,000	2250,000	DCCM1	2,504	EH	2,503	EH
K21C	KB50X45	3850,000	2250,000	DCCM1	2,506	AM	2,514	EH
K21D	KB50X45	550,000	2250,000	DCCM1	2,177	DCCM2	2,158	DCCM2
K21E	KB50X45	2050,000	2250,000	DCCM1	2,160	DCCM2	2,141	DCCM2
K21F	KB50X45	3750,000	2250,000	DCCM1	2,142	DCCM2	2,124	DCCM2
K21G	KB50X45	150,000	2250,000	DCCM1	2,434	DCCM3	2,433	DCCM1
K21H	KB50X45	1000,000	2250,000	DCCM1	2,434	DCCM3	2,431	DCCM1
K21I	KB50X45	2350,000	2250,000	DCCM1	2,436	DCCM3	2,436	DCCM1
K21J	KB50X45	550,000	2250,000	DCCM1	2,160	DCCM3	2,142	DCCM3
K21K	KB50X45	1650,000	2250,000	DCCM1	2,149	DCCM1	2,148	DCCM2
K21L	KB50X45	2750,000	2250,000	DCCM1	2,149	DCCM1	2,148	DCCM2
K2M1	KB50X45	150,000	2250,000	DCCM1	2,856	EH	2,877	EH
K2M1	KB50X45	1200,000	2250,000	DCCM1	2,856	EH	2,822	EH
K2M1	KB50X45	2850,000	2250,000	DCCM1	2,857	EH	2,821	EH
K2N1	KB50X45	350,000	2250,000	DCCM1	2,990	EH	2,971	EH
K2N2	KB50X45	1650,000	2250,000	DCCM1	2,997	EH	2,971	EH
K2N2	KB50X45	2950,000	2250,000	DCCM1	2,990	EH	2,971	EH
K2N3	KB50X45	550,000	2250,000	DCCM1	2,271	EH	2,252	EH
K2N3	KB50X45	2000,000	2250,000	DCCM1	2,271	EH	2,252	EH
K2N3	KB50X45	3650,000	2250,000	DCCM1	2,271	EH	2,252	EH
K2N4	KB50X45	550,000	2250,000	DCCM1	2,183	EH	2,164	EH
K2N4	KB50X45	2000,000	2250,000	DCCM1	2,183	EH	2,164	EH
K2N4	KB50X45	3650,000	2250,000	DCCM1	2,183	EH	2,164	EH
K2N5	KB50X45	550,000	2250,000	DCCM1	2,434	EH	2,434	EH
K2N5	KB50X45	2000,000	2250,000	DCCM1	2,511	EH	2,490	EH
K2N5	KB50X45	3650,000	2250,000	DCCM1	2,522	EH	2,501	EH
K2N6	KB50X45	250,000	2250,000	DCCM1	2,168	DCCM2	2,158	DCCM2
K2N6	KB50X45	1650,000	2250,000	DCCM1	2,172	DCCM2	2,153	DCCM2
K2N6	KB50X45	2950,000	2250,000	DCCM1	2,168	DCCM2	2,150	DCCM2
K2N7	KB50X45	250,000	2250,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K2N7	KB50X45	870,000	2250,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K2N7	KB50X45	490,000	2250,000	DCCM1	0,000	DCCM1	0,000	DCCM1
K2N8	KB50X45	850,000	2250,000	DCCM1	2,448	DCCM1	2,582	DCCM1
K2N8	KB50X45	1000,000	2250,000	DCCM1	2,448	DCCM1	2,582	DCCM1
K2N8	KB50X45	2350,000	2250,000	DCCM1	2,444	DCCM1	2,582	DCCM1
K2N9	KB50X45	350,000	2250,000	DCCM1	2,146	DCCM1	2,342	DCCM2
K2N9	KB50X45	1650,000	2250,000	DCCM1	2,146	DCCM1	2,342	DCCM2
K2N9	KB50X45	2950,000	2250,000	DCCM1	2,146	DCCM2	2,341	DCCM2
K2O1	KB50X45	250,000	2250,000	DCCM1	2,358	EH	2,330	EH
K2O1	KB50X45	1800,000	2250,000	DCCM1	2,358	EH	2,330	EH
K2O1	KB50X45	2250,000	2250,000	DCCM1	2,358	EH	2,330	EH
K2O2	KB50X45	550,000	2250,000	DCCM1	2,189	DCCM3	2,163	DCCM3
K2O2	KB50X45	1650,000	2250,000	DCCM1	2,200	DCCM3	2,173	DCCM3
K2O2	KB50X45	2950,000	2250,000	DCCM1	2,210	DCCM3	2,183	DCCM3
K2O3	KB50X45	250,000	2250,000	DCCM1	2,448	DCCM3	2,419	DCCM3
K2O3	KB50X45	2000,000	2250,000	DCCM1	2,453	DCCM3	2,432	DCCM3
K2O3	KB50X45	3650,000	2250,000	DCCM1	2,456	DCCM3	2,445	DCCM3
K2O4	KB50X45	550,000	2250,000	DCCM1	2,458	DCCM2	2,451	DCCM2
K2O4	KB50X45	2000,000	2250,000	DCCM1	2,458	DCCM2	2,458	DCCM2
K2O4	KB50X45	3650,000	2250,000	DCCM1	2,502	DCCM2	2,482	DCCM2
K2O5	KB50X45	550,000	2250,000	DCCM1	2,000	DCCM2	2,001	DCCM2
K2O5	KB50X45	2000,000	2250,000	DCCM1	2,337	DCCM2	2,319	DCCM2
K2O5	KB50X45	3650,000	2250,000	DCCM1	2,355	DCCM2	2,336	DCCM2
K2O6	KB50X45	250,000	2250,000	DCCM1	2,778	EH	2,745	EH
K2O6	KB50X45	1300,000	2250,000	DCCM1	2,778	EH	2,745	EH
K2O6	KB50X45	2350,000	2250,000	DCCM1	2,778	EH	2,745	EH
K2O7	KB50X45	550,000	2250,000	DCCM1	2,946	EH	2,921	EH
K2O7	KB50X45	1650,000	2250,000	DCCM1	2,946	EH	2,921	EH
K2O7	KB50X45	2950,000	2250,000	DCCM1	2,946	EH	2,921	EH
K2O8	KB50X45	550,000	2250,000	DCCM1	2,238	EH	2,219	EH
K2O8	KB50X45	2000,000	2250,000	DCCM1	2,238	EH	2,219	EH
K2O8	KB50X45	3650,000	2250,000	DCCM1	2,238	EH	2,219	EH
K2O9	KB50X45	550,000	2250,000	DCCM1	2,165	EH	2,147	EH
K2O9	KB50X45	2000,000	2250,000	DCCM1	2,165	EH	2,147	EH
K2O9	KB50X45	3650,000	2250,000	DCCM1	2,165	EH	2,147	EH
K2P1	KB50X45	250,000	2250,000	DCCM1	2,982	DCCM3	2,953	DCCM3
K2P1	KB50X45	1300,000	2250,000	DCCM1	2,975	DCCM3	2,942	DCCM3
K2P1	KB50X45	2350,000	2250,000	DCCM1	2,968	DCCM3	2,930	DCCM3

K2 P1	KB50X45	350,000	2250,000	DCCN1	3,128	DCCN5	3,124	DCCN5
K2 P2	KB50X45	1650,000	2250,000	DCCN1	3,172	DCCN5	3,147	DCCN5
K2 P2	KB50X45	2950,000	2250,000	DCCN1	3,124	DCCN5	3,158	DCCN5
K2 P3	KB50X45	350,000	2250,000	DCCN1	3,434	DCCN4	3,504	DCCN4
K2 P3	KB50X45	2000,000	2250,000	DCCN1	2,538	DCCN4	2,512	DCCN4
K2 P3	KB50X45	3650,000	2250,000	DCCN1	2,469	DCCN5	2,448	DCCN5
K2 P4	KB50X45	350,000	2250,000	DCCN1	3,527	DCCN7	3,506	DCCN7
K2 P4	KB50X45	2000,000	2250,000	DCCN1	2,517	DCCN7	2,516	DCCN7
K2 P4	KB50X45	3650,000	2250,000	DCCN1	2,491	EH	2,471	EH
K2 P5	KB50X45	350,000	2250,000	DCCN1	3,375	DCCN1	3,355	DCCN1
K2 P5	KB50X45	2000,000	2250,000	DCCN1	2,385	DCCN1	2,375	DCCN1
K2 P5	KB50X45	3650,000	2250,000	DCCN1	2,416	DCCN1	2,394	DCCN1
K2 P6	KB50X45	350,000	2250,000	DCCN1	3,583	DCCN1	3,534	DCCN1
K2 P6	KB50X45	1500,000	2250,000	DCCN1	2,575	DCCN1	2,554	DCCN1
K2 P6	KB50X45	2950,000	2250,000	DCCN1	2,595	DCCN1	2,574	DCCN1
K2 P7	KB50X45	350,000	2250,000	DCCN1	3,434	EH	3,465	EH
K2 P7	KB50X45	1700,000	2250,000	DCCN1	3,434	EH	3,465	EH
K2 P7	KB50X45	2350,000	2250,000	DCCN1	3,434	EH	3,465	EH
K2 P8	KB50X45	350,000	2250,000	DCCN1	3,770	EH	3,747	EH
K2 P8	KB50X45	1650,000	2250,000	DCCN1	3,770	EH	3,747	EH
K2 P8	KB50X45	2950,000	2250,000	DCCN1	3,770	EH	3,747	EH
K2 P9	KB50X45	350,000	2250,000	DCCN1	2,140	EH	2,122	EH
K2 P9	KB50X45	2000,000	2250,000	DCCN1	2,140	EH	2,122	EH
K2 P9	KB50X45	3650,000	2250,000	DCCN1	2,140	EH	2,122	EH
K3 A1	3KB45X45	350,000	2025,000	DCCN1	2,849	EH	2,849	EH
K3 A1	3KB45X45	1550,000	2025,000	DCCN1	2,849	EH	2,849	EH
K3 A1	3KB45X45	2450,000	2025,000	DCCN1	2,849	EH	2,849	EH
K3 A2	3KB45X45	350,000	2025,000	DCCN1	2,239	EH	2,239	EH
K3 A2	3KB45X45	1650,000	2025,000	DCCN1	2,239	EH	2,239	EH
K3 A2	3KB45X45	3050,000	2025,000	DCCN1	2,239	EH	2,239	EH
K3 A3	3KB45X45	350,000	2025,000	DCCN1	1,675	DCCN3	1,675	DCCN3
K3 A3	3KB45X45	2500,000	2025,000	DCCN1	1,675	DCCN3	1,675	DCCN3
K3 A3	3KB45X45	4750,000	2025,000	DCCN1	1,371	EH	1,371	EH
K3 A4	3KB45X45	350,000	2025,000	DCCN1	2,142	DCCN10	2,142	DCCN10
K3 A4	3KB45X45	2000,000	2025,000	DCCN1	2,142	DCCN3	2,142	DCCN3
K3 A4	3KB45X45	3650,000	2025,000	DCCN1	2,142	DCCN3	2,142	DCCN3
K3 A5	3KB45X45	350,000	2025,000	DCCN1	2,237	DCCN1	2,237	DCCN1
K3 A5	3KB45X45	1725,000	2025,000	DCCN1	2,236	DCCN1	2,236	DCCN1
K3 A5	3KB45X45	3250,000	2025,000	DCCN1	2,236	DCCN1	2,236	DCCN1
K3 A6	3KB45X45	350,000	2025,000	DCCN1	2,581	DCCN1	2,581	DCCN1
K3 A6	3KB45X45	1405,000	2025,000	DCCN1	2,580	DCCN1	2,580	DCCN1
K3 A6	3KB45X45	2610,000	2025,000	DCCN1	2,580	DCCN1	2,580	DCCN1
K3 A7	3KB45X45	350,000	2025,000	DCCN1	2,849	EH	2,849	EH
K3 A7	3KB45X45	1350,000	2025,000	DCCN1	2,849	EH	2,849	EH
K3 A7	3KB45X45	2450,000	2025,000	DCCN1	2,849	EH	2,849	EH
K3 A8	3KB45X45	350,000	2025,000	DCCN1	2,238	EH	2,238	EH
K3 A8	3KB45X45	1450,000	2025,000	DCCN1	2,238	EH	2,238	EH
K3 A8	3KB45X45	3050,000	2025,000	DCCN1	2,238	EH	2,238	EH
K3 A9	3KB45X45	350,000	2025,000	DCCN1	1,675	DCCN3	1,675	DCCN3
K3 A9	3KB45X45	2500,000	2025,000	DCCN1	1,675	DCCN3	1,675	DCCN3
K3 A9	3KB45X45	4750,000	2025,000	DCCN1	1,371	EH	1,371	EH
K3 I1	3KB45X45	350,000	2025,000	DCCN1	3,124	EH	3,124	EH
K3 I1	3KB45X45	1300,000	2025,000	DCCN1	3,124	EH	3,124	EH
K3 I1	3KB45X45	2350,000	2025,000	DCCN1	3,124	EH	3,124	EH
K3 I2	3KB45X45	350,000	2177,189	DCCN4	3,594	EH	3,594	EH
K3 I2	3KB45X45	1650,000	2025,000	DCCN1	3,604	EH	3,604	EH
K3 I2	3KB45X45	2950,000	2646,465	DCCN4	3,614	EH	3,614	EH
K3 I3	3KB45X45	350,000	2025,000	DCCN1	3,138	EH	3,138	EH
K3 I3	3KB45X45	1400,000	2025,000	DCCN1	3,138	EH	3,138	EH
K3 I3	3KB45X45	2450,000	2025,000	DCCN1	3,138	EH	3,138	EH
K3 I4	3KB45X45	350,000	2025,000	DCCN1	3,324	EH	3,324	EH
K3 I4	3KB45X45	1650,000	2025,000	DCCN1	3,324	EH	3,324	EH
K3 I4	3KB45X45	2950,000	3145,328	DCCN3	3,338	DCCN5	3,338	DCCN5
K4 O1	4PB30X30	200,000	900,000	DCCN1	0,594	DCCN7	1,445	DCCN7
K4 O1	4PB30X30	1250,000	900,000	DCCN1	0,592	DCCN7	1,441	DCCN7
K4 O1	4PB30X30	2500,000	900,000	DCCN1	0,590	DCCN7	1,437	DCCN7
K4 O2	4PB30X30	200,000	900,000	DCCN1	0,589	DCCN7	1,138	DCCN7
K4 O2	4PB30X30	1650,000	900,000	DCCN1	0,587	DCCN7	1,133	DCCN7

K4C2	4KB30X30	3100,000	900,000	DCOM1	0,588	DCOM7	1,128	DCOM7
K4C3	4KB30X30	250,000	900,000	DCOM1	0,929	DCOM5	0,929	DCOM5
K4C3	4KB30X30	2000,000	900,000	DCOM1	0,934	DCOM5	0,934	DCOM5
K4C3	4KB30X30	2800,000	900,000	DCOM1	0,939	DCOM5	0,939	DCOM5
K4C4	4KB30X30	250,000	900,000	DCOM1	0,929	DCOM5	0,929	DCOM5
K4C4	4KB30X30	2000,000	900,000	DCOM1	0,934	DCOM5	0,934	DCOM5
K4C4	4KB30X30	2750,000	900,000	DCOM5	0,939	DCOM5	0,939	DCOM5
K4C5	4KB30X30	250,000	900,000	DCOM1	0,848	DCOM4	0,848	DCOM4
K4C5	4KB30X30	2000,000	900,000	DCOM1	0,854	DCOM4	0,854	DCOM4
K4C5	4KB30X30	2750,000	900,000	DCOM1	0,860	DCOM4	0,860	DCOM4
K4D1	4KB30X30	200,000	900,000	DCOM1	1,321	DCOM5	1,321	DCOM5
K4D1	4KB30X30	1350,000	900,000	DCOM1	1,327	DCOM5	1,327	DCOM5
K4D1	4KB30X30	2500,000	900,000	DCOM1	1,332	DCOM5	1,332	DCOM5
K4D2	4KB30X30	200,000	900,000	DCOM1	1,110	DCOM5	1,110	DCOM5
K4D2	4KB30X30	1650,000	900,000	DCOM1	1,105	DCOM5	1,105	DCOM5
K4D2	4KB30X30	3100,000	900,000	DCOM1	1,100	DCOM5	1,100	DCOM5
K4D3	4KB30X30	250,000	900,000	DCOM1	0,928	DCOM5	0,928	DCOM5
K4D3	4KB30X30	2000,000	900,000	DCOM1	0,933	DCOM5	0,933	DCOM5
K4D3	4KB30X30	2800,000	900,000	DCOM1	0,938	DCOM5	0,938	DCOM5
K4D4	4KB30X30	250,000	900,000	DCOM1	0,958	DCOM5	0,958	DCOM5
K4D4	4KB30X30	2000,000	900,000	DCOM1	0,963	DCOM5	0,963	DCOM5
K4D4	4KB30X30	2750,000	900,000	DCOM1	0,968	DCOM5	0,968	DCOM5
K4D5	4KB30X30	250,000	900,000	DCOM1	0,873	DCOM5	0,873	DCOM5
K4D5	4KB30X30	2000,000	900,000	DCOM1	0,878	DCOM5	0,878	DCOM5
K4D5	4KB30X30	2500,000	900,000	DCOM1	0,883	DCOM5	0,883	DCOM5
K4E1	4KB30X30	250,000	900,000	DCOM1	3,789	DCOM2	3,789	DCOM2
K4E1	4KB30X30	625,000	900,000	DCOM1	3,792	DCOM2	3,792	DCOM2
K4E1	4KB30X30	1000,000	900,000	DCOM1	3,795	DCOM2	3,795	DCOM2
K4E2	4KB30X30	200,000	900,000	DCOM1	3,768	DCOM2	3,768	DCOM2
K4E2	4KB30X30	575,000	900,000	DCOM1	3,773	DCOM2	3,773	DCOM2
K4E2	4KB30X30	950,000	900,000	DCOM1	3,780	DCOM2	3,780	DCOM2
K4F1	4KB30X30	250,000	926,961	DCOM5	4,026	DCOM2	4,026	DCOM2
K4F1	4KB30X30	625,000	900,000	DCOM1	4,019	DCOM2	4,019	DCOM2
K4F1	4KB30X30	1000,000	900,000	DCOM1	4,012	DCOM2	4,012	DCOM2
K4F2	4KB30X30	200,000	900,000	DCOM1	4,026	DCOM2	4,026	DCOM2
K4F2	4KB30X30	575,000	900,000	DCOM1	4,033	DCOM2	4,033	DCOM2
K4F2	4KB30X30	950,000	900,000	DCOM1	4,040	DCOM2	4,040	DCOM2
K4G1	4KB30X30	200,000	900,000	DCOM1	4,098	DCOM2	4,098	DCOM2
K4G1	4KB30X30	575,000	900,000	DCOM1	4,105	DCOM2	4,105	DCOM2
K4G1	4KB30X30	950,000	953,817	DCOM5	4,112	DCOM2	4,112	DCOM2
K4G2	4KB30X30	200,000	900,000	DCOM1	3,963	DCOM2	3,963	DCOM2
K4G2	4KB30X30	575,000	900,000	DCOM1	3,970	DCOM2	3,970	DCOM2
K4G2	4KB30X30	950,000	900,000	DCOM1	3,977	DCOM2	3,977	DCOM2
K4H1	4KB30X30	200,000	900,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K4H1	4KB30X30	575,000	900,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K4H1	4KB30X30	950,000	900,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K4H2	4KB30X30	200,000	900,000	DCOM1	3,648	DCOM10	3,648	DCOM10
K4H2	4KB30X30	575,000	900,000	DCOM1	3,654	DCOM10	3,654	DCOM10
K4H2	4KB30X30	950,000	900,000	DCOM1	3,659	DCOM10	3,659	DCOM10
K4H3	4KB30X30	200,000	900,000	DCOM1	3,626	DCOM9	3,626	DCOM9
K4H3	4KB30X30	575,000	900,000	DCOM1	3,631	DCOM9	3,631	DCOM9
K4H3	4KB30X30	950,000	900,000	DCOM1	3,636	DCOM9	3,636	DCOM9
K4H4	4KB30X30	200,000	900,000	DCOM1	0,253	DCOM2	0,000	DCOM1
K4H4	4KB30X30	575,000	900,000	DCOM1	0,252	DCOM2	0,000	DCOM1
K4H4	4KB30X30	950,000	900,000	DCOM1	0,251	DCOM2	0,000	DCOM1
K4J1	4KB30X30	200,000	900,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K4J1	4KB30X30	575,000	900,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K4J1	4KB30X30	950,000	900,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K4J2	4KB30X30	250,000	900,000	DCOM1	3,664	DCOM10	3,664	DCOM10
K4J2	4KB30X30	625,000	900,000	DCOM1	3,658	DCOM10	3,658	DCOM10
K4J2	4KB30X30	1000,000	900,000	DCOM1	3,653	DCOM10	3,653	DCOM10
K4J3	4KB30X30	200,000	900,000	DCOM1	3,607	BH	3,607	BH
K4J3	4KB30X30	575,000	900,000	DCOM1	3,607	BH	3,607	BH
K4J3	4KB30X30	950,000	900,000	DCOM1	3,607	BH	3,607	BH
K4J4	4KB30X30	200,000	900,000	DCOM1	0,261	DCOM2	0,000	DCOM1
K4J4	4KB30X30	575,000	900,000	DCOM1	0,260	DCOM2	0,000	DCOM1
K4J4	4KB30X30	950,000	900,000	DCOM1	0,259	DCOM2	0,000	DCOM1
K4K1	4KB30X30	250,000	954,571	DCOM5	4,068	DCOM2	4,068	DCOM2

R4K1	4FR30X30	425,000	900,000	DOON1	4,041	DOON2	4,051	DOON1
R4K1	4FR30X30	1000,000	900,000	DOON1	4,054	DOON2	4,054	DOON2
R4K2	4FR30X30	000,000	900,000	DOON1	3,964	DOON2	3,964	DOON2
R4K2	4FR30X30	975,000	900,000	DOON1	3,971	DOON2	3,971	DOON2
R4K2	4FR30X30	950,000	900,000	DOON1	3,978	DOON2	3,978	DOON2
R4L1	4FR30X30	120,000	900,000	DOON2	4,008	DOON2	4,020	DOON2
R4L1	4FR30X30	975,000	900,000	DOON1	4,013	DOON2	4,014	DOON2
R4L1	4FR30X30	1000,000	900,000	DOON1	4,011	DOON2	4,011	DOON2
R4L1	4FR30X30	100,000	900,000	DOON1	4,026	DOON2	4,026	DOON2
R4L2	4FR30X30	975,000	900,000	DOON1	4,037	DOON2	4,038	DOON2
R4L2	4FR30X30	950,000	900,000	DOON1	4,040	DOON2	4,040	DOON2
R4M1	4FR30X30	090,000	900,000	DOON1	3,908	DOON2	3,908	DOON2
R4M1	4FR30X30	975,000	900,000	DOON1	3,911	DOON2	3,911	DOON2
R4M1	4FR30X30	1000,000	900,000	DOON1	3,914	DOON2	3,914	DOON2
R4M2	4FR30X30	290,000	900,000	DOON1	3,776	DOON2	3,776	DOON2
R4M2	4FR30X30	975,000	900,000	DOON1	3,783	DOON2	3,783	DOON2
R4M2	4FR30X30	950,000	900,000	DOON1	3,790	DOON2	3,790	DOON2
R4M1	4FR30X30	000,000	900,000	DOON1	0,561	DOON5	1,191	DOON5
R4M1	4FR30X30	000,000	900,000	DOON1	0,563	DOON5	1,194	DOON5
R4M1	4FR30X30	2000,000	900,000	DOON1	0,568	DOON5	1,250	DOON5
R4M2	4FR30X30	000,000	900,000	DOON1	0,562	DOON5	1,065	DOON5
R4M2	4FR30X30	1000,000	900,000	DOON1	0,569	DOON5	1,066	DOON5
R4M2	4FR30X30	3100,000	900,000	DOON1	0,577	DOON5	1,075	DOON5
R4M3	4FR30X30	040,000	900,000	DOON1	0,506	DOON5	0,905	DOON5
R4M3	4FR30X30	3000,000	900,000	DOON1	0,911	DOON5	0,911	DOON5
R4M3	4FR30X30	3500,000	900,000	DOON1	0,916	DOON5	0,916	DOON5
R4M4	4FR30X30	050,000	900,000	DOON1	0,543	DOON5	0,943	DOON5
R4M4	4FR30X30	3000,000	900,000	DOON1	0,948	DOON5	0,948	DOON5
R4M4	4FR30X30	3750,000	900,000	DOON1	0,950	DOON5	0,950	DOON5
R4M5	4FR30X30	050,000	900,000	DOON1	0,585	DOON5	0,965	DOON5
R4M5	4FR30X30	3000,000	900,000	DOON1	0,972	DOON5	0,972	DOON5
R4M5	4FR30X30	3750,000	900,000	DOON1	0,977	DOON5	0,977	DOON5
R4O1	4FR30X30	000,000	900,000	DOON1	0,560	DOON5	1,436	DOON5
R4O1	4FR30X30	1750,000	900,000	DOON1	0,568	DOON5	1,439	DOON5
R4O1	4FR30X30	2300,000	900,000	DOON1	0,566	DOON5	1,428	DOON5
R4O2	4FR30X30	000,000	900,000	DOON1	0,588	DOON5	1,120	DOON5
R4O2	4FR30X30	1000,000	900,000	DOON1	0,583	DOON5	1,104	DOON5
R4O2	4FR30X30	3100,000	900,000	DOON1	0,591	DOON5	1,121	DOON5
R4O3	4FR30X30	050,000	900,000	DOON1	0,910	DOON5	0,918	DOON5
R4O3	4FR30X30	3000,000	900,000	DOON1	0,927	DOON5	0,927	DOON5
R4O3	4FR30X30	3500,000	900,000	DOON1	0,927	DOON5	0,927	DOON5
R4O4	4FR30X30	050,000	900,000	DOON1	0,959	DOON5	0,959	DOON5
R4O4	4FR30X30	3000,000	900,000	DOON1	0,964	DOON5	0,964	DOON5
R4O4	4FR30X30	3750,000	1007,815	DOON5	0,965	DOON5	0,969	DOON5
R4O5	4FR30X30	050,000	900,000	DOON1	0,846	DOON5	0,846	DOON5
R4O5	4FR30X30	3000,000	900,000	DOON1	0,852	DOON5	0,852	DOON5
R4O5	4FR30X30	3750,000	900,000	DOON1	0,859	DOON5	0,859	DOON5
R5A1	R3OX25	000,000	750,000	DOON1	1,234	DOON7	1,200	DOON7
R5A1	R3OX25	1000,000	750,000	DOON1	1,236	DOON7	1,203	DOON7
R5A1	R3OX25	2500,000	750,000	DOON1	1,242	DOON7	1,207	DOON7
R5A2	R3OX25	000,000	750,000	DOON1	0,975	DOON5	0,950	DOON5
R5A2	R3OX25	1000,000	750,000	DOON1	0,987	DOON5	0,988	DOON5
R5A2	R3OX25	3100,000	750,000	DOON1	0,989	DOON5	0,960	DOON5
R5A3	R3OX25	050,000	750,000	DOON1	0,801	DOON3	0,779	DOON3
R5A3	R3OX25	3000,000	750,000	DOON1	0,804	DOON3	0,783	DOON3
R5A3	R3OX25	3800,000	750,000	DOON1	0,810	DOON3	0,787	DOON3
R5A4	R3OX25	050,000	750,000	DOON1	0,808	EM	0,796	EM
R5A4	R3OX25	3000,000	750,000	DOON1	0,812	EM	0,789	EM
R5A4	R3OX25	3750,000	750,000	DOON1	0,816	EM	0,793	EM
R5A5	R3OX25	050,000	750,000	DOON1	0,787	DOON5	0,768	DOON5
R5A5	R3OX25	3000,000	750,000	DOON1	0,795	DOON5	0,777	DOON5
R5A5	R3OX25	3750,000	750,000	DOON1	0,797	DOON5	0,775	DOON5
R5A6	R3OX25	050,000	750,000	DOON1	0,687	DOON5	0,695	DOON5
R5A6	R3OX25	3000,000	750,000	DOON1	0,697	DOON5	0,686	DOON5
R5A6	R3OX25	3750,000	750,000	DOON1	0,697	DOON5	0,685	DOON5
R5A7	R3OX25	050,000	750,000	DOON1	1,003	DOON4	1,011	DOON4
R5A7	R3OX25	1000,000	750,000	DOON1	1,009	DOON4	1,015	DOON4
R5A7	R3OX25	3900,000	750,000	DOON1	1,040	DOON4	1,019	DOON4

K5B1	K30X25	750,000	750,000	DOON1	1,214	EM	1,189	EM
K5B1	K30X25	1350,000	750,000	DOON1	1,214	EM	1,189	EM
K5B1	K30X25	2450,000	750,000	DOON1	1,214	EM	1,189	EM
K5B2	K30X25	750,000	750,000	DOON1	1,152	EM	1,128	EM
K5B2	K30X25	1350,000	750,000	DOON1	1,152	EM	1,128	EM
K5B2	K30X25	2500,000	750,000	DOON1	1,152	EM	1,128	EM
K5B3	K30X25	750,000	750,000	DOON1	0,928	EM	0,911	EM
K5B3	K30X25	1650,000	750,000	DOON1	0,928	EM	0,911	EM
K5B3	K30X25	3050,000	750,000	DOON1	0,928	EM	0,911	EM
K5B4	K30X25	750,000	750,000	DOON1	0,904	EM	0,886	EM
K5B4	K30X25	1650,000	750,000	DOON1	0,904	EM	0,886	EM
K5B4	K30X25	3100,000	750,000	DOON1	0,904	EM	0,886	EM
K5B5	K30X25	750,000	750,000	DOON1	0,722	EM	0,711	EM
K5B5	K30X25	2000,000	750,000	DOON1	0,722	EM	0,711	EM
K5B5	K30X25	3750,000	750,000	DOON1	0,722	EM	0,711	EM
K5B6	K30X25	750,000	750,000	DOON1	0,733	EM	0,719	EM
K5B6	K30X25	2025,000	750,000	DOON1	0,733	EM	0,719	EM
K5B6	K30X25	3800,000	750,000	DOON1	0,733	EM	0,719	EM
K5B7	K30X25	750,000	750,000	DOON1	0,704	EM	0,692	EM
K5B7	K30X25	2000,000	750,000	DOON1	0,704	EM	0,692	EM
K5B7	K30X25	3950,000	750,000	DOON1	0,704	EM	0,692	EM
K5B8	K30X25	750,000	750,000	DOON1	0,825	DOON10	0,801	DOON10
K5B8	K30X25	2060,000	750,000	DOON1	0,722	EM	0,711	EM
K5B8	K30X25	3780,000	750,000	DOON1	0,722	EM	0,711	EM
K5B9	K30X25	750,000	750,000	DOON1	0,823	DOON10	0,799	DOON10
K5B9	K30X25	2000,000	750,000	DOON1	0,815	EM	0,792	EM
K5B9	K30X25	3950,000	750,000	DOON1	0,819	EM	0,796	EM
K5C1	K30X25	750,000	750,000	DOON1	1,243	DOON10	1,218	DOON10
K5C1	K30X25	1350,000	750,000	DOON1	1,247	DOON10	1,212	DOON10
K5C1	K30X25	2500,000	750,000	DOON1	1,251	DOON10	1,215	DOON10
K5C2	K30X25	750,000	750,000	DOON1	0,977	DOON10	0,944	DOON10
K5C2	K30X25	1650,000	750,000	DOON1	0,977	DOON10	0,950	DOON10
K5C2	K30X25	3100,000	750,000	DOON1	0,981	DOON10	0,954	DOON10
K5D1	K30X25	750,000	750,000	DOON1	1,216	DOON10	1,184	DOON10
K5D1	K30X25	1350,000	750,000	DOON1	1,220	DOON10	1,188	DOON10
K5D1	K30X25	2500,000	750,000	DOON1	1,225	DOON10	1,192	DOON10
K5D2	K30X25	750,000	899,414	DOON1	0,945	DOON10	0,944	DOON10
K5D2	K30X25	1650,000	750,000	DOON1	0,970	DOON10	0,947	DOON10
K5D2	K30X25	3100,000	750,000	DOON1	0,974	DOON10	0,951	DOON10
K5D3	K30X25	750,000	750,000	DOON1	1,181	EM	1,154	EM
K5D3	K30X25	1350,000	750,000	DOON1	1,181	EM	1,154	EM
K5D3	K30X25	2500,000	750,000	DOON1	1,181	EM	1,154	EM
K5D4	K30X25	750,000	750,000	DOON1	0,927	EM	0,907	EM
K5D4	K30X25	1550,000	750,000	DOON1	0,928	DOON10	0,907	DOON10
K5D4	K30X25	3100,000	750,000	DOON1	0,932	DOON10	0,911	DOON10
K5D5	K30X25	750,000	750,000	DOON1	0,777	DOON10	0,758	DOON10
K5D5	K30X25	2025,000	750,000	DOON1	0,781	DOON10	0,761	DOON10
K5D5	K30X25	3900,000	750,000	DOON1	0,785	DOON10	0,765	DOON10
K5D6	K30X25	750,000	750,000	DOON1	0,784	DOON10	0,759	DOON10
K5D6	K30X25	2000,000	750,000	DOON1	0,793	DOON10	0,773	DOON10
K5D6	K30X25	3750,000	750,000	DOON1	0,797	DOON10	0,776	DOON10
K5D7	K30X25	750,000	750,000	DOON1	0,820	DOON10	0,794	DOON10
K5D7	K30X25	2000,000	750,000	DOON1	0,824	DOON10	0,800	DOON10
K5D7	K30X25	3750,000	750,000	DOON1	0,825	EM	0,801	EM
K5D8	K30X25	750,000	750,000	DOON1	0,786	DOON10	0,762	DOON10
K5D8	K30X25	2000,000	750,000	DOON1	0,786	DOON10	0,767	DOON10
K5D8	K30X25	3750,000	750,000	DOON1	0,791	DOON10	0,771	DOON10
K5H1	K30X25	750,000	750,000	DOON1	1,181	EM	1,154	EM
K5H1	K30X25	1350,000	750,000	DOON1	1,181	EM	1,154	EM
K5H1	K30X25	2500,000	750,000	DOON1	1,181	EM	1,154	EM
K5H2	K30X25	750,000	870,713	DOON10	0,961	EM	0,930	EM
K5H2	K30X25	1650,000	750,000	DOON1	0,961	EM	0,930	EM
K5H2	K30X25	3100,000	750,000	DOON1	0,961	EM	0,930	EM
K5H3	K30X25	750,000	750,000	DOON1	0,751	EM	0,734	EM
K5H3	K30X25	2025,000	750,000	DOON1	0,751	EM	0,735	EM
K5H3	K30X25	3900,000	750,000	DOON1	0,755	DOON10	0,739	DOON10
K5H4	K30X25	750,000	750,000	DOON1	0,806	DOON10	0,784	DOON10
K5H4	K30X25	2000,000	750,000	DOON1	0,810	DOON10	0,788	DOON10
K5H4	K30X25	3750,000	750,000	DOON1	0,814	DOON10	0,791	DOON10

K5H4	K30X25	250,000	750,000	DCON1	0,817	DCON5	0,794	DCON6
K5H5	K30X25	2000,000	750,000	DCON1	0,821	DCON5	0,798	DCON6
K5H6	K30X25	3750,000	750,000	DCON1	0,826	DCON5	0,802	DCON6
K5H7	K30X25	250,000	750,000	DCON1	0,784	DCON2	0,748	DCON2
K5H8	K30X25	2000,000	750,000	DCON1	0,789	DCON2	0,752	DCON2
K5H9	K30X25	3750,000	750,000	DCON1	0,793	DCON2	0,757	DCON2
K5K1	K30X25	250,000	750,000	DCON1	1,181	EH	1,181	EH
K5K2	K30X25	2000,000	750,000	DCON1	1,181	EH	1,184	EH
K5K3	K30X25	3750,000	750,000	DCON1	1,181	EH	1,184	EH
K5K4	K30X25	250,000	750,000	DCON1	0,927	EH	0,907	EH
K5K5	K30X25	2000,000	750,000	DCON1	0,937	EH	0,907	EH
K5K6	K30X25	3750,000	750,000	DCON1	0,938	DCON10	0,902	DCON10
K5K7	K30X25	250,000	750,000	DCON1	0,786	DCON10	0,787	DCON10
K5K8	K30X25	2025,000	750,000	DCON1	0,780	DCON10	0,780	DCON10
K5K9	K30X25	3800,000	750,000	DCON1	0,784	DCON10	0,784	DCON10
K5K10	K30X25	250,000	750,000	DCON1	0,788	DCON10	0,788	DCON10
K5K11	K30X25	2000,000	750,000	DCON1	0,793	DCON10	0,792	DCON10
K5K12	K30X25	3750,000	750,000	DCON1	0,795	DCON10	0,795	DCON10
K5K13	K30X25	250,000	750,000	DCON1	0,824	DCON5	0,800	DCON6
K5K14	K30X25	2000,000	750,000	DCON1	0,828	EH	0,802	EH
K5K15	K30X25	3750,000	750,000	DCON1	0,817	DCON7	0,794	DCON7
K5K16	K30X25	250,000	750,000	DCON1	0,777	DCON2	0,769	DCON2
K5K17	K30X25	2000,000	750,000	DCON1	0,783	DCON2	0,764	DCON2
K5K18	K30X25	3750,000	750,000	DCON1	0,788	DCON2	0,769	DCON2
K5M1	K30X25	250,000	750,000	DCON1	1,251	DCON3	1,215	DCON3
K5M2	K30X25	2000,000	750,000	DCON1	1,255	DCON3	1,218	DCON3
K5M3	K30X25	2500,000	750,000	DCON1	1,257	DCON4	1,176	DCON4
K5M4	K30X25	250,000	750,000	DCON1	0,987	DCON5	0,969	DCON5
K5M5	K30X25	2000,000	750,000	DCON1	0,987	DCON5	0,969	DCON5
K5M6	K30X25	3750,000	750,000	DCON1	0,981	DCON5	0,967	DCON5
K5N1	K30X25	250,000	750,000	DCON1	1,251	EH	1,215	EH
K5N2	K30X25	2000,000	750,000	DCON1	1,255	EH	1,218	EH
K5N3	K30X25	2500,000	750,000	DCON1	1,257	DCON5	1,202	DCON5
K5O1	K30X25	250,000	750,000	DCON1	0,929	DCON5	0,902	DCON5
K5O2	K30X25	2000,000	750,000	DCON1	0,934	DCON5	0,906	DCON5
K5O3	K30X25	3750,000	750,000	DCON1	0,938	DCON5	0,906	DCON5
K5P1	K30X25	250,000	750,000	DCON1	1,254	DCON6	1,217	DCON6
K5P2	K30X25	2000,000	750,000	DCON1	1,134	EH	1,113	EH
K5P3	K30X25	2500,000	750,000	DCON1	1,134	EH	1,113	EH
K5P4	K30X25	250,000	750,000	DCON1	0,977	DCON6	0,950	DCON6
K5P5	K30X25	2000,000	750,000	DCON1	0,981	DCON6	0,954	DCON6
K5P6	K30X25	3750,000	750,000	DCON1	0,986	DCON6	0,958	DCON6
K5P7	K30X25	250,000	750,000	DCON1	0,790	DCON6	0,769	DCON6
K5P8	K30X25	2025,000	750,000	DCON1	0,793	DCON6	0,773	DCON6
K5P9	K30X25	3800,000	750,000	DCON1	0,799	DCON6	0,777	DCON6
K5P10	K30X25	250,000	750,000	DCON1	0,794	DCON6	0,773	DCON6
K5P11	K30X25	2000,000	750,000	DCON1	0,797	DCON6	0,777	DCON6
K5P12	K30X25	3750,000	750,000	DCON1	0,800	DCON6	0,781	DCON6
K5P13	K30X25	250,000	750,000	DCON1	0,813	DCON3	0,790	DCON3
K5P14	K30X25	2000,000	750,000	DCON1	0,818	DCON1	0,795	DCON1
K5P15	K30X25	3750,000	750,000	DCON1	0,824	DCON1	0,800	DCON1
K5P16	K30X25	250,000	750,000	DCON1	0,238	DCON2	0,225	DCON2
K5P17	K30X25	2000,000	750,000	DCON1	0,743	DCON2	0,730	DCON2
K5P18	K30X25	3750,000	750,000	DCON1	0,743	DCON2	0,734	DCON2
K5H1	6K30X50	250,000	1500,000	DCON1	2,308	DCON4	1,399	DCON4
K5H2	6K30X50	1300,000	1500,000	DCON1	2,308	DCON4	1,397	DCON4
K5H3	6K30X50	2350,000	1500,000	DCON2	2,307	DCON4	1,396	DCON4
K5H4	6K30X50	250,000	1500,000	DCON1	2,043	EH	2,136	EH
K5H5	6K30X50	1300,000	1500,000	DCON1	2,043	EH	2,136	EH
K5H6	6K30X50	2350,000	1500,000	DCON1	2,043	EH	2,136	EH
K5H7	6K30X50	250,000	1500,000	DCON1	1,518	EH	1,598	EH
K5H8	6K30X50	2000,000	1500,000	DCON1	1,518	EH	1,598	EH
K5H9	6K30X50	3650,000	1500,000	DCON1	1,518	EH	1,598	EH
K5H10	6K30X50	250,000	1500,000	DCON1	0,115	DCON3	1,392	DCON3
K5H11	6K30X50	450,000	1500,000	DCON1	0,115	DCON3	1,392	DCON3
K5H12	6K30X50	850,000	1500,000	DCON1	0,114	DCON3	1,391	DCON3
K5H13	6K30X50	250,000	1500,000	DCON1	2,096	EH	2,631	EH
K5H14	6K30X50	1550,000	1500,000	DCON1	2,096	EH	2,631	EH

K644	6K30X50	2750,000	1452,844	DCOM4	0,000	EH	2,491	EH
K645	6K30X50	250,000	2103,844	DCOM4	0,000	DCOM1	1,707	DCOM5
K646	6K30X50	450,000	1747,494	DCOM4	0,000	DCOM1	1,707	DCOM5
K647	6K30X50	650,000	1391,000	DCOM1	0,000	DCOM1	1,004	DCOM5
K647	6K30X50	350,000	1500,000	DCOM1	0,904	DCOM2	2,363	DCOM2
K647	6K30X50	1550,000	1500,000	DCOM1	0,927	DCOM2	2,373	DCOM2
K647	6K30X50	1750,000	1500,000	DCOM5	0,491	DCOM2	2,344	DCOM2
K648	6K30X50	100,000	1500,000	DCOM1	0,786	DCOM1	1,778	DCOM1
K648	6K30X50	1500,000	1500,000	DCOM1	0,782	DCOM1	1,790	DCOM1
K648	6K30X50	2940,000	1500,000	DCOM1	0,298	DCOM1	1,007	DCOM1
K649	6K30X50	250,000	1500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K649	6K30X50	370,000	1500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K649	6K30X50	490,000	1500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K651	6K30X50	250,000	1500,000	DCOM1	0,908	DCOM2	1,398	DCOM5
K651	6K30X50	1300,000	1500,000	DCOM1	2,306	DCOM2	1,397	DCOM5
K651	6K30X50	2350,000	1500,000	DCOM1	2,307	DCOM2	1,395	DCOM5
K652	6K30X50	350,000	1500,000	DCOM1	2,043	EH	2,136	EH
K652	6K30X50	1650,000	1500,000	DCOM1	2,043	EH	2,136	EH
K652	6K30X50	2950,000	1500,000	DCOM1	2,043	EH	2,136	EH
K653	6K30X50	350,000	1500,000	DCOM1	1,518	EH	1,598	EH
K653	6K30X50	2000,000	1500,000	DCOM1	1,518	EH	1,598	EH
K653	6K30X50	3550,000	1500,000	DCOM1	1,518	EH	1,598	EH
K654	6K30X50	280,000	1500,000	DCOM1	0,047	DCOM5	1,465	DCOM5
K654	6K30X50	450,000	1500,000	DCOM1	0,048	DCOM5	1,464	DCOM5
K654	6K30X50	650,000	1500,000	DCOM1	0,048	DCOM5	1,463	DCOM5
K655	6K30X50	350,000	1500,000	DCOM1	1,973	EH	2,542	EH
K655	6K30X50	1550,000	1500,000	DCOM1	1,973	EH	2,542	EH
K655	6K30X50	2950,000	2465,128	DCOM1	1,973	EH	2,542	EH
K656	6K30X50	240,000	1163,291	DCOM5	0,000	DCOM1	1,699	DCOM5
K656	6K30X50	480,000	1702,129	DCOM5	0,000	DCOM1	1,698	DCOM5
K656	6K30X50	650,000	1500,000	DCOM1	0,000	DCOM1	1,697	DCOM5
K657	6K30X50	350,000	1500,000	DCOM1	0,925	DCOM2	2,365	DCOM2
K657	6K30X50	1550,000	1500,000	DCOM1	0,928	DCOM2	2,376	DCOM2
K657	6K30X50	2750,000	1500,000	DCOM1	0,922	DCOM2	2,385	DCOM2
K658	6K30X50	200,000	1500,000	DCOM1	0,786	DCOM1	1,778	DCOM1
K658	6K30X50	1550,000	1500,000	DCOM1	0,782	DCOM1	1,790	DCOM1
K658	6K30X50	2940,000	1500,000	DCOM1	0,786	DCOM1	1,802	DCOM1
K659	6K30X50	250,000	1500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K659	6K30X50	370,000	1500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K659	6K30X50	490,000	1500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K1H10	1K50X50	150,000	2500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K1H10	1K50X50	320,000	2500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K1H10	1K50X50	490,000	2500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K1H11	1K50X50	250,000	2500,000	DCOM1	3,986	EH	3,986	EH
K1H11	1K50X50	1300,000	2500,000	DCOM1	3,986	EH	3,986	EH
K1H11	1K50X50	2350,000	2500,000	DCOM1	3,986	EH	3,986	EH
K1H12	1K50X50	380,000	2500,000	DCOM1	3,276	EH	3,276	EH
K1H12	1K50X50	1550,000	2500,000	DCOM1	3,279	EH	3,276	EH
K1H12	1K50X50	2950,000	2822,245	DCOM7	3,276	EH	3,276	EH
K1H13	1K50X50	350,000	4986,887	DCOM3	4,159	EH	4,159	EH
K1H13	1K50X50	2000,000	2500,000	DCOM1	4,159	EH	4,159	EH
K1H13	1K50X50	3650,000	4980,837	DCOM3	4,159	EH	4,159	EH
K1H14	1K50X50	350,000	3775,738	DCOM3	3,216	EH	3,216	EH
K1H14	1K50X50	2000,000	2500,000	DCOM1	3,216	EH	3,216	EH
K1H14	1K50X50	3650,000	3653,391	DCOM3	3,216	EH	3,216	EH
K1H15	1K50X50	350,000	2500,000	DCOM1	2,793	DCOM8	2,793	DCOM8
K1H15	1K50X50	3000,000	2500,000	DCOM1	2,804	DCOM8	2,804	DCOM8
K1H15	1K50X50	3650,000	2600,000	DCOM1	2,785	DCOM7	2,785	DCOM7
K1H16	1K50X50	250,000	2500,000	DCOM1	2,558	DCOM2	2,558	DCOM2
K1H16	1K50X50	1950,000	2500,000	DCOM1	2,577	DCOM2	2,577	DCOM2
K1H16	1K50X50	3650,000	2500,000	DCOM1	2,594	DCOM2	2,594	DCOM2
K1J10	1K50X50	150,000	2500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K1J10	1K50X50	320,000	2500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K1J10	1K50X50	490,000	2500,000	DCOM1	0,000	DCOM1	0,000	DCOM1
K1J11	1K50X50	250,000	2500,000	DCOM1	3,986	EH	3,986	EH
K1J11	1K50X50	1300,000	2500,000	DCOM1	3,986	EH	3,986	EH
K1J11	1K50X50	2350,000	2500,000	DCOM1	3,986	EH	3,986	EH
K1J12	1K50X50	350,000	2500,000	DCOM1	3,347	EH	3,347	EH

K1312	1K50X50	1850,000	3470,000	DOON3	3,347	BH	3,347	BH
K1312	1K50X50	3950,000	3029,743	DOON3	3,347	BH	3,347	BH
K1313	1K50X50	350,000	3358,333	DOON4	4,407	BH	4,407	BH
K1313	1K50X50	3000,000	3358,333	DOON4	4,407	BH	4,407	BH
K1313	1K50X50	3550,000	3347,313	DOON4	4,407	BH	4,407	BH
K1314	1K50X50	350,000	3969,201	DOON4	3,355	BH	3,355	BH
K1314	1K50X50	3000,000	3969,201	DOON4	3,355	BH	3,355	BH
K1314	1K50X50	3550,000	3917,355	DOON4	3,355	BH	3,355	BH
K1315	1K50X50	350,000	2500,000	DOON1	2,794	DOON7	2,794	DOON7
K1315	1K50X50	3000,000	2500,000	DOON1	2,794	DOON7	2,794	DOON7
K1315	1K50X50	3550,000	2500,000	DOON1	2,794	DOON8	2,794	DOON8
K1316	1K50X50	350,000	3400,000	DOON1	2,548	DOON1	2,548	DOON2
K1316	1K50X50	3450,000	3400,000	DOON1	2,547	DOON2	2,547	DOON2
K1316	1K50X50	3550,000	2500,000	DOON1	2,547	DOON1	2,547	DOON2
K2A10	KB50X45	350,000	2250,000	DOON1	2,489	DOON1	2,489	DOON1
K2A10	KB50X45	3450,000	2250,000	DOON1	2,485	DOON1	2,485	DOON1
K2A10	KB50X45	3550,000	2250,000	DOON1	2,521	DOON1	2,500	DOON1
K2A11	KB50X45	200,000	2250,000	DOON1	2,533	DOON1	2,534	DOON1
K2A11	KB50X45	1550,000	2250,000	DOON1	2,535	DOON1	2,534	DOON1
K2A11	KB50X45	2550,000	2250,000	DOON1	2,536	DOON1	2,574	DOON1
K2A12	KB50X45	200,000	2250,000	DOON1	2,536	DOON1	2,535	DOON1
K2A12	KB50X45	1550,000	2250,000	DOON1	2,536	DOON1	2,535	DOON1
K2A12	KB50X45	2550,000	2250,000	DOON1	2,537	DOON1	2,535	DOON1
K2A13	KB50X45	350,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1
K2A13	KB50X45	340,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1
K2A13	KB50X45	490,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1
K2C10	KB50X45	350,000	2250,000	DOON1	2,500	BH	2,480	BH
K2C10	KB50X45	3000,000	2250,000	DOON1	2,511	BH	2,491	BH
K2C10	KB50X45	3550,000	2250,000	DOON1	2,523	BH	2,502	BH
K2C11	KB50X45	200,000	2250,000	DOON1	2,732	DOON2	2,699	DOON1
K2C11	KB50X45	1550,000	2250,000	DOON1	2,740	DOON2	2,716	DOON2
K2C11	KB50X45	2550,000	2250,000	DOON1	2,757	DOON2	2,733	DOON2
K2C12	KB50X45	350,000	2250,000	DOON1	3,325	BH	3,732	BH
K2C12	KB50X45	1550,000	2250,000	DOON1	3,325	BH	3,732	BH
K2C12	KB50X45	2550,000	2250,000	DOON1	3,325	BH	3,732	BH
K2C13	KB50X45	350,000	2250,000	DOON1	3,007	BH	2,961	BH
K2C13	KB50X45	1550,000	2250,000	DOON1	3,007	BH	2,991	BH
K2C13	KB50X45	2550,000	2250,000	DOON1	3,007	BH	2,961	BH
K2C14	KB50X45	350,000	2250,000	DOON1	2,303	BH	2,284	BH
K2C14	KB50X45	3000,000	2250,000	DOON1	2,303	BH	2,284	BH
K2C14	KB50X45	3550,000	2250,000	DOON1	2,303	BH	2,284	BH
K2C15	KB50X45	350,000	2250,000	DOON1	2,218	BH	2,200	BH
K2C15	KB50X45	3000,000	2250,000	DOON1	2,218	BH	2,200	BH
K2C15	KB50X45	3550,000	2250,000	DOON1	2,218	BH	2,200	BH
K2C16	KB50X45	350,000	2250,000	DOON1	2,503	DOON10	2,482	DOON10
K2C16	KB50X45	3000,000	2250,000	DOON1	2,513	DOON10	2,492	DOON10
K2C16	KB50X45	3550,000	2250,000	DOON1	2,513	DOON10	2,502	DOON10
K2C17	KB50X45	300,000	2250,000	DOON1	2,815	DOON2	2,791	DOON2
K2C17	KB50X45	1550,000	2250,000	DOON1	2,837	DOON2	2,808	DOON2
K2C17	KB50X45	2550,000	2250,000	DOON1	2,850	DOON2	2,825	DOON2
K2C18	KB50X45	250,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1
K2C18	KB50X45	340,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1
K2C18	KB50X45	490,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1
K2D10	KB50X45	350,000	2250,000	DOON1	2,493	BH	2,473	BH
K2D10	KB50X45	3000,000	2250,000	DOON1	2,493	BH	2,473	BH
K2D10	KB50X45	3550,000	2250,000	DOON1	2,493	BH	2,473	BH
K2D11	KB50X45	350,000	2250,000	DOON1	2,354	BH	2,333	BH
K2D11	KB50X45	3000,000	2250,000	DOON1	2,354	BH	2,333	BH
K2D11	KB50X45	3550,000	2250,000	DOON1	2,354	BH	2,333	BH
K2D12	KB50X45	350,000	2250,000	DOON1	2,213	BH	2,194	BH
K2D12	KB50X45	3000,000	2250,000	DOON1	2,213	BH	2,194	BH
K2D12	KB50X45	3550,000	2250,000	DOON1	2,213	BH	2,194	BH
K2D25	KB50X45	200,000	2250,000	DOON1	3,019	DOON2	2,994	DOON2
K2D25	KB50X45	1550,000	2250,000	DOON1	3,033	DOON2	3,007	DOON2
K2D25	KB50X45	2550,000	2250,000	DOON1	2,996	DOON1	2,972	DOON1
K2D27	KB50X45	250,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1
K2D27	KB50X45	340,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1
K2D27	KB50X45	490,000	2250,000	DOON1	0,000	DOON1	0,000	DOON1

K2F10	KB50X45	350,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2F10	KB50X45	2000,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2F10	KB50X45	3550,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2F11	KB50X45	350,000	2250,000	D-COM1	2,199	BH	2,199	BH
K2F11	KB50X45	2000,000	2250,000	D-COM1	2,199	BH	2,199	BH
K2F11	KB50X45	3550,000	2250,000	D-COM1	2,199	BH	2,199	BH
K2F12	KB50X45	350,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2F12	KB50X45	2000,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2F12	KB50X45	3550,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2G10	KB50X45	350,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2G10	KB50X45	2000,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2G10	KB50X45	3550,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2G11	KB50X45	350,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2G11	KB50X45	2000,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2G11	KB50X45	3550,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2G12	KB50X45	350,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2G12	KB50X45	2000,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2G12	KB50X45	3550,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2K10	KB50X45	350,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2K10	KB50X45	2000,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2K10	KB50X45	3550,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2K11	KB50X45	350,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2K11	KB50X45	2000,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2K11	KB50X45	3550,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2K12	KB50X45	350,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2K12	KB50X45	2000,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2K12	KB50X45	3550,000	2250,000	D-COM1	2,399	D-COM2	2,399	D-COM2
K2L10	KB50X45	350,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L10	KB50X45	2000,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L10	KB50X45	3550,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L11	KB50X45	350,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L11	KB50X45	2000,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L11	KB50X45	3550,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L12	KB50X45	350,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L12	KB50X45	2000,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L12	KB50X45	3550,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2L13	KB50X45	350,000	2250,000	D-COM1	2,499	D-COM2	2,499	D-COM2
K2L13	KB50X45	2000,000	2250,000	D-COM1	2,499	D-COM2	2,499	D-COM2
K2L13	KB50X45	3550,000	2250,000	D-COM1	2,499	D-COM2	2,499	D-COM2
K2M10	KB50X45	350,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2M10	KB50X45	2000,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2M10	KB50X45	3550,000	2250,000	D-COM1	2,499	BH	2,499	BH
K2M11	KB50X45	350,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2M11	KB50X45	2000,000	2250,000	D-COM1	2,399	BH	2,399	BH
K2M11	KB50X45	3550,000	2250,000	D-COM1	2,399	BH	2,399	BH

K2014	KB50X45	250,000	2250,000	DCON1	0,177	EH	0,182	EH
K2015	KB50X45	2000,000	2250,000	DCON1	0,172	EH	0,182	EH
K2016	KB50X45	3650,000	2250,000	DCON1	0,177	EH	0,182	EH
K2017	KB50X45	250,000	2250,000	DCON1	0,164	EH	0,146	EH
K2018	KB50X45	2000,000	2250,000	DCON1	0,164	EH	0,146	EH
K2019	KB50X45	3650,000	2250,000	DCON1	0,164	EH	0,146	EH
K2017	KB50X45	250,000	2250,000	DCON1	1,400	DCON2	0,283	DCON2
K2017	KB50X45	1500,000	2250,000	DCON1	2,315	DCON2	0,900	DCON2
K2017	KB50X45	2950,000	2250,000	DCON1	2,343	DCON2	0,917	DCON2
K2019	KB50X45	250,000	2250,000	DCON1	0,000	DCON1	0,000	DCON1
K2019	KB50X45	2000,000	2250,000	DCON1	0,000	DCON1	0,000	DCON1
K2019	KB50X45	490,000	2250,000	DCON1	0,000	DCON1	0,000	DCON1
K2P10	KB50X45	350,000	2250,000	DCON1	0,465	DCON10	0,465	DCON10
K2P10	KB50X45	2000,000	2250,000	DCON1	0,469	DCON10	0,447	DCON10
K2P10	KB50X45	3650,000	2250,000	DCON1	0,462	DCON10	0,460	DCON10
K2P11	KB50X45	350,000	2250,000	DCON1	0,510	DCON2	0,490	DCON2
K2P11	KB50X45	2000,000	2250,000	DCON1	0,516	DCON2	0,505	DCON2
K2P11	KB50X45	3650,000	2250,000	DCON1	0,540	DCON2	0,516	DCON2
K2P12	KB50X45	250,000	2250,000	DCON1	0,533	DCON1	0,412	DCON1
K2P12	KB50X45	1500,000	2250,000	DCON1	2,553	DCON1	2,437	DCON1
K2P12	KB50X45	2950,000	2250,000	DCON1	2,580	DCON1	2,557	DCON1
K2P13	KB50X45	250,000	2250,000	DCON1	0,000	DCON1	0,000	DCON1
K2P13	KB50X45	2000,000	2250,000	DCON1	0,000	DCON1	0,000	DCON1
K2P13	KB50X45	490,000	2250,000	DCON1	0,000	DCON1	0,000	DCON1
K3A10	KB45X45	250,000	2025,000	DCON1	0,148	DCON10	0,148	DCON10
K3A10	KB45X45	2000,000	2025,000	DCON1	0,145	DCON4	0,145	DCON4
K3A10	KB45X45	3750,000	2025,000	DCON1	0,156	DCON4	0,156	DCON4
K3A11	KB45X45	250,000	2025,000	DCON1	0,212	DCON1	0,212	DCON1
K3A11	KB45X45	1725,000	2025,000	DCON1	2,235	DCON1	2,235	DCON1
K3A11	KB45X45	3250,000	2025,000	DCON1	2,253	DCON1	2,253	DCON1
K3A12	KB45X45	250,000	2025,000	DCON1	0,563	DCON1	0,563	DCON1
K3A12	KB45X45	1405,000	2025,000	DCON1	2,549	DCON1	2,549	DCON1
K3A12	KB45X45	2510,000	2025,000	DCON1	2,561	DCON1	2,561	DCON1
K5B10	K30X25	250,000	750,000	DCON1	0,835	EH	0,802	EH
K5B10	K30X25	2000,000	750,000	DCON1	0,815	DCON3	0,792	DCON3
K5B10	K30X25	3750,000	750,000	DCON1	0,819	DCON3	0,796	DCON3
K5B11	K30X25	250,000	750,000	DCON1	0,920	DCON1	0,907	DCON1
K5B11	K30X25	1620,000	750,000	DCON1	0,926	DCON1	0,907	DCON1
K5B11	K30X25	3050,000	750,000	DCON1	0,932	DCON1	0,913	DCON1
K5B12	K30X25	250,000	750,000	DCON1	0,753	DCON2	0,738	DCON2
K5B12	K30X25	2000,000	750,000	DCON1	0,758	DCON2	0,743	DCON2
K5B12	K30X25	3750,000	750,000	DCON1	0,764	DCON2	0,747	DCON2
K5J17	K30X25	250,000	750,000	DCON1	1,181	EH	1,154	EH
K5J17	K30X25	1350,000	750,000	DCON1	1,181	EH	1,154	EH
K5J17	K30X25	2500,000	750,000	DCON1	1,181	EH	1,154	EH
K5J18	K30X25	250,000	750,000	DCON10	0,935	EH	0,933	EH
K5J18	K30X25	1650,000	750,000	DCON1	0,935	EH	0,933	EH
K5J19	K30X25	3100,000	750,000	DCON1	0,935	EH	0,933	EH
K5J19	K30X25	250,000	750,000	DCON1	0,751	EH	0,736	EH
K5J19	K30X25	2025,000	750,000	DCON1	0,751	EH	0,736	EH
K5J19	K30X25	3800,000	750,000	DCON1	0,755	DCON10	0,739	DCON10
K5J20	K30X25	250,000	750,000	DCON1	0,807	DCON10	0,785	DCON10
K5J20	K30X25	2000,000	750,000	DCON1	0,811	DCON10	0,789	DCON10
K5J20	K30X25	3750,000	750,000	DCON1	0,815	DCON10	0,792	DCON10
K5J21	K30X25	250,000	750,000	DCON1	0,818	DCON5	0,795	DCON5
K5J21	K30X25	2000,000	750,000	DCON1	0,823	DCON6	0,799	DCON6
K5J21	K30X25	3750,000	750,000	DCON1	0,799	EH	0,778	EH
K5J22	K30X25	250,000	750,000	DCON1	0,767	DCON2	0,750	DCON2
K5J22	K30X25	2000,000	750,000	DCON1	0,772	DCON2	0,755	DCON2
K5J22	K30X25	3750,000	750,000	DCON1	0,777	DCON2	0,759	DCON2

SAV2000 v7.42 File: CTR -New Paths PAGE 9
10/20/03 19:00:51

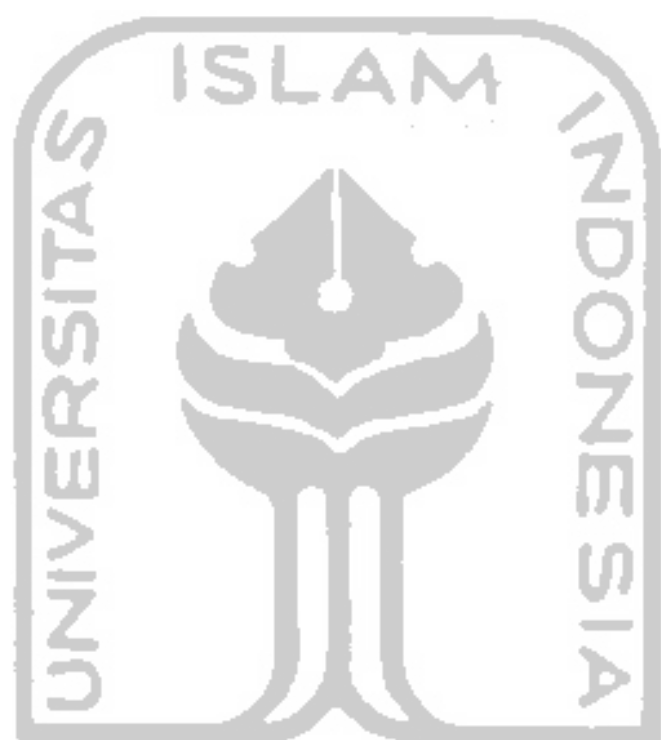
Zone1 & 2a
Kangas D3 Rhombus HTT

CONCRETE DESIGN OUTPUT (ACI 318-99)

REINFORC AND STRAP DESIGN OF BEAM-TYPE ELEMENTS

PIEH ID	SECTION ID	STATION ID	-----PROFILES-----						COMBO
			TOP	COMBO	BOTTOM	COMBO	SHEAR	COMBO	
1B1	B130X50	225,000	158,164	DOON1	78,813	DOON1	0,112	EH	
1B1	B130X50	2400,000	88,140	DOON1	98,925	DOON1	0,112	EH	
1B1	B130X50	4275,000	158,164	DOON1	78,813	DOON1	0,112	EH	
1B2	B130X50	0,000	78,813	DOON1	16,643	DOON1	0,080	EH	
1B2	B130X50	2387,500	26,488	DOON1	55,247	DOON1	0,080	EH	
1B2	B130X50	4275,000	106,719	DOON1	53,237	DOON1	0,080	EH	
1B3	B130X50	0,000	35,310	DOON1	16,643	DOON1	0,080	EH	
1B3	B130X50	2387,500	26,488	DOON1	55,247	DOON1	0,080	EH	
1B3	B130X50	4275,000	106,719	DOON1	53,237	DOON1	0,080	EH	
1B4	B130X50	275,000	57,212	DOON1	28,571	DOON1	0,066	EH	
1B4	B130X50	2250,000	14,277	DOON1	39,975	DOON1	0,066	EH	
1B4	B130X50	4275,000	57,212	DOON1	28,571	DOON1	0,066	EH	
1B5	B130X50	225,000	57,212	DOON1	28,571	DOON1	0,066	EH	
1B5	B130X50	2250,000	14,277	DOON1	39,975	DOON1	0,066	EH	
1B5	B130X50	4275,000	57,212	DOON1	28,571	DOON1	0,066	EH	
1B6	B130X50	225,000	57,212	DOON1	28,571	DOON1	0,066	EH	
1B6	B130X50	2250,000	14,277	DOON1	39,975	DOON1	0,066	EH	
1B6	B130X50	4275,000	57,212	DOON1	28,571	DOON1	0,066	EH	
1B7	B130X50	250,000	54,823	DOON1	27,378	DOON1	0,065	EH	
1B7	B130X50	2257,500	14,277	DOON1	39,975	DOON1	0,065	EH	
1B7	B130X50	4275,000	57,212	DOON1	28,571	DOON1	0,065	EH	
1B8	B130X50	0,000	0,000	DOON1	31,491	DOON1	0,140	EH	
1B8	B130X50	275,000	28,242	DOON1	27,663	DOON1	0,140	EH	
1B8	B130X50	250,000	28,242	DOON1	45,371	DOON1	0,140	EH	
1B9	B130X50	225,000	71,206	DOON1	35,549	DOON1	0,114	DOON10	
1B9	B130X50	1887,500	17,741	DOON1	41,884	DOON1	0,139	DOON10	
1B9	B130X50	3500,000	0,000	DOON1	27,207	DOON1	0,156	DOON10	
1C1	B25X40	250,000	9,600	DOON1	4,799	DOON1	0,028	EH	
1C1	B25X40	1300,000	3,450	DOON1	10,385	DOON1	0,028	EH	
1C1	B25X40	2350,000	13,811	DOON1	6,902	DOON1	0,028	EH	
1C2	B25X40	250,000	9,600	DOON1	4,799	DOON1	0,028	EH	
1C2	B25X40	1300,000	3,450	DOON1	10,385	DOON1	0,028	EH	
1C2	B25X40	2350,000	13,811	DOON1	6,902	DOON1	0,028	EH	
1C3	B25X40	250,000	9,600	DOON1	4,799	DOON1	0,028	EH	
1C3	B25X40	1300,000	3,450	DOON1	10,385	DOON1	0,028	EH	
1C3	B25X40	2350,000	13,811	DOON1	6,902	DOON1	0,028	EH	
1C4	B25X40	250,000	9,600	DOON1	4,799	DOON1	0,028	EH	
1C4	B25X40	1300,000	3,450	DOON1	10,385	DOON1	0,028	EH	
1C4	B25X40	2350,000	13,811	DOON1	6,902	DOON1	0,028	EH	
1C5	B25X40	250,000	12,733	DOON1	6,364	DOON1	0,032	EH	
1C5	B25X40	1325,000	4,358	DOON1	12,578	DOON1	0,032	EH	
1C5	B25X40	2600,000	17,448	DOON1	8,719	DOON1	0,032	EH	
1C6	B25X40	150,000	17,448	DOON1	8,719	DOON1	0,032	EH	
1C6	B25X40	1325,000	4,358	DOON1	12,578	DOON1	0,032	EH	
1C6	B25X40	2600,000	17,448	DOON1	8,719	DOON1	0,032	EH	
1C7	B25X40	250,000	12,733	DOON1	6,364	DOON1	0,032	EH	
1C7	B25X40	1325,000	4,358	DOON1	12,578	DOON1	0,032	EH	
1C7	B25X40	2600,000	17,448	DOON1	8,719	DOON1	0,032	EH	
1C8	B25X40	150,000	17,448	DOON1	8,719	DOON1	0,032	EH	
1C8	B25X40	1325,000	4,358	DOON1	12,578	DOON1	0,032	EH	
1C8	B25X40	2600,000	17,448	DOON1	8,719	DOON1	0,032	EH	
1C9	B25X40	150,000	17,448	DOON1	8,719	DOON1	0,032	EH	
1C9	B25X40	1325,000	4,358	DOON1	12,578	DOON1	0,032	EH	
1C9	B25X40	2500,000	12,733	DOON1	6,364	DOON1	0,032	EH	
2A1	B145X70	250,000	1011,807	DOON6	1006,666	DOON5	1,834	DOON2	
2A1	B145X70	1625,000	387,857	DOON6	653,125	DOON5	1,442	DOON2	
2A1	B145X70	3000,000	0,000	DOON1	302,765	DOON2	1,429	DOON2	
2A2	B145X70	250,000	1955,329	DOON6	1003,749	DOON2	2,390	EH	
2A2	B145X70	1625,000	803,337	DOON6	496,770	DOON2	2,174	EH	
2A2	B145X70	3000,000	0,000	DOON1	1053,443	DOON5	1,987	EH	
2A3	B145X70	250,000	2164,049	DOON6	1044,141	DOON6	3,582	EH	
2A3	B145X70	1625,000	403,256	DOON6	733,268	DOON6	3,262	EH	
2A3	B145X70	3000,000	0,000	DOON1	1230,823	DOON5	2,179	EH	
2A4	B145X70	250,000	1987,929	DOON6	1011,143	DOON6	3,360	EH	
2A4	B145X70	1625,000	858,691	DOON6	759,520	DOON6	2,144	EH	
2A4	B145X70	3000,000	0,000	DOON1	1142,436	DOON5	1,958	EH	

2A5	BT45X70	0,000,000	1150,143	DCOM5	1011,143	DCOM5	1,443	DCOM5
2A5	BT45X70	1625,000	804,368	DCOM6	809,773	DCOM5	1,093	DCOM2
2A5	BT45X70	3000,000	0,000	DCOM1	594,567	DCOM2	1,919	DCOM1
2A6	BT45X70	0,000,000	1481,480	DCOM7	1011,143	DCOM5	0,240	DCOM5
2A6	BT45X70	1612,500	874,407	DCOM6	507,301	DCOM1	4,896	DCOM2
2A6	BT45X70	3000,000	0,000	DCOM1	1011,143	DCOM2	4,991	DCOM2
2A7	BT45X70	0,000,000	1137,079	DCOM7	1011,143	DCOM5	0,458	DCOM5
2A7	BT45X70	1615,000	559,164	DCOM6	982,768	DCOM1	2,098	DCOM2
2A7	BT45X70	3000,000	0,000	DCOM1	104,581	DCOM3	1,910	DCOM1
2A8	BT45X70	0,000,000	1046,197	DCOM6	1011,143	DCOM6	0,364	EM
2A8	BT45X70	1615,000	966,708	DCOM6	767,805	DCOM5	2,148	EM
2A8	BT45X70	3000,000	0,000	DCOM1	1145,821	DCOM4	1,961	EM
2A9	BT45X70	0,000,000	9145,451	DCOM4	1050,418	DCOM6	0,508	EM
2A9	BT45X70	1623,000	918,069	DCOM5	794,967	DCOM5	0,372	EM
2A9	BT45X70	3000,000	0,000	DCOM1	1036,113	DCOM5	1,186	EM
2B1	BT30X50	0,000,000	0,000,000	DCOM3	535,144	DCOM6	0,566	DCOM1
2B1	BT30X50	3500,000	125,143	DCOM3	115,143	DCOM3	0,570	DCOM2
2B1	BT30X50	6775,000	911,740	DCOM4	824,234	DCOM7	0,808	DCOM1
2B2	BT30X50	0,000,000	878,747	DCOM5	245,599	DCOM6	0,479	DCOM1
2B2	BT30X50	2397,500	170,109	DCOM5	170,408	DCOM5	0,550	DCOM1
2B2	BT30X50	4775,000	541,026	DCOM6	474,147	DCOM5	0,720	DCOM1
2B3	BT30X50	0,000,000	858,745	DCOM5	248,317	DCOM6	0,475	DCOM1
2B3	BT30X50	2397,500	177,420	DCOM5	170,590	DCOM6	0,562	DCOM1
2B3	BT30X50	4775,000	545,171	DCOM6	474,147	DCOM5	0,721	DCOM1
2B4	BT30X50	0,000,000	980,693	DCOM3	591,163	DCOM6	1,698	DCOM2
2B4	BT30X50	2150,000	297,981	DCOM3	345,693	DCOM2	1,175	DCOM1
2B4	BT30X50	4275,000	1023,370	DCOM4	683,264	DCOM7	1,896	DCOM2
2B5	BT30X50	0,000,000	929,474	DCOM3	437,970	DCOM6	1,764	DCOM2
2B5	BT30X50	2150,000	281,945	DCOM3	235,731	DCOM1	1,031	EM
2B5	BT30X50	4275,000	877,189	DCOM4	580,325	DCOM7	1,753	DCOM1
2B6	BT30X50	0,000,000	861,066	DCOM3	536,140	DCOM6	1,753	DCOM2
2B6	BT30X50	2150,000	276,859	DCOM3	234,207	DCOM1	1,062	DCOM2
2B6	BT30X50	4275,000	896,135	DCOM4	523,464	DCOM7	1,756	DCOM2
2B7	BT30X50	0,000,000	984,543	DCOM3	589,640	DCOM6	1,820	DCOM7
2B7	BT30X50	2162,500	298,730	DCOM3	298,730	DCOM3	1,126	DCOM2
2B7	BT30X50	4275,000	913,586	DCOM4	543,501	DCOM7	1,845	DCOM2
2B8	BT30X50	0,000,000	474,147	DCOM4	474,147	DCOM3	1,643	DCOM1
2B8	BT30X50	325,000	613,133	DCOM4	561,475	DCOM7	1,245	DCOM1
2B8	BT30X50	760,000	846,961	DCOM4	627,854	DCOM7	1,828	DCOM1
2B9	BT30X50	0,000,000	878,018	DCOM3	573,265	DCOM6	1,619	DCOM1
2B9	BT30X50	1862,500	279,869	DCOM3	279,869	DCOM3	1,415	DCOM1
2B9	BT30X50	3500,000	474,147	DCOM4	518,943	DCOM3	1,531	DCOM1
2C1	B25X40	0,000,000	350,707	DCOM5	311,148	DCOM6	1,035	DCOM1
2C1	B25X40	1300,000	114,189	DCOM5	114,189	DCOM5	1,035	DCOM2
2C1	B25X40	2350,000	311,148	DCOM6	323,737	DCOM5	0,981	DCOM2
2C2	B25X40	0,000,000	442,443	DCOM5	311,148	DCOM5	1,511	DCOM2
2C2	B25X40	1300,000	134,592	DCOM2	174,270	DCOM5	1,457	DCOM2
2C2	B25X40	2350,000	323,541	DCOM10	335,213	DCOM5	1,403	DCOM2
2C3	B25X40	0,000,000	562,403	DCOM5	311,148	DCOM5	1,543	DCOM2
2C3	B25X40	1300,000	134,133	DCOM2	177,345	DCOM5	1,489	DCOM2
2C3	B25X40	2350,000	331,282	DCOM10	340,327	DCOM5	1,434	DCOM2
2C4	B25X40	0,000,000	364,042	DCOM5	311,148	DCOM6	1,133	DCOM1
2C4	B25X40	1300,000	118,429	DCOM5	118,429	DCOM5	1,074	DCOM2
2C4	B25X40	2350,000	317,611	DCOM10	337,954	DCOM5	1,020	DCOM2
2C5	B25X40	0,000,000	396,395	DCOM3	320,828	DCOM3	1,035	EM
2C5	B25X40	2250,000	206,029	DCOM2	311,148	DCOM2	0,770	EM
2C5	B25X40	4500,000	311,430	DCOM4	390,348	DCOM4	1,247	EM
2C6	B25X40	0,000,000	464,841	DCOM3	279,983	DCOM2	0,429	DCOM10
2C6	B25X40	2250,000	148,691	DCOM2	311,148	DCOM2	0,499	DCOM10
2C6	B25X40	4500,000	406,677	DCOM4	340,841	DCOM2	0,905	DCOM10
2C7	B25X40	0,000,000	394,918	DCOM3	280,571	DCOM2	0,901	DCOM10
2C7	B25X40	2250,000	141,953	DCOM2	311,148	DCOM2	0,505	DCOM10
2C7	B25X40	4500,000	476,397	DCOM4	286,715	DCOM2	0,934	DCOM10
2C8	B25X40	0,000,000	444,442	DCOM3	444,442	DCOM3	1,336	EM
2C8	B25X40	2250,000	254,558	DCOM2	277,344	DCOM2	0,828	EM
2C8	B25X40	4500,000	311,148	DCOM4	194,715	DCOM4	1,042	EM
2C9	B25X40	0,000,000	936,765	DCOM4	447,870	DCOM4	1,361	EM
2C9	B25X40	2250,000	258,178	DCOM2	311,148	DCOM2	0,984	EM



الجامعة الإسلامية في إندونيسيا

249	BT4SX70	4500,000	249,173	DOON3	137,854	DOON3	1,031	EH
241	BT4SX70	250,000	1252,842	DOON6	1011,143	DOON6	2,460	DOON2
242	BT4SX70	1625,000	431,437	DOON6	563,925	DOON6	2,171	DOON2
243	BT4SX70	3000,000	0,000	DOON1	334,404	DOON3	1,210	EH
342	BT4SX70	250,000	2127,931	DOON6	1078,718	DOON6	5,713	DOON2
343	BT4SX70	1625,000	1011,143	DOON6	787,838	DOON6	5,351	DOON2
344	BT4SX70	3000,000	0,000	DOON1	1144,438	DOON6	5,001	DOON2
343	BT4SX70	250,000	2456,657	DOON6	1183,803	DOON6	6,324	DOON2
343	BT4SX70	1625,000	1011,143	DOON6	946,507	DOON6	5,351	DOON2
343	BT4SX70	3000,000	0,000	DOON1	1144,438	DOON6	5,351	DOON2
344	BT4SX70	250,000	2456,654	DOON6	1134,827	DOON6	6,610	DOON2
344	BT4SX70	1625,000	1011,143	DOON6	1011,143	DOON6	6,103	DOON2
344	BT4SX70	3000,000	0,000	DOON1	1444,438	DOON6	5,351	DOON2
345	BT4SX70	250,000	1322,664	DOON6	1265,957	DOON3	2,914	DOON2
345	BT4SX70	1625,000	634,032	DOON10	1011,143	DOON6	2,307	DOON2
345	BT4SX70	3000,000	0,000	DOON1	444,438	DOON1	2,353	DOON1
346	BT4SX70	0,000	0,000	DOON1	1011,143	DOON2	2,965	DOON2
346	BT4SX70	1325,000	473,023	DOON2	473,023	DOON2	4,270	DOON2
346	BT4SX70	3000,000	1484,554	DOON6	444,438	DOON2	4,430	DOON2
347	BT4SX70	250,000	1032,871	DOON6	1268,723	DOON6	2,881	DOON2
347	BT4SX70	1625,000	642,160	DOON10	1011,143	DOON6	2,104	DOON2
347	BT4SX70	3000,000	0,000	DOON1	444,438	DOON2	2,354	DOON1
348	BT4SX70	250,000	3470,654	DOON6	1191,608	DOON6	6,637	DOON2
348	BT4SX70	1625,000	1011,143	DOON6	1011,143	DOON6	6,129	DOON2
348	BT4SX70	3000,000	0,000	DOON1	1444,438	DOON6	5,433	DOON2
349	BT4SX70	250,000	2501,792	DOON6	1206,112	DOON6	6,403	DOON2
349	BT4SX70	1625,000	1011,143	DOON6	940,839	DOON6	6,047	DOON2
349	BT4SX70	3000,000	0,000	DOON1	1322,667	DOON6	5,247	DOON2
351	BT30X50	225,000	1241,815	DOON4	616,391	DOON7	2,369	DOON2
351	BT30X50	1625,000	331,170	DOON4	528,529	DOON3	2,935	DOON2
351	BT30X50	3000,000	0,000	DOON1	474,147	DOON3	1,758	DOON2
352	BT30X50	225,000	1213,378	DOON3	532,128	DOON3	2,826	DOON2
352	BT30X50	1625,000	384,371	DOON3	538,770	DOON4	2,002	DOON2
352	BT30X50	3000,000	0,000	DOON1	474,147	DOON2	1,755	DOON2
353	BT30X50	0,000	474,147	DOON6	265,133	DOON5	1,157	DOON2
353	BT30X50	2367,500	173,858	DOON5	455,367	DOON5	0,701	DOON2
353	BT30X50	4275,000	633,615	DOON6	560,590	DOON3	1,147	DOON2
354	BT30X50	0,000	132,344	DOON6	251,191	DOON5	0,964	EH
354	BT30X50	2367,500	300,202	DOON2	315,095	DOON2	0,954	EH
354	BT30X50	4275,000	934,653	DOON2	474,147	DOON2	1,455	EH
355	BT30X50	0,000	474,147	DOON5	285,145	DOON5	1,196	DOON2
355	BT30X50	2367,500	173,795	DOON5	455,623	DOON5	0,700	DOON2
355	BT30X50	4275,000	634,135	DOON6	561,543	DOON3	1,180	DOON2
356	BT30X50	225,000	1077,328	DOON3	589,497	DOON3	2,170	DOON2
356	BT30X50	2250,000	342,051	DOON3	339,134	DOON4	1,511	DOON2
356	BT30X50	4275,000	1243,257	DOON4	904,836	DOON7	2,235	DOON2
357	BT30X50	225,000	1075,838	DOON3	737,297	DOON3	2,021	DOON2
357	BT30X50	2250,000	341,452	DOON3	341,452	DOON3	1,329	DOON1
357	BT30X50	4275,000	1243,978	DOON4	829,507	DOON2	2,550	DOON2
358	BT30X50	225,000	1080,110	DOON3	734,457	DOON3	2,029	DOON2
358	BT30X50	2250,000	342,989	DOON3	342,989	DOON3	1,330	DOON2
358	BT30X50	4275,000	1104,840	DOON4	746,428	DOON2	2,044	DOON2
359	BT30X50	250,000	1269,965	DOON3	390,240	DOON6	2,109	DOON2
359	BT30X50	2262,500	393,490	DOON3	399,490	DOON3	1,486	DOON2
359	BT30X50	4275,000	1153,011	DOON4	791,143	DOON2	2,186	DOON2
361	BT5X20	0,000	271,363	DOON1	129,954	DOON1	0,503	DOON1
361	BT5X20	1500,000	84,880	DOON1	104,942	DOON1	0,340	EH
361	BT5X20	3000,000	113,340	DOON1	74,601	DOON1	0,415	DOON1
362	BT5X20	0,000	270,565	DOON1	129,466	DOON1	0,502	DOON1
362	BT5X20	1500,000	84,568	DOON1	104,989	DOON1	0,340	EH
362	BT5X20	3000,000	113,279	DOON1	74,160	DOON1	0,416	DOON1
441	BT4SX70	250,000	1360,712	DOON6	398,622	DOON6	2,493	DOON2
441	BT4SX70	1625,000	410,064	DOON6	787,227	DOON6	2,250	DOON2
441	BT4SX70	3000,000	0,000	DOON1	635,701	DOON2	2,038	DOON2
442	BT4SX70	250,000	2247,516	DOON6	1087,367	DOON6	2,715	DOON10
442	BT4SX70	1625,000	645,557	DOON6	815,814	DOON6	2,431	DOON10
442	BT4SX70	3000,000	0,000	DOON1	1266,173	DOON6	2,184	DOON10
443	BT4SX70	250,000	2445,505	DOON6	1130,027	DOON6	2,918	DOON10

4A3	BI4SX70	1425,000	957,190	DCOM	1011,143	DCOM5	2,514	DCOM10
4A3	BI4SX70	3000,000	0,000	DCOM1	1330,900	DCOM5	1,337	DCOM10
4A4	BI4SX70	250,000	2084,941	DCOM5	1011,143	DCOM5	2,423	EM
4A4	BI4SX70	1425,000	805,333	DCOM5	1011,143	DCOM5	2,509	EM
4A4	BI4SX70	3000,000	0,000	DCOM1	1262,214	DCOM5	2,020	EM
4A5	BI4SX70	250,000	941,450	DCOM5	1011,143	DCOM5	1,984	DCOM2
4A5	BI4SX70	1425,000	848,746	DCOM10	848,049	DCOM5	1,781	DCOM2
4A5	BI4SX70	3000,000	0,000	DCOM1	257,086	DCOM2	1,709	DCOM1
4A6	BI4SX70	250,000	941,980	DCOM5	1011,143	DCOM5	1,984	DCOM2
4A6	BI4SX70	1425,000	871,117	DCOM10	851,889	DCOM5	1,717	DCOM2
4A6	BI4SX70	3000,000	0,000	DCOM1	354,714	DCOM2	1,712	DCOM1
4A7	BI4SX70	250,000	2086,834	DCOM5	1011,143	DCOM5	2,427	EM
4A7	BI4SX70	1425,000	883,455	DCOM5	1011,143	DCOM5	1,717	EM
4A7	BI4SX70	3000,000	0,000	DCOM1	1330,138	DCOM5	2,030	EM
4A8	BI4SX70	250,000	2436,683	DCOM5	1174,541	DCOM5	2,932	DCOM10
4A8	BI4SX70	1425,000	838,131	DCOM5	1011,143	DCOM5	2,528	DCOM10
4A8	BI4SX70	3000,000	0,000	DCOM1	1536,091	DCOM5	2,301	DCOM10
4A9	BI4SX70	250,000	2003,131	DCOM5	1011,143	DCOM5	2,349	EM
4A9	BI4SX70	1425,000	855,455	DCOM5	867,484	DCOM5	2,133	EM
4A9	BI4SX70	3000,000	0,000	DCOM1	1161,245	DCOM5	1,547	EM
4B1	B30X50	150,000	530,515	DCOM3	342,161	DCOM3	1,071	DCOM2
4B1	B30X50	2250,000	177,765	DCOM3	177,765	DCOM3	0,645	DCOM1
4B1	B30X50	4350,000	605,320	DCOM4	301,566	DCOM3	1,089	DCOM2
4B2	B30X50	150,000	535,308	DCOM4	351,255	DCOM4	1,078	DCOM2
4B2	B30X50	2250,000	194,804	DCOM3	194,804	DCOM3	0,629	DCOM1
4B2	B30X50	4350,000	600,082	DCOM3	392,370	DCOM3	1,031	DCOM2
4B3	B30X50	1200,000	223,777	DCOM5	194,968	DCOM5	1,593	DCOM1
4B3	B30X50	2250,000	400,557	DCOM4	343,101	DCOM5	1,437	DCOM2
4B4	B30X50	150,000	649,719	DCOM5	424,816	DCOM5	1,502	DCOM1
4B4	B30X50	2250,000	438,233	DCOM2	252,837	DCOM5	1,327	DCOM1
4B4	B30X50	4350,000	985,433	DCOM5	474,147	DCOM5	1,754	EM
4B5	B30X50	150,000	653,384	DCOM5	451,005	DCOM5	1,516	DCOM1
4B5	B30X50	2250,000	377,208	DCOM3	236,141	DCOM5	1,342	DCOM1
4B6	B30X50	150,000	673,143	DCOM5	373,512	DCOM5	1,744	DCOM1
4B6	B30X50	2250,000	189,944	DCOM5	207,300	DCOM5	1,507	DCOM1
4B6	B30X50	4350,000	639,732	DCOM5	418,411	DCOM5	1,605	DCOM2
4B7	B130X50	275,000	1033,512	DCOM4	446,038	DCOM7	0,503	DCOM4
4B7	B130X50	512,500	736,037	DCOM4	505,298	DCOM7	0,415	DCOM4
4B7	B130X50	1050,000	474,147	DCOM4	602,406	DCOM3	0,313	DCOM4
4B8	B130X50	275,000	1062,938	DCOM3	444,231	DCOM5	0,227	DCOM5
4B8	B130X50	1050,000	519,583	DCOM3	393,906	DCOM4	1,666	DCOM1
4B8	B130X50	3500,000	474,147	DCOM4	618,496	DCOM3	1,901	DCOM2
4B9	B130X50	275,000	953,459	DCOM3	549,172	DCOM5	1,894	DCOM2
4B9	B130X50	2250,000	304,688	DCOM3	323,599	DCOM4	1,140	DCOM2
4B9	B130X50	4275,000	1016,222	DCOM4	502,810	DCOM7	1,964	DCOM2
4D1	B20X50	0,000	73,234	DCOM4	135,930	DCOM4	0,884	DCOM1
4D1	B20X50	500,000	127,397	DCOM4	57,470	DCOM4	1,031	DCOM1
4D1	B20X50	1000,000	232,463	DCOM4	115,869	DCOM4	1,278	DCOM1
4D2	B20X50	0,000	322,949	DCOM3	212,276	DCOM3	0,501	DCOM1
4D2	B20X50	2250,000	105,414	DCOM3	276,541	DCOM1	0,370	EM
4D2	B20X50	4500,000	334,865	DCOM4	219,990	DCOM4	0,494	DCOM1
4D3	B20X50	0,000	775,075	DCOM3	111,820	DCOM3	1,243	DCOM1
4D3	B20X50	500,000	117,896	DCOM3	55,710	DCOM3	1,050	DCOM1
4D3	B20X50	1000,000	66,803	DCOM1	33,330	DCOM1	0,853	DCOM1
4D4	B20X50	0,000	231,006	DCOM4	114,644	DCOM4	1,281	DCOM1
4D4	B20X50	500,000	120,164	DCOM4	57,112	DCOM4	1,083	DCOM1
4D4	B20X50	1000,000	65,621	DCOM1	32,842	DCOM1	0,895	DCOM1
4D5	B20X50	0,000	326,946	DCOM4	214,890	DCOM4	0,505	DCOM1
4D5	B20X50	2250,000	108,820	DCOM3	275,162	DCOM1	0,370	EM
4D5	B20X50	4500,000	332,055	DCOM3	218,172	DCOM3	0,490	DCOM1
4D6	B20X50	0,000	72,417	DCOM3	25,125	DCOM3	0,878	DCOM1
4D6	B20X50	500,000	126,417	DCOM3	57,208	DCOM3	1,075	DCOM1
4D6	B20X50	1000,000	231,399	DCOM3	114,838	DCOM3	1,272	DCOM1
4D7	B20X50	0,000	141,949	DCOM1	60,554	DCOM1	0,554	DCOM1
4D7	B20X50	500,000	60,931	DCOM1	40,174	DCOM1	0,757	DCOM1
4D7	B20X50	1000,000	76,184	DCOM4	38,000	DCOM4	0,672	DCOM1
4D8	B20X50	0,000	49,153	DCOM3	24,500	DCOM3	0,495	DCOM1
4D8	B20X50	500,000	88,818	DCOM5	43,095	DCOM4	0,503	DCOM1

4D9	B20X50	1000,000	193,824	DCCM4	26,178	DCCM4	1,000	DCCM1
4D9	B20X50	0,000	68,625	DCCM4	74,137	DCCM4	0,681	DCCM1
4D9	B20X50	500,000	68,423	DCCM4	41,385	DCCM4	0,784	DCCM1
4D9	B20X50	1000,000	162,873	DCCM4	81,490	DCCM4	0,341	DCCM1
4F1	B20X30	0,000	37,721	DCCM1	18,620	DCCM1	0,048	BH
4F1	B20X30	1320,738	37,112	DCCM1	23,897	DCCM1	0,048	BH
4F1	B20X30	2641,477	40,590	DCCM1	30,249	DCCM1	0,048	BH
4F2	B20X30	0,000	37,770	DCCM1	18,844	DCCM1	0,048	BH
4F1	B20X30	1320,738	37,609	DCCM1	28,330	DCCM1	0,048	BH
4F2	B20X30	2641,477	40,654	DCCM1	29,180	DCCM1	0,048	BH
4F3	B20X30	0,000	6,549	DCCM4	4,192	DCCM4	0,130	DCCM2
4F3	B20X30	364,148	1,577	DCCM4	0,371	DCCM4	0,131	DCCM2
4F3	B20X30	768,295	6,710	DCCM4	14,314	DCCM4	0,097	BH
4F4	B20X30	0,000	6,869	DCCM4	14,148	DCCM4	0,098	BH
4F4	B20X30	364,148	1,575	DCCM4	4,095	DCCM4	0,117	DCCM2
4F4	B20X30	768,295	0,528	DCCM4	4,251	DCCM4	0,128	DCCM2
4F5	B20X30	0,000	2,581	DCCM4	1,141	DCCM4	0,048	DCCM1
4F5	B20X30	364,148	1,443	DCCM4	0,585	DCCM4	0,039	DCCM2
4F5	B20X30	768,295	5,765	DCCM4	1,350	DCCM4	0,048	DCCM1
4F6	B20X30	0,000	2,155	DCCM4	1,442	DCCM4	0,048	DCCM1
4F6	B20X30	364,148	1,495	DCCM4	0,535	DCCM4	0,030	DCCM2
4F6	B20X30	768,295	5,866	DCCM4	1,835	DCCM4	0,048	DCCM1
4F7	B20X30	0,000	40,787	DCCM1	20,348	DCCM1	0,049	BH
4F7	B20X30	1320,738	10,161	DCCM1	21,803	DCCM1	0,049	BH
4F7	B20X30	2641,477	39,841	DCCM1	19,873	DCCM1	0,049	BH
4F8	B20X30	0,000	39,772	DCCM1	19,841	DCCM1	0,049	BH
4F8	B20X30	1320,738	10,137	DCCM1	21,816	DCCM1	0,049	BH
4F8	B20X30	2641,477	40,688	DCCM1	20,590	DCCM1	0,049	BH
4F9	B20X30	0,000	24,841	DCCM1	11,408	DCCM1	0,038	BH
4F9	B20X30	1320,738	8,197	DCCM1	17,690	DCCM1	0,038	BH
4F9	B20X30	2641,477	19,343	DCCM4	9,551	DCCM4	0,038	BH
5A1	B145X70	250,000	1015,438	DCCM6	727,604	DCCM5	1,939	DCCM2
5A1	B145X70	1625,000	381,696	DCCM4	535,512	DCCM5	1,726	DCCM2
5A1	B145X70	3000,000	0,000	DCCM1	308,701	DCCM2	1,514	DCCM2
5A2	B145X70	250,000	1784,413	DCCM6	1011,143	DCCM6	2,137	DCCM10
5A2	B145X70	1625,000	648,844	DCCM6	620,538	DCCM6	1,943	DCCM10
5A2	B145X70	3000,000	0,000	DCCM1	1103,724	DCCM5	1,775	DCCM10
5A3	B145X70	250,000	2143,051	DCCM6	1038,991	DCCM6	2,175	DCCM2
5A3	B145X70	1625,000	318,808	DCCM10	807,047	DCCM5	1,877	BH
5A3	B145X70	3000,000	0,000	DCCM1	1409,879	DCCM5	1,630	BH
5A4	B145X70	250,000	1798,358	DCCM6	1011,143	DCCM6	2,162	DCCM10
5A4	B145X70	1625,000	658,675	DCCM4	767,789	DCCM5	1,948	DCCM10
5A4	B145X70	3000,000	0,000	DCCM1	1209,345	DCCM5	1,800	DCCM10
5A5	B145X70	250,000	645,160	DCCM6	1011,143	DCCM5	1,939	DCCM2
5A5	B145X70	1625,000	285,109	DCCM5	896,437	DCCM5	1,676	DCCM2
5A5	B145X70	3000,000	0,000	DCCM1	889,236	DCCM2	1,730	DCCM1
5A6	B145X70	250,000	860,421	DCCM6	1011,143	DCCM5	1,950	DCCM2
5A6	B145X70	1625,000	381,481	DCCM5	640,818	DCCM5	1,664	DCCM2
5A6	B145X70	3000,000	0,000	DCCM1	381,710	DCCM2	1,720	DCCM1
5A7	B145X70	250,000	1783,684	DCCM6	1011,143	DCCM6	2,150	DCCM10
5A7	B145X70	1625,000	634,993	DCCM6	800,666	DCCM5	1,955	DCCM10
5A7	B145X70	3000,000	0,000	DCCM1	1238,157	DCCM5	1,787	DCCM10
5A8	B145X70	250,000	2129,808	DCCM6	1032,218	DCCM6	2,156	DCCM2
5A8	B145X70	1625,000	208,911	DCCM10	660,675	DCCM5	1,857	BH
5A8	B145X70	3000,000	0,000	DCCM1	1438,945	DCCM5	1,520	BH
5A9	B145X70	250,000	1786,843	DCCM6	1011,143	DCCM6	2,135	DCCM10
5A9	B145X70	1625,000	647,397	DCCM6	712,360	DCCM5	1,842	DCCM10
5A9	B145X70	3000,000	0,000	DCCM1	1123,870	DCCM5	1,773	DCCM10
5B1	B130X50	150,000	474,147	DCCM3	363,185	DCCM4	1,067	DCCM2
5B1	B130X50	2250,000	132,681	DCCM3	232,774	DCCM3	0,671	DCCM2
5B1	B130X50	4500,000	474,147	DCCM4	413,416	DCCM3	1,028	DCCM2
5B2	B130X50	150,000	474,147	DCCM4	358,252	DCCM3	1,072	DCCM2
5B2	B130X50	2250,000	128,007	DCCM5	232,480	DCCM2	0,676	DCCM2
5B2	B130X50	4500,000	474,147	DCCM3	413,762	DCCM4	1,027	DCCM2
5B3	B130X50	150,000	319,049	DCCM6	474,147	DCCM5	1,564	DCCM1
5B3	B130X50	1200,000	126,918	DCCM5	176,318	DCCM5	1,315	DCCM2
5B3	B130X50	2250,000	543,588	DCCM5	356,697	DCCM5	1,987	DCCM2

504	B20X50	125,000	170,407	DOCM4	74,946	DOCM4	0,478	EH
505	B20X50	2250,000	123,715	DOCM3	123,715	DOCM3	0,387	EH
506	B20X50	4875,000	380,477	DOCM3	245,435	DOCM3	0,392	EH
5F1	B20X50	0,000	0,000	DOCM1	587,418	DOCM1	2,345	DOCM1
5F1	B20X50	1062,500	178,103	DOCM2	178,103	DOCM2	0,707	DOCM2
5F1	B20X50	3125,000	680,388	DOCM2	320,677	DOCM2	7,020	DOCM2
5F2	B20X50	0,000	13,303	EH	133,304	DOCM1	0,704	EH
5F2	B20X50	1250,000	178,237	DOCM2	248,018	DOCM2	0,620	EH
5F2	B20X50	4500,000	788,144	DOCM3	367,432	DOCM2	1,096	DOCM2
5F3	B20X50	0,000	13,303	EH	133,304	DOCM1	0,704	EH
5F3	B20X50	2250,000	178,203	DOCM2	349,413	DOCM2	0,618	EH
5F3	B20X50	4500,000	784,362	DOCM3	366,069	DOCM1	1,099	DOCM2
5F4	B20X50	0,000	341,581	DOCM2	178,503	DOCM2	0,319	DOCM2
5F4	B20X50	1062,500	178,263	DOCM2	310,431	DOCM2	2,006	DOCM2
5F4	B20X50	2125,000	0,000	DOCM1	566,363	DOCM1	1,634	DOCM2
6A1	B145X70	0,000	31,101	DOCM10	350,000	DOCM5	1,154	DOCM1
6A1	B145X70	875,000	331,101	DOCM5	289,769	DOCM5	1,370	DOCM1
6A1	B145X70	1750,000	734,301	DOCM5	364,704	DOCM5	1,487	DOCM1
6A2	B145X70	250,000	1413,400	DOCM5	381,430	DOCM2	1,133	EH
6A2	B145X70	1125,000	874,934	DOCM5	373,731	DOCM2	1,153	EH
6A2	B145X70	2000,000	145,224	DOCM10	701,060	DOCM5	1,115	EH
6A3	B145X70	250,000	1503,556	DOCM5	440,127	DOCM5	1,027	EH
6A3	B145X70	1125,000	861,873	DOCM2	465,547	DOCM2	1,138	EH
6A3	B145X70	3000,000	229,316	DOCM5	195,989	DOCM5	1,160	EH
6A4	B145X70	0,000	9,746	DOCM10	283,927	DOCM5	1,251	DOCM1
6A4	B145X70	250,000	320,011	DOCM5	336,687	DOCM5	1,367	DOCM1
6A4	B145X70	1750,000	730,968	DOCM5	723,665	DOCM5	1,436	DOCM1
6A5	B145X70	250,000	1037,633	DOCM5	442,389	DOCM5	1,484	DOCM2
6A5	B145X70	1625,000	439,474	DOCM2	463,474	DOCM2	1,300	EH
6A5	B145X70	3000,000	0,000	DOCM1	1451,435	DOCM2	1,333	EH
6A6	B145X70	250,000	1634,340	DOCM5	903,323	DOCM2	1,563	DOCM2
6A6	B145X70	1625,000	447,716	DOCM2	447,716	DOCM2	1,333	EH
6A6	B145X70	3000,000	0,000	DOCM1	1370,852	DOCM2	1,235	EH
6A7	B145X70	250,000	729,350	DOCM5	761,350	DOCM5	1,630	DOCM2
6A7	B145X70	1625,000	304,293	DOCM10	719,397	DOCM5	1,388	DOCM2
6A7	B145X70	3000,000	0,000	DOCM1	383,311	DOCM2	1,048	DOCM1
6A8	B145X70	250,000	234,101	DOCM5	755,841	DOCM5	1,639	DOCM2
6A8	B145X70	1625,000	307,938	DOCM10	723,008	DOCM5	1,367	DOCM2
6A8	B145X70	3000,000	0,000	DOCM1	366,460	DOCM2	1,252	DOCM1
6A9	B145X70	250,000	1458,713	DOCM5	792,454	DOCM2	1,318	EH
6A9	B145X70	1625,000	395,487	DOCM2	581,366	DOCM5	1,264	EH
6A9	B145X70	3000,000	0,000	DOCM1	1179,480	DOCM2	1,206	EH
6B1	B130X50	150,000	313,024	DOCM3	155,450	DOCM3	0,684	DOCM5
6B1	B130X50	2250,000	77,466	DOCM3	139,966	DOCM2	0,370	DOCM5
6B1	B130X50	4350,000	286,515	DOCM4	144,003	DOCM3	0,638	DOCM5
6B2	B130X50	150,000	317,374	DOCM4	157,340	DOCM4	0,694	DOCM5
6B2	B130X50	2250,000	69,325	DOCM3	132,338	DOCM2	0,380	DOCM5
6B2	B130X50	4350,000	278,605	DOCM3	133,458	DOCM3	0,642	DOCM5
6B3	B30X50	150,000	103,016	DOCM5	141,367	DOCM5	0,563	DOCM1
6B3	B30X50	1200,000	101,739	DOCM1	81,719	DOCM2	1,016	DOCM2
6B3	B30X50	2250,000	330,403	DOCM2	164,018	DOCM2	1,168	DOCM2
6B4	B30X50	150,000	195,144	DOCM5	87,371	DOCM5	0,317	DOCM2
6B4	B30X50	1200,000	188,515	DOCM2	114,058	DOCM5	0,361	DOCM2
6B4	B30X50	2250,000	463,160	DOCM5	209,250	DOCM3	1,044	DOCM2
6B5	B30X50	150,000	177,345	DOCM5	84,415	DOCM5	1,201	DOCM2
6B5	B30X50	1200,000	276,277	DOCM2	135,156	DOCM2	1,365	DOCM2
6B5	B30X50	2250,000	547,167	DOCM3	271,312	DOCM2	1,328	DOCM2
6B6	B30X50	150,000	103,245	DOCM5	151,764	DOCM5	0,533	DOCM1
6B6	B30X50	1200,000	109,817	DOCM1	87,398	DOCM2	1,090	DOCM2
6B6	B30X50	2250,000	353,636	DOCM2	173,460	DOCM2	1,261	DOCM2
6B7	B130X50	225,000	565,013	DOCM4	347,452	DOCM3	0,300	DOCM1
6B7	B130X50	612,500	474,147	DOCM4	400,193	DOCM3	0,900	DOCM1
6B7	B130X50	1000,000	262,555	DOCM4	424,243	DOCM3	0,000	DOCM1
6B8	B130X50	225,000	570,445	DOCM3	440,463	DOCM3	1,361	DOCM2
6B8	B130X50	1862,500	218,362	DOCM3	222,376	DOCM3	1,237	DOCM2
6B8	B130X50	3500,000	287,192	DOCM3	420,112	DOCM3	1,483	DOCM2
6B9	B130X50	0,000	0,000	DOCM1	415,917	DOCM2	1,715	DOCM1
6B9	B130X50	1012,500	207,163	DOCM4	426,637	DOCM3	2,140	DOCM2

858	B10N40	2000,000	214,138	D00M4	418,132	D00M4	0,498	D00M1
859	B10N40	0,000	320,517	D00M3	210,518	D00M3	0,941	D00M6
860	B10N40	1200,000	190,714	D00M4	170,890	D00M2	0,565	D00M1
861	B10N40	4000,000	404,401	D00M4	288,104	D00M2	0,910	D00M1
862	B10N40	120,000	331,014	D00M1	108,806	D00M3	0,841	D00M6
863	B10N40	3200,000	130,870	D00M3	170,041	D00M2	0,843	D00M1
864	B10N40	4000,000	474,044	D00M3	300,131	D00M3	0,414	D00M1
865	B10N40	0,000	258,361	D00M4	118,079	D00M4	0,277	D00M1
866	B10N40	1100,000	115,048	D00M4	115,048	D00M4	0,161	D00M3
867	B10N40	4000,000	104,848	D00M3	240,849	D00M4	0,404	D00M1
868	B10N40	0,000	84,911	D00M5	311,141	D00M3	0,171	D00M1
869	B10N40	2200,000	135,010	D00M3	135,010	D00M3	0,682	D00M2
870	B10N40	4000,000	414,508	D00M3	171,509	D00M3	0,400	D00M2
871	B10N40	0,000	480,881	D00M2	311,149	D00M2	0,478	EW
872	B10N40	3200,000	185,071	D00M2	311,148	D00M2	0,400	EW
873	B10N40	4000,000	311,148	D00M3	200,140	D00M3	0,604	EW
874	B10N40	0,000	0,000	D00M1	300,305	D00M2	2,114	D00M1
875	B10N40	1100,000	100,814	D00M1	200,814	D00M2	2,682	D00M1
876	B10N40	3000,000	400,800	D00M3	311,148	D00M3	0,900	D00M3
877	B10N40	0,000	480,470	D00M2	311,148	D00M2	0,831	D00M2
878	B10N40	1100,000	101,261	D00M2	200,704	D00M2	0,559	D00M2
879	B10N40	2000,000	0,000	D00M1	590,466	D00M3	0,424	D00M1
880	B10N40	0,000	700,487	D00M3	336,806	D00M3	1,108	EW
881	B10N40	2100,000	188,817	D00M2	311,149	D00M2	0,561	EW
882	B10N40	4000,000	330,292	D00M4	167,844	D00M3	0,069	EW
883	B10N40	0,000	684,198	D00M4	331,299	D00M4	1,182	EW
884	B10N40	3200,000	188,280	D00M2	311,148	D00M2	0,545	EW
885	B10N40	4000,000	311,148	D00M3	190,386	D00M3	0,400	EW
886	B10N50	0,000	10,400	D00M3	30,341	D00M3	0,148	D00M1
887	B10N50	500,000	11,805	D00M3	14,191	D00M3	0,146	D00M2
888	B10N50	1000,000	7,898	D00M4	11,500	D00M3	0,165	D00M3
889	B10N50	0,000	89,822	D00M3	34,838	D00M3	0,200	D00M6
890	B10N50	2000,000	20,134	D00M3	69,846	D00M3	0,125	D00M6
891	B10N50	4000,000	41,605	D00M3	81,044	D00M3	0,164	EW
892	B10N50	0,000	18,872	D00M1	9,900	D00M2	0,154	D00M2
893	B10N50	500,000	15,039	D00M3	4,563	D00M2	0,134	D00M2
894	B10N50	1000,000	16,040	D00M3	10,605	D00M4	0,113	EW
895	B10N50	0,000	20,819	D00M2	10,409	D00M2	0,166	D00M2
896	B10N50	500,000	16,038	D00M4	4,202	D00M2	0,166	D00M2
897	B10N50	1000,000	17,075	D00M3	19,094	D00M3	0,148	D00M3
898	B10N50	0,000	65,182	D00M4	32,523	D00M4	0,197	D00M6
899	B10N50	2000,000	19,728	D00M4	72,192	D00M2	0,118	D00M6
900	B10N50	4000,000	42,492	D00M3	79,210	D00M4	0,161	EW
901	B10N50	0,000	19,176	D00M3	29,776	D00M4	0,141	D00M1
902	B10N50	500,000	11,935	D00M7	23,696	D00M4	0,139	D00M2
903	B10N50	1000,000	7,491	D00M3	11,740	D00M4	0,159	D00M3
904	B10N50	0,000	8,921	D00M3	10,341	D00M6	0,157	D00M2
905	B10N50	500,000	12,533	D00M4	8,444	D00M2	0,217	D00M2
906	B10N50	1000,000	34,838	D00M3	10,387	D00M2	0,237	D00M3
907	B10N50	0,000	64,408	D00M2	32,000	D00M2	0,219	D00M2
908	B10N50	500,000	37,791	D00M2	16,088	D00M2	0,289	D00M2
909	B10N50	1000,000	17,840	D00M3	8,910	D00M3	0,279	D00M3
910	B10N50	0,000	70,911	D00M2	36,207	D00M2	0,357	D00M2
911	B10N50	500,000	42,183	D00M2	18,167	D00M1	0,387	D00M2
912	B10N50	1000,000	18,219	D00M3	3,104	D00M3	0,217	D00M3
913	B10N50	0,000	213,716	D00M1	103,205	D00M1	0,679	D00M1
914	B10N50	1500,000	20,162	D00M1	114,770	D00M1	0,393	EW
915	B10N50	3000,000	291,687	D00M1	138,669	D00M1	0,282	D00M1
916	B10N50	0,000	410,651	D00M1	190,970	D00M1	1,063	D00M1
917	B10N50	2000,000	22,591	D00M1	177,880	D00M1	0,408	EW
918	B10N50	4000,000	401,683	D00M1	187,143	D00M7	1,058	D00M1
919	B10N50	0,000	803,894	D00M1	144,348	D00M1	0,782	D00M1
920	B10N50	1500,000	89,347	D00M2	104,289	D00M2	0,407	EW
921	B10N50	3000,000	224,733	D00M1	108,000	D00M1	0,493	D00M1
922	B10N50	250,000	178,203	D00M6	62,026	D00M5	2,832	D00M2
923	B10N50	500,000	133,465	D00M6	153,941	D00M5	0,428	D00M2
924	B10N50	750,000	70,709	D00M10	185,815	D00M3	2,329	D00M2
925	B10N50	250,000	178,203	D00M6	75,151	D00M5	2,517	D00M2

8E2	B20X30	300,000	137,181	DC0N6	166,875	DC0N5	2,523	DC0N3
8E2	B20X30	350,000	78,720	DC0N10	195,535	DC0N3	2,519	DC0N2
8E3	B130X50	0,000	31,727	DC0N10	340,585	DC0N3	2,522	DC0N1
8E3	B130X50	200,000	342,344	DC0N6	134,301	DC0N3	2,723	DC0N3
8E3	B130X50	1250,000	539,354	DC0N6	280,303	DC0N2	2,728	DC0N2
8E4	B130X50	150,000	0,000	DC0N1	331,925	DC0N2	1,401	DC0N2
8E4	B130X50	875,000	35,743	DC0N3	138,925	DC0N3	1,445	DC0N3
8E4	B130X50	1500,000	98,543	DC0N6	24,346	DC0N6	1,573	DC0N1
8E5	B130X50	180,000	0,000	DC0N1	350,511	DC0N2	1,531	DC0N3
8E5	B130X50	300,000	104,117	DC0N3	145,908	DC0N3	1,401	DC0N3
8E5	B130X50	1250,000	474,147	DC0N3	177,460	DC0N5	1,683	DC0N1
8E6	B130X50	150,000	0,000	DC0N1	377,175	DC0N2	2,952	DC0N1
8E6	B130X50	400,000	176,065	DC0N3	127,471	DC0N3	2,240	DC0N3
8E6	B130X50	1050,000	474,147	DC0N2	237,375	DC0N2	3,723	DC0N1
8E7	B130X50	150,000	0,000	DC0N1	350,946	DC0N2	3,535	DC0N2
8E7	B130X50	200,000	140,529	DC0N3	131,948	DC0N3	3,605	DC0N3
8E7	B130X50	1250,000	474,147	DC0N2	265,404	DC0N2	3,687	DC0N2
8E8	B130X50	150,000	0,000	DC0N1	347,112	DC0N1	3,434	DC0N2
8E8	B130X50	300,000	138,015	DC0N3	148,037	DC0N3	3,545	DC0N3
8E8	B130X50	1250,000	474,147	DC0N2	373,413	DC0N2	3,545	DC0N2
8E9	B130X50	150,000	0,000	DC0N1	294,619	DC0N2	1,052	DC0N2
8E9	B130X50	375,000	72,367	DC0N3	140,315	DC0N3	1,145	DC0N3
8E9	B130X50	1500,000	36,360	DC0N2	18,166	DC0N2	1,224	DC0N2
8D1	B20X50	125,000	247,368	DC0N2	121,697	DC0N2	0,710	DC0N2
8D1	B20X50	1250,000	91,949	DC0N3	61,108	DC0N3	0,499	DC0N3
8D1	B20X50	2375,000	53,982	DC0N4	46,393	DC0N4	0,414	DC0N2
8D2	B20X50	0,000	0,000	DC0N1	103,803	DC0N2	0,705	DC0N1
8D2	B20X50	1127,000	83,585	DC0N3	33,235	DC0N3	0,330	DC0N3
8D2	B20X50	3375,000	319,634	DC0N2	173,607	DC0N2	1,062	DC0N2
8D3	B20X50	0,000	57,005	DC0N4	23,451	DC0N4	0,033	EH
8D3	B20X50	2250,000	17,954	DC0N3	507,245	DC0N3	0,558	EH
8D3	B20X50	4500,000	51,943	DC0N3	25,928	DC0N3	0,035	EH
8D4	B20X50	0,000	45,982	DC0N2	22,937	DC0N2	0,137	EH
8D4	B20X50	2250,000	17,704	DC0N3	245,849	DC0N3	0,100	EH
8D4	B20X50	4500,000	0,000	DC0N1	69,043	DC0N2	0,124	EH
8D5	B20X50	0,000	0,000	DC0N1	168,353	DC0N3	0,297	EH
8D5	B20X50	2127,500	116,405	DC0N3	116,405	DC0N3	0,500	EH
8D5	B20X50	4275,000	357,447	DC0N2	234,584	DC0N2	0,672	EH
8D6	B20X50	125,000	290,822	DC0N2	145,026	DC0N2	1,532	DC0N2
8D6	B20X50	2250,000	178,385	DC0N3	37,328	DC0N3	0,405	DC0N1
8D6	B20X50	4275,000	319,634	DC0N2	195,889	DC0N2	0,653	DC0N2
8D7	B20X50	0,000	0,000	DC0N1	367,482	DC0N2	0,531	DC0N6
8D7	B20X50	2127,500	128,787	DC0N3	205,067	DC0N3	0,397	DC0N3
8D7	B20X50	4275,000	395,408	DC0N2	259,740	DC0N2	1,014	DC0N6
8D8	B20X50	0,000	0,000	DC0N1	357,655	DC0N2	0,590	DC0N6
8D8	B20X50	2127,500	128,423	DC0N3	205,899	DC0N3	0,395	DC0N3
8D8	B20X50	4275,000	395,352	DC0N2	255,010	DC0N2	1,013	DC0N6
8D9	B20X50	125,000	289,980	DC0N3	143,502	DC0N3	0,590	DC0N2
8D9	B20X50	2250,000	128,228	DC0N3	35,387	DC0N3	0,408	DC0N1
8D9	B20X50	4275,000	319,634	DC0N2	197,163	DC0N2	0,664	DC0N2
8F1	B20X30	0,000	35,437	DC0N3	17,522	DC0N3	0,045	EH
8F1	B20X30	1875,000	5,034	DC0N3	41,139	DC0N4	0,045	EH
8F1	B20X30	3750,000	35,247	DC0N3	18,066	DC0N3	0,045	EH
8F2	B20X30	0,000	35,535	DC0N4	17,732	DC0N4	0,045	EH
8F2	B20X30	1875,000	5,857	DC0N4	41,748	DC0N3	0,045	EH
8F2	B20X30	3750,000	35,027	DC0N4	17,478	DC0N4	0,045	EH
8F3	B20X30	0,000	171,963	DC0N1	85,133	DC0N1	0,436	DC0N1
8F3	B20X30	875,000	77,432	DC0N1	42,353	DC0N1	0,442	DC0N1
8F3	B20X30	1750,000	11,379	DC0N1	5,666	DC0N1	0,398	DC0N1
8F4	B20X30	0,000	0,000	DC0N1	11,379	DC0N1	0,391	DC0N1
8F4	B20X30	875,000	58,072	DC0N1	38,774	DC0N1	0,435	DC0N1
8F4	B20X30	1750,000	157,213	DC0N1	77,896	DC0N1	0,479	DC0N1
8F5	B20X30	0,000	166,618	DC0N1	77,603	DC0N1	0,478	DC0N1
8F5	B20X30	875,000	58,600	DC0N1	38,423	DC0N1	0,434	DC0N1
8F5	B20X30	1750,000	0,000	DC0N1	11,728	DC0N1	0,390	DC0N1
8F6	B20X30	875,000	78,307	DC0N1	42,503	DC0N1	0,444	DC0N1
8F6	B20X30	1750,000	107,680	DC0N1	85,476	DC0N1	0,428	DC0N1
8F7	B20X30	225,000	359,881	DC0N4	173,203	DC0N4	0,895	DC0N2

8F7	B130X50	210,000	149,958	DOON4	179,149	DOON3	0,947	DOON2
8F7	B130X50	1000,000	0,000	DOON1	277,090	DOON3	0,914	DOON2
8F8	B130X50	0,000	36,820	DOON3	170,006	DOON3	1,413	DOON1
8F8	B130X50	1470,000	76,369	DOON3	114,000	DOON3	0,400	DOON1
8F9	B130X50	125,000	394,017	DOON4	163,890	DOON4	0,001	EM
8F9	B130X50	2150,000	91,517	DOON3	133,817	DOON2	0,911	EH
8F9	B130X50	4775,000	291,911	DOON3	164,805	DOON3	0,804	EM
1E10	B130X50	125,000	71,106	DOON1	36,848	DOON1	0,114	DOON10
1E10	B130X50	1968,500	17,761	DOON1	41,824	DOON1	0,139	DOON10
1E10	B130X50	3030,000	0,000	DOON1	17,900	DOON1	0,159	DOON10
1E11	B130X50	0,000	0,000	DOON1	31,491	DOON1	0,140	EM
1E11	B130X50	376,000	26,061	DOON1	22,668	DOON1	0,140	EM
1E11	B130X50	750,000	90,320	DOON1	46,821	DOON1	0,140	EM
1E12	B130X50	250,000	54,820	DOON1	20,470	DOON1	0,065	EM
1E12	B130X50	1268,500	14,277	DOON1	39,923	DOON1	0,065	EM
1E12	B130X50	4970,000	57,517	DOON1	36,571	DOON1	0,065	EM
1E13	B130X50	225,000	57,112	DOON1	38,571	DOON1	0,066	EM
1E13	B130X50	2150,000	14,177	DOON1	38,528	DOON1	0,066	EM
1E13	B130X50	4775,000	57,517	DOON1	38,571	DOON1	0,066	EM
1E14	B130X50	225,000	57,219	DOON1	38,571	DOON1	0,066	EM
1E14	B130X50	1250,000	14,277	DOON1	39,923	DOON1	0,066	EM
1E14	B130X50	4775,000	57,517	DOON1	38,571	DOON1	0,066	EM
1E15	B130X50	225,000	57,212	DOON1	38,571	DOON1	0,066	EM
1E15	B130X50	1250,000	14,177	DOON1	38,528	DOON1	0,066	EM
1E15	B130X50	4775,000	57,517	DOON1	38,571	DOON1	0,066	EM
1E16	B130X50	150,000	56,791	DOON1	38,361	DOON1	0,065	EM
1E16	B130X50	2075,000	14,172	DOON1	38,594	DOON1	0,065	EM
1E16	B130X50	4000,000	47,845	DOON1	38,798	DOON1	0,065	EM
1E17	B130X50	150,000	56,751	DOON1	38,361	DOON1	0,065	EM
1E17	B130X50	2075,000	14,172	DOON1	38,594	DOON1	0,065	EM
1E17	B130X50	4000,000	47,845	DOON1	38,798	DOON1	0,065	EM
1E18	B130X50	250,000	70,523	DOON1	35,283	DOON1	0,073	EM
1E18	B130X50	2500,000	17,619	DOON1	49,376	DOON1	0,073	EM
1E18	B130X50	4950,000	70,523	DOON1	35,283	DOON1	0,073	EM
1E19	B130X50	250,000	70,523	DOON1	35,283	DOON1	0,073	EM
1E19	B130X50	2500,000	17,619	DOON1	49,376	DOON1	0,073	EM
1E19	B130X50	4950,000	70,523	DOON1	35,283	DOON1	0,073	EM
1E20	B130X50	225,000	73,365	DOON1	36,625	DOON1	0,075	EM
1E20	B130X50	2500,000	18,299	DOON1	49,376	DOON1	0,075	EM
1E20	B130X50	4775,000	73,365	DOON1	36,625	DOON1	0,075	EM
1E21	B130X50	250,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E21	B130X50	5000,000	84,437	DOON1	198,778	DOON1	0,165	EM
1E21	B130X50	9750,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E22	B130X50	250,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E22	B130X50	5000,000	84,437	DOON1	198,778	DOON1	0,165	EM
1E22	B130X50	9750,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E23	B130X50	250,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E23	B130X50	5000,000	84,437	DOON1	198,778	DOON1	0,165	EM
1E23	B130X50	9750,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E24	B130X50	225,000	347,319	DOON1	171,350	DOON1	0,167	EM
1E24	B130X50	5000,000	85,855	DOON1	198,778	DOON1	0,167	EM
1E24	B130X50	9775,000	347,319	DOON1	171,350	DOON1	0,167	EM
1E25	B130X50	250,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E25	B130X50	5000,000	84,437	DOON1	198,778	DOON1	0,165	EM
1E25	B130X50	9750,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E26	B130X50	250,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E26	B130X50	5000,000	84,437	DOON1	198,778	DOON1	0,165	EM
1E26	B130X50	9750,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E27	B130X50	250,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E27	B130X50	5000,000	84,437	DOON1	198,778	DOON1	0,165	EM
1E27	B130X50	9750,000	341,516	DOON1	169,492	DOON1	0,165	EM
1E28	B130X50	225,000	73,365	DOON1	36,625	DOON1	0,075	EM
1E28	B130X50	2500,000	18,299	DOON1	49,376	DOON1	0,075	EM
1E28	B130X50	4775,000	73,365	DOON1	36,625	DOON1	0,075	EM
1E29	B130X50	250,000	98,217	DOON1	49,005	DOON1	0,093	EM
1E29	B130X50	2925,000	27,647	DOON1	65,295	DOON1	0,093	EM
1E29	B130X50	6600,000	110,985	DOON1	49,350	DOON1	0,093	EM
1E30	B130X50	250,000	98,217	DOON1	49,005	DOON1	0,093	EM

1015	B2 SX40	950,000	12,713	DCCN1	8,264	DCCN1	0,000	EH
1015	B2 SX40	1455,000	4,253	DCCN1	12,578	DCCN1	0,000	EH
1015	B2 SX40	2600,000	17,448	DCCN1	8,713	DCCN1	0,000	EH
1016	B2 SX40	125,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1016	B2 SX40	1255,000	3,319	DCCN1	10,435	DCCN1	0,000	EH
1016	B2 SX40	3375,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1017	B2 SX40	125,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1017	B2 SX40	1350,000	3,729	DCCN1	10,435	DCCN1	0,000	EH
1017	B2 SX40	1375,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1018	B2 SX40	125,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1018	B2 SX40	1250,000	34,170	DCCN1	33,862	DCCN1	0,000	EH
1018	B2 SX40	4075,000	56,836	DCCN1	28,865	DCCN1	0,000	EH
1019	B2 SX40	125,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1019	B2 SX40	1250,000	14,170	DCCN1	33,862	DCCN1	0,000	EH
1019	B2 SX40	4375,000	56,836	DCCN1	28,865	DCCN1	0,000	EH
1020	B2 SX40	125,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1020	B2 SX40	2250,000	14,170	DCCN1	33,862	DCCN1	0,000	EH
1020	B2 SX40	4375,000	56,836	DCCN1	28,865	DCCN1	0,000	EH
1021	B2 SX40	125,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1021	B2 SX40	1250,000	14,170	DCCN1	33,862	DCCN1	0,000	EH
1021	B2 SX40	4375,000	56,836	DCCN1	28,865	DCCN1	0,000	EH
1022	B2 SX40	125,000	14,827	DCCN1	7,440	DCCN1	0,000	EH
1022	B2 SX40	2250,000	17,827	DCCN1	41,627	DCCN1	0,000	EH
1022	B2 SX40	4375,000	71,559	DCCN1	38,696	DCCN1	0,000	EH
2A10	B14 SX70	250,000	1981,740	DCCN5	1000,000	DCCN5	1,400	EH
2A10	B14 SX70	1805,000	824,529	DCCN5	498,339	DCCN5	2,192	EH
2A10	B14 SX70	3800,000	0,000	DCCN1	1080,422	DCCN5	3,000	EH
2A11	B14 SX70	250,000	1050,344	DCCN5	1011,143	DCCN5	1,994	DCCN5
2A11	B14 SX70	1825,000	410,368	DCCN5	574,392	DCCN5	1,631	DCCN5
2A11	B14 SX70	3800,000	0,000	DCCN1	395,314	DCCN5	1,463	DCCN5
2A12	B14 SX70	0,000	0,000	DCCN1	341,637	DCCN5	2,458	DCCN5
2A12	B14 SX70	350,000	123,838	DCCN2	173,829	DCCN5	2,523	DCCN5
2A12	B14 SX70	1100,000	702,826	DCCN2	348,506	DCCN5	2,530	DCCN5
2A13	B14 SX70	0,000	0,000	DCCN1	341,637	DCCN5	2,458	DCCN5
2A13	B14 SX70	350,000	173,613	DCCN2	173,613	DCCN5	2,523	DCCN5
2A13	B14 SX70	1100,000	701,814	DCCN2	348,451	DCCN5	2,530	DCCN5
2A14	B14 SX70	0,000	0,000	DCCN1	341,637	DCCN5	1,926	DCCN5
2A14	B14 SX70	375,000	567,123	DCCN5	535,896	DCCN5	2,040	DCCN5
2A14	B14 SX70	1750,000	1023,312	DCCN5	572,612	DCCN5	2,226	DCCN5
2A15	B14 SX70	0,000	0,000	DCCN1	341,637	DCCN5	1,984	DCCN5
2A15	B14 SX70	375,000	800,671	DCCN5	344,820	DCCN5	2,098	DCCN5
2A15	B14 SX70	1750,000	1565,345	DCCN5	622,820	DCCN5	2,284	DCCN5
2A16	B14 SX70	0,000	0,000	DCCN1	1037,504	DCCN5	1,206	DCCN5
2A16	B14 SX70	2000,000	311,934	DCCN2	1208,485	DCCN2	0,666	DCCN1
2A16	B14 SX70	4000,000	0,000	DCCN1	1625,512	DCCN5	1,220	DCCN5
2A17	B14 SX70	0,000	0,000	DCCN1	1226,791	DCCN5	1,313	DCCN5
2A17	B14 SX70	2000,000	359,510	DCCN2	1431,314	DCCN2	0,789	DCCN2
2A17	B14 SX70	4000,000	0,000	DCCN1	1134,894	DCCN5	1,343	DCCN5
2A18	B14 SX70	0,000	0,000	DCCN1	1126,320	DCCN5	1,374	DCCN5
2A18	B14 SX70	2000,000	319,856	DCCN2	1292,941	DCCN2	0,759	DCCN2
2A18	B14 SX70	4000,000	0,000	DCCN1	1030,248	DCCN5	1,313	DCCN5
2A19	B14 SX70	0,000	0,000	DCCN1	1121,414	DCCN5	1,361	DCCN5
2A19	B14 SX70	2000,000	367,595	DCCN2	1313,220	DCCN2	1,053	DCCN2
2A19	B14 SX70	4000,000	0,000	DCCN1	1011,143	DCCN5	1,307	DCCN5
2A20	B14 SX70	0,000	0,000	DCCN1	1131,127	DCCN5	1,325	DCCN5
2A20	B14 SX70	2000,000	319,550	DCCN2	1291,501	DCCN2	0,761	DCCN2
2A20	B14 SX70	4000,000	0,000	DCCN1	1032,268	DCCN5	1,315	DCCN5
2A21	B14 SX70	0,000	0,000	DCCN1	1232,220	DCCN5	1,314	DCCN5
2A21	B14 SX70	2000,000	359,371	DCCN2	1448,172	DCCN2	0,795	DCCN2
2A21	B14 SX70	4000,000	0,000	DCCN1	1196,395	DCCN5	1,345	DCCN5
2A22	B14 SX70	0,000	0,000	DCCN1	1044,232	DCCN5	1,312	DCCN5
2A22	B14 SX70	2000,000	311,868	DCCN2	1309,645	DCCN2	0,698	DCCN2
2A22	B14 SX70	4000,000	0,000	DCCN1	1097,425	DCCN5	1,222	DCCN5
2A23	B14 SX70	0,000	0,000	DCCN1	1011,143	DCCN5	1,342	DCCN5
2A23	B14 SX70	1300,000	254,294	DCCN2	318,616	DCCN2	3,317	DCCN2
2A23	B14 SX70	2600,000	1011,143	DCCN5	543,963	DCCN5	3,841	DCCN5
2A24	B14 SX70	0,000	0,000	DCCN1	1011,143	DCCN5	3,042	DCCN5
2A24	B14 SX70	1300,000	254,294	DCCN2	318,616	DCCN2	3,317	DCCN2
2A24	B14 SX70	2600,000	1011,143	DCCN5	543,963	DCCN5	3,841	DCCN5

2A25	BT45X70	250,000	1147,647	DOON4	1011,143	DOON5	5,989	DOON2
2A26	BT45X70	1125,000	611,710	DOON6	680,952	DOON5	2,956	DOON2
2A28	BT45X70	2000,000	0,000	DOON1	500,059	DOON2	1,741	DOON2
2A29	BT45X70	0,000	0,000	DOON1	227,403	DOON1	3,444	DOON2
2A30	BT45X70	575,000	428,173	DOON6	240,706	DOON5	4,146	DOON2
2A31	BT45X70	1750,000	1072,243	DOON6	704,321	DOON6	4,226	DOON2
2A32	BT45X70	0,000	0,000	DOON1	706,633	DOON1	4,134	DOON2
2A33	BT45X70	875,000	474,603	DOON6	644,721	DOON5	4,214	DOON2
2A37	BT45X70	1750,000	1114,541	DOON6	724,247	DOON6	4,473	DOON2
2A38	BT45X70	0,000	0,000	DOON1	443,272	DOON6	2,120	DOON2
2A39	BT45X70	675,000	229,803	DOON1	505,944	DOON6	1,538	DOON2
2A39	BT45X70	1350,000	267,802	DOON2	573,113	DOON6	3,244	DOON2
2A40	BT45X70	0,000	0,000	DOON1	577,245	DOON1	3,254	DOON2
2A40	BT45X70	1375,000	865,706	DOON2	704,532	DOON6	2,554	DOON2
2A40	BT45X70	2750,000	1135,923	DOON6	728,263	DOON6	3,216	DOON2
2A41	BT45X70	0,000	0,000	DOON1	1342,514	DOON6	1,472	EM
2A41	BT45X70	1375,000	806,333	DOON1	453,617	DOON2	2,153	EM
2A41	BT45X70	2750,000	1945,543	DOON1	557,412	DOON2	2,379	EM
2A42	BT45X70	0,000	0,000	DOON1	1152,243	DOON6	2,327	EM
2A42	BT45X70	1375,000	654,373	DOON5	540,381	DOON2	2,414	EM
2A42	BT45X70	2750,000	2214,841	DOON5	1072,543	DOON3	3,630	EM
2A43	BT45X70	0,000	0,000	DOON1	1044,565	DOON6	2,139	EM
2A43	BT45X70	1375,000	1037,589	DOON5	537,458	DOON2	2,325	EM
2A43	BT45X70	2750,000	2172,073	DOON6	1053,952	DOON5	3,541	EM
2A44	BT45X70	0,000	0,000	DOON1	991,233	DOON1	3,287	DOON2
2A44	BT45X70	1325,000	593,031	DOON5	1011,143	DOON6	3,502	DOON2
2A44	BT45X70	2750,000	1441,235	DOON5	941,206	DOON3	3,344	DOON2
2A45	BT45X70	0,000	0,000	DOON1	1204,300	DOON6	3,753	DOON2
2A45	BT45X70	1325,000	891,807	DOON1	955,296	DOON4	4,057	DOON2
2A45	BT45X70	2775,000	1281,849	DOON5	832,408	DOON5	4,413	DOON2
2A46	BT45X70	0,000	0,000	DOON1	351,450	DOON1	3,225	DOON2
2A46	BT45X70	1375,000	595,654	DOON5	1011,143	DOON6	2,566	DOON2
2A46	BT45X70	2750,000	1445,673	DOON5	944,412	DOON5	3,548	DOON2
2A47	BT45X70	0,000	0,000	DOON1	1045,539	DOON6	2,143	EM
2A47	BT45X70	1375,000	1011,143	DOON5	827,583	DOON2	2,330	EM
2A47	BT45X70	2750,000	2182,115	DOON5	1057,286	DOON5	3,546	EM
2A48	BT45X70	0,000	0,000	DOON1	1200,130	DOON6	2,143	EM
2A48	BT45X70	1375,000	976,227	DOON5	543,873	DOON2	2,430	EM
2A48	BT45X70	2750,000	2239,583	DOON6	1034,152	DOON5	2,646	EM
2A49	BT45X70	0,000	0,000	DOON1	1054,133	DOON6	2,442	EM
2A49	BT45X70	1375,000	817,823	DOON5	431,762	DOON2	2,169	EM
2A49	BT45X70	2750,000	1960,513	DOON5	993,624	DOON2	2,385	EM
2A40	BT45X70	0,000	0,000	DOON1	562,955	DOON2	2,227	DOON2
2A40	BT45X70	1375,000	953,645	DOON5	735,225	DOON5	2,527	DOON2
2A40	BT45X70	2750,000	1135,171	DOON5	1011,143	DOON10	2,863	DOON2
2A42	BT45X70	1350,000	261,379	DOON2	354,518	DOON6	2,427	DOON2
2A42	BT45X70	2750,000	813,693	DOON6	557,345	DOON5	2,599	DOON2
2A42	BT45X70	4250,000	1133,070	DOON5	743,582	DOON5	2,742	DOON2
2B10	BT30X50	825,000	665,328	DOON4	547,528	DOON7	1,458	DOON1
2B10	BT30X50	1650,000	284,742	DOON4	226,675	DOON3	1,454	DOON1
2B10	BT30X50	3500,000	474,147	DOON3	529,672	DOON4	1,535	DOON1
2B11	BT30X50	0,000	424,147	DOON2	476,514	DOON1	1,502	DOON1
2B11	BT30X50	275,000	606,417	DOON3	560,762	DOON6	1,690	DOON1
2B11	BT30X50	750,000	830,570	DOON3	638,641	DOON8	1,737	DOON1
2B12	BT30X50	250,000	949,349	DOON4	588,441	DOON7	1,824	DOON2
2B12	BT30X50	2262,500	189,579	DOON3	303,257	DOON4	1,102	DOON1
2B12	BT30X50	4275,000	504,646	DOON3	553,067	DOON8	1,817	DOON2
2B13	BT30X50	225,000	876,373	DOON4	525,453	DOON7	1,745	DOON2
2B13	BT30X50	2250,000	220,315	DOON3	234,223	DOON2	1,032	DOON1
2B13	BT30X50	4275,000	680,876	DOON3	534,033	DOON8	1,754	DOON2
2B14	BT30X50	225,000	894,320	DOON4	522,349	DOON7	1,766	DOON2
2B14	BT30X50	2250,000	270,847	DOON3	235,408	DOON2	1,064	DOON2
2B14	BT30X50	4275,000	863,196	DOON3	540,664	DOON8	1,754	DOON2
2B15	BT30X50	225,000	950,435	DOON4	527,321	DOON7	1,741	DOON2
2B15	BT30X50	2250,000	319,508	DOON3	247,211	DOON2	1,217	DOON1
2B15	BT30X50	4275,000	1032,768	DOON3	698,105	DOON8	1,826	DOON2
2B16	BT30X50	225,000	960,535	DOON3	547,103	DOON8	1,779	DOON2
2B16	BT30X50	2500,000	312,753	DOON3	267,346	DOON2	1,036	DOON1

2B12	B130X50	4775,000	1005,088	DOON4	414,403	DOON7	1,322	DOON2
2B17	B130X50	225,000	1001,781	DOON4	581,596	DOON7	1,823	DOON2
2B17	B130X50	3800,000	311,547	DOON2	170,967	DOON2	1,079	DOON2
2B17	B130X50	4775,000	576,537	DOON2	835,412	DOON2	1,072	DOON2
2B18	B145X70	150,000	1106,098	DOON5	1011,143	DOON5	2,032	DOON2
2B18	B145X70	1125,000	701,759	DOON6	962,441	DOON5	1,503	DOON2
2B18	B145X70	1000,000	120,142	DOON10	615,341	DOON5	1,723	DOON2
2B19	B145X70	0,000	119,143	DOON10	615,341	DOON5	1,723	DOON2
2B19	B145X70	1375,000	991,915	DOON5	610,147	DOON4	1,432	DOON2
2B19	B145X70	1750,000	1172,145	DOON4	1011,143	DOON5	1,175	DOON2
2B20	B130X50	115,000	374,016	DOON2	110,309	DOON4	2,116	DOON2
2B20	B130X50	1200,000	515,710	DOON4	474,147	DOON3	1,724	DOON2
2B20	B130X50	3775,000	923,434	DOON4	743,171	DOON7	2,169	DOON2
2B21	B130X50	225,000	754,355	DOON3	445,557	DOON6	1,453	DOON2
2B21	B130X50	1800,000	299,527	DOON3	371,748	DOON4	1,365	DOON2
2B21	B130X50	4775,000	544,125	DOON4	170,242	DOON4	1,737	DOON2
2B22	B130X50	225,000	825,320	DOON3	568,612	DOON2	1,736	DOON2
2B22	B130X50	2250,000	265,331	DOON3	252,706	DOON2	1,104	DOON2
2B22	B130X50	4775,000	246,337	DOON4	531,035	DOON7	1,913	DOON2
2B23	B130X50	225,000	771,523	DOON3	501,558	DOON8	1,427	DOON2
2B23	B130X50	2250,000	248,501	DOON3	248,501	DOON3	1,039	DOON2
2B23	B130X50	4775,000	794,502	DOON4	578,413	DOON7	1,468	DOON2
2B24	B130X50	225,000	772,078	DOON3	560,393	DOON3	1,417	DOON2
2B24	B130X50	2250,000	248,573	DOON3	248,573	DOON3	0,998	DOON1
2B24	B130X50	4775,000	775,437	DOON4	531,109	DOON7	1,407	DOON2
2B25	B130X50	150,000	1130,563	DOON3	610,244	DOON3	2,257	DOON2
2B25	B130X50	2250,000	353,041	DOON3	336,177	DOON2	1,288	DOON2
2B25	B130X50	4775,000	875,373	DOON4	559,442	DOON7	2,141	DOON2
2B26	B130X50	225,000	934,352	DOON3	606,137	DOON3	1,908	DOON2
2B26	B130X50	2250,000	304,560	DOON3	319,540	DOON4	1,211	DOON1
2B26	B130X50	4775,000	1002,715	DOON4	434,884	DOON7	1,892	DOON2
2B27	B130X50	225,000	936,464	DOON4	584,739	DOON7	1,962	DOON2
2B27	B130X50	2250,000	305,848	DOON3	314,517	DOON4	1,285	DOON2
2B27	B130X50	4775,000	967,700	DOON3	710,459	DOON3	1,833	DOON2
2B28	B130X50	225,000	1163,555	DOON4	588,862	DOON7	2,335	DOON2
2B28	B130X50	2250,000	302,708	DOON3	333,492	DOON2	1,326	DOON2
2B28	B130X50	4775,000	947,576	DOON3	578,833	DOON3	2,193	DOON2
2B29	B130X50	225,000	800,074	DOON4	541,145	DOON7	1,481	DOON2
2B29	B130X50	2250,000	241,525	DOON3	241,526	DOON3	1,062	DOON2
2B29	B130X50	4775,000	749,097	DOON3	600,366	DOON3	1,410	DOON2
2B30	B130X50	225,000	797,835	DOON4	584,860	DOON7	1,484	DOON2
2B30	B130X50	2250,000	247,539	DOON3	247,539	DOON3	1,035	DOON2
2B30	B130X50	4775,000	768,424	DOON3	595,560	DOON3	1,474	DOON2
2B31	B130X50	225,000	858,433	DOON4	545,436	DOON7	1,736	DOON2
2B31	B130X50	2250,000	284,455	DOON3	236,839	DOON2	1,061	DOON2
2B31	B130X50	4775,000	868,505	DOON3	546,579	DOON3	1,764	DOON2
2B32	B130X50	225,000	931,063	DOON4	557,531	DOON7	1,827	DOON2
2B32	B130X50	2250,000	307,757	DOON3	331,939	DOON2	1,012	DOON2
2B32	B130X50	4775,000	964,176	DOON3	609,038	DOON3	1,784	DOON2
2C10	B25X40	0,000	928,184	DOON3	443,773	DOON3	1,350	EM
2C10	B25X40	2250,000	255,118	DOON2	311,148	DOON2	0,973	EM
2C10	B25X40	4500,000	304,972	DOON4	155,313	DOON2	1,025	EM
2C11	B25X40	0,000	935,235	DOON4	447,001	DOON4	1,342	EM
2C11	B25X40	2250,000	257,262	DOON2	275,293	DOON2	0,964	EM
2C11	B25X40	4500,000	311,148	DOON3	192,031	DOON3	1,041	EM
2C12	B25X40	0,000	397,764	DOON4	233,209	DOON2	0,902	DOON10
2C12	B25X40	2250,000	140,873	DOON2	311,148	DOON7	0,503	DOON10
2C12	B25X40	4500,000	423,548	DOON3	284,431	DOON7	0,933	DOON10
2C13	B25X40	0,000	470,835	DOON4	283,035	DOON2	0,932	DOON10
2C13	B25X40	2250,000	140,188	DOON2	311,148	DOON2	0,503	DOON10
2C13	B25X40	4500,000	403,809	DOON3	338,472	DOON2	0,904	DOON10
2C14	B25X40	0,000	341,475	DOON4	224,170	DOON4	1,025	EM
2C14	B25X40	2250,000	202,556	DOON2	311,148	DOON2	0,762	EM
2C14	B25X40	4500,000	202,903	DOON3	265,417	DOON3	1,240	EM
2C15	B25X40	0,000	689,212	DOON3	338,310	DOON3	1,109	EM
2C15	B25X40	2500,000	173,505	DOON2	311,148	DOON1	0,631	EM
2C15	B25X40	5000,000	545,575	DOON4	311,148	DOON4	1,030	EM
2C16	B25X40	0,000	311,148	DOON3	189,134	DOON3	0,964	EM

2016	B2 SX40	2150,000	298,443	DOON7	301,282	DOON2	0,274	EM
2016	B2 SX40	4500,000	209,094	DOON4	289,161	DOON4	1,151	EM
2017	B2 SX40	0,000	457,602	DOON3	280,090	DOON2	0,230	DOON10
2017	B2 SX40	2140,000	176,247	DOON2	311,148	DOON4	7,507	DOON10
2017	B2 SX40	4500,000	407,102	DOON4	239,635	DOON2	0,308	DOON10
2018	B2 SX40	0,000	414,553	DOON3	249,043	DOON2	0,356	EM
2018	B2 SX40	2140,000	176,247	DOON2	311,148	DOON2	0,194	EM
2018	B2 SX40	4500,000	439,747	DOON4	275,649	DOON2	0,371	EM
2019	B2 SX40	0,000	836,156	DOON3	491,724	DOON3	1,170	EM
2019	B2 SX40	2140,000	176,247	DOON2	278,402	DOON2	0,240	EM
2019	B2 SX40	4500,000	176,247	DOON4	214,746	DOON4	1,031	EM
2020	B2 SX40	0,000	384,345	DOON4	423,471	DOON4	1,328	EM
2020	B2 SX40	2140,000	244,361	DOON2	311,148	DOON2	0,543	EM
2020	B2 SX40	4500,000	180,406	DOON3	138,830	DOON3	0,530	EM
2021	B2 SX40	0,000	374,367	DOON3	415,102	DOON3	1,311	EM
2021	B2 SX40	2140,000	151,401	DOON2	311,148	DOON2	0,333	EM
2021	B2 SX40	4500,000	288,347	DOON4	138,068	DOON2	0,385	EM
2022	B2 SX40	0,000	344,535	DOON4	404,530	DOON4	1,277	EM
2022	B2 SX40	2140,000	176,247	DOON2	278,402	DOON2	0,330	EM
2022	B2 SX40	4500,000	331,513	DOON3	211,266	DOON3	1,030	EM
2023	B2 SX40	0,000	418,622	DOON4	252,308	DOON2	0,958	EM
2023	B2 SX40	2140,000	176,247	DOON2	311,148	DOON2	0,496	EM
2023	B2 SX40	4500,000	455,733	DOON3	272,666	DOON2	0,967	EM
2024	B2 SX40	0,000	474,374	DOON4	285,375	DOON2	0,366	DOON10
2024	B2 SX40	2140,000	176,247	DOON2	311,148	DOON2	0,366	DOON10
2024	B2 SX40	4500,000	401,213	DOON3	232,999	DOON2	0,903	DOON10
2025	B2 SX40	0,000	311,148	DOON4	132,403	DOON4	0,938	EM
2025	B2 SX40	2140,000	176,247	DOON2	311,148	DOON2	0,248	EM
2025	B2 SX40	4500,000	302,403	DOON3	306,129	DOON3	1,246	EM
2026	B2 SX40	0,000	397,229	DOON4	337,384	DOON4	1,107	EM
2026	B2 SX40	2140,000	176,247	DOON2	311,148	DOON2	0,630	EM
2026	B2 SX40	4500,000	585,096	DOON3	311,148	DOON3	1,030	EM
2027	B2 SX40	150,000	393,433	DOON5	129,862	DOON5	1,964	DOON1
2027	B2 SX40	1425,000	137,350	DOON5	137,350	DOON5	0,981	DOON1
2027	B2 SX40	2500,000	311,148	DOON5	311,148	DOON5	1,278	DOON2
2028	B2 SX40	1425,000	95,243	DOON5	95,243	DOON5	0,771	DOON2
2028	B2 SX40	2500,000	311,148	DOON5	309,546	DOON5	1,114	DOON1
2029	B2 SX40	1425,000	329,202	DOON6	311,148	DOON5	1,227	DOON2
2029	B2 SX40	1425,000	128,838	DOON5	128,838	DOON5	0,976	DOON1
2029	B2 SX40	2500,000	248,949	DOON5	249,315	DOON5	1,229	DOON2
2030	B2 SX40	150,000	421,679	DOON5	375,775	DOON5	1,461	DOON1
2030	B2 SX40	1425,000	135,626	DOON5	135,626	DOON5	1,140	DOON2
2030	B2 SX40	2500,000	328,664	DOON6	266,229	DOON5	1,625	DOON2
2031	B2 SX40	150,000	374,452	DOON5	311,148	DOON6	1,463	DOON1
2031	B2 SX40	1325,000	182,435	DOON6	182,435	DOON6	1,268	DOON2
2031	B2 SX40	2500,000	368,924	DOON6	311,148	DOON6	1,253	DOON2
2032	B2 SX40	150,000	351,503	DOON5	311,148	DOON6	1,543	DOON2
2032	B2 SX40	1325,000	135,469	DOON6	135,469	DOON6	1,336	DOON2
2032	B2 SX40	2500,000	348,323	DOON6	311,148	DOON6	1,867	DOON2
2033	B2 SX40	150,000	352,631	DOON5	311,148	DOON6	1,546	DOON2
2033	B2 SX40	1325,000	176,410	DOON6	176,410	DOON6	1,241	DOON2
2033	B2 SX40	2500,000	349,323	DOON6	311,148	DOON6	1,292	DOON2
2034	B2 SX40	150,000	375,570	DOON5	311,148	DOON6	1,466	DOON1
2034	B2 SX40	1325,000	183,802	DOON6	183,802	DOON6	1,174	DOON2
2034	B2 SX40	2500,000	373,370	DOON6	311,148	DOON6	1,258	DOON2
2035	B2 SX40	150,000	423,921	DOON5	311,148	DOON10	1,267	DOON2
2035	B2 SX40	1325,000	137,350	DOON5	137,350	DOON5	1,099	DOON2
2035	B2 SX40	2500,000	311,529	DOON6	311,148	DOON5	1,408	DOON2
2036	B2 SX40	250,000	331,667	DOON5	333,853	DOON9	1,263	DOON2
2036	B2 SX40	1425,000	139,411	DOON5	139,411	DOON5	1,077	DOON2
2036	B2 SX40	2500,000	430,540	DOON5	281,401	DOON5	1,430	DOON2
2037	B2 SX40	150,000	313,989	DOON5	311,148	DOON5	1,040	DOON2
2037	B2 SX40	1425,000	105,718	DOON5	105,718	DOON5	0,822	DOON1
2037	B2 SX40	2500,000	324,008	DOON5	311,148	DOON5	1,021	DOON2
2038	B2 SX40	135,000	310,565	DOON3	224,907	DOON4	1,182	DOON2
2038	B2 SX40	1255,000	108,516	DOON4	133,266	DOON2	0,845	DOON2
2039	B2 SX40	125,000	335,724	DOON7	220,454	DOON3	1,168	DOON2

2034	B25X40	125,000	169,474	DOON3	169,474	DOON3	0,278	DOON1
2034	B25X40	3375,000	290,822	DOON4	249,737	DOON3	0,814	DOON2
2040	B25X40	125,000	310,491	DOON3	209,306	DOON3	0,761	DOON3
2040	B25X40	3375,000	169,474	DOON3	120,566	DOON3	0,475	DOON1
2040	B25X40	4375,000	344,107	DOON4	305,822	DOON4	0,343	DOON1
2041	B25X40	125,000	413,087	DOON3	311,148	DOON3	0,973	DOON2
2041	B25X40	3375,000	120,566	DOON3	240,498	DOON1	0,541	DOON3
2041	B25X40	4375,000	400,530	DOON4	261,733	DOON3	0,390	DOON2
2042	B25X40	125,000	427,575	DOON4	301,121	DOON3	0,947	DOON2
2042	B25X40	3375,000	169,474	DOON3	120,566	DOON1	0,417	DOON1
2042	B25X40	4375,000	389,018	DOON3	255,006	DOON3	0,927	DOON2
2043	B25X40	125,000	311,148	DOON4	217,817	DOON3	0,264	DOON1
2043	B25X40	3375,000	120,566	DOON3	174,133	DOON1	0,501	DOON4
2043	B25X40	4375,000	279,302	DOON3	148,881	DOON3	0,670	DOON5
2044	B25X40	125,000	389,018	DOON4	254,980	DOON4	0,218	BM
2044	B25X40	3375,000	120,566	DOON4	247,454	DOON3	0,417	BM
2044	B25X40	4375,000	311,822	DOON3	204,793	DOON3	0,345	BM
3A10	B145X70	350,000	2244,579	DOON5	1086,485	DOON6	5,756	DOON2
3A10	B145X70	1825,000	1011,143	DOON5	246,653	DOON5	2,394	DOON2
3A10	B145X70	3000,000	0,000	DOON1	1178,378	DOON5	5,094	DOON2
3A11	B145X70	250,000	1387,513	DOON5	1049,491	DOON5	2,871	DOON2
3A11	B145X70	1825,000	517,171	DOON5	648,153	DOON5	2,133	DOON2
3A11	B145X70	3000,000	0,000	DOON1	362,676	DOON2	1,094	DOON1
3A12	B145X70	0,000	0,000	DOON1	497,432	DOON2	2,783	DOON1
3A12	B145X70	550,000	305,743	DOON5	287,368	DOON5	2,988	DOON1
3A12	B145X70	1100,000	1011,143	DOON5	568,068	DOON5	3,110	DOON1
3A13	B145X70	0,000	0,000	DOON1	497,384	DOON2	1,730	DOON1
3A13	B145X70	550,000	305,846	DOON5	287,533	DOON5	2,984	DOON1
3A13	B145X70	1100,000	1011,143	DOON5	568,362	DOON5	3,106	DOON1
3A14	B145X70	0,000	0,000	DOON1	1139,053	DOON5	1,409	DOON2
3A14	B145X70	3000,000	311,763	DOON5	1317,141	DOON5	0,853	DOON1
3A14	B145X70	4000,000	0,000	DOON1	1133,436	DOON5	1,411	DOON2
3A15	B145X70	0,000	0,000	DOON1	1316,408	DOON5	1,603	DOON2
3A15	B145X70	3000,000	370,219	DOON5	1477,987	DOON5	1,049	DOON2
3A15	B145X70	4000,000	0,000	DOON1	1370,015	DOON5	1,548	DOON2
3A16	B145X70	0,000	0,000	DOON1	1353,298	DOON4	1,850	DOON2
3A16	B145X70	3000,000	390,441	DOON5	1457,905	DOON5	1,684	DOON2
3A16	B145X70	4000,000	0,000	DOON1	1425,942	DOON5	1,804	DOON2
3A17	B145X70	0,000	0,000	DOON1	789,099	DOON2	1,416	DOON2
3A17	B145X70	3000,000	241,452	DOON5	1050,297	DOON2	0,862	DOON2
3A17	B145X70	4000,000	0,000	DOON1	1011,143	DOON2	1,218	DOON2
3A18	B145X70	0,000	0,000	DOON1	1363,686	DOON5	1,855	DOON2
3A18	B145X70	3000,000	391,968	DOON5	1463,741	DOON5	1,090	DOON2
3A18	B145X70	4000,000	0,000	DOON1	1434,951	DOON5	1,811	DOON2
3A19	B145X70	0,000	0,000	DOON1	1390,256	DOON5	1,686	DOON2
3A19	B145X70	2000,000	324,842	DOON5	1512,901	DOON5	1,050	DOON1
3A19	B145X70	4000,000	0,000	DOON1	1393,431	DOON5	1,594	DOON2
3A20	B145X70	0,000	0,000	DOON1	1159,921	DOON5	1,439	DOON2
3A20	B145X70	3000,000	312,410	DOON5	1301,619	DOON5	0,875	BM
3A20	B145X70	4000,000	0,000	DOON1	1153,238	DOON5	1,426	DOON2
3A21	B145X70	0,000	0,000	DOON1	1011,143	DOON2	1,706	DOON2
3A21	B145X70	1200,000	270,663	DOON5	500,236	DOON5	2,119	DOON2
3A21	B145X70	2600,000	892,250	DOON5	442,061	DOON5	2,780	DOON2
3A22	B145X70	0,000	0,000	DOON1	1011,143	DOON2	2,711	DOON2
3A22	B145X70	1300,000	271,066	DOON5	500,681	DOON5	2,124	DOON2
3A22	B145X70	2600,000	895,702	DOON5	443,755	DOON5	2,785	DOON2
3A23	B145X70	250,000	1248,578	DOON5	1144,623	DOON9	3,059	DOON2
3A23	B145X70	1125,000	786,453	DOON5	1011,143	DOON5	2,833	DOON2
3A23	B145X70	2000,000	123,908	DOON10	616,620	DOON5	2,626	DOON2
3A24	B145X70	0,000	0,000	DOON1	324,973	DOON2	4,503	DOON2
3A24	B145X70	875,000	513,876	DOON5	516,581	DOON5	4,846	DOON2
3A24	B145X70	1750,000	1192,231	DOON5	654,465	DOON5	5,130	DOON2
3A25	B145X70	0,000	0,000	DOON1	825,565	DOON2	4,765	DOON2
3A25	B145X70	875,000	554,344	DOON5	814,491	DOON5	5,098	DOON2
3A25	B145X70	1750,000	1360,182	DOON5	683,937	DOON5	5,243	DOON2
3A26	B145X70	350,000	1372,735	DOON5	1206,935	DOON9	2,594	DOON2
3A26	B145X70	1125,000	831,301	DOON5	1011,143	DOON5	2,368	DOON2
3A26	B145X70	2000,000	101,272	DOON10	617,816	DOON5	2,151	DOON2

BA27	BT45X70	0,000	171,464	DCOM10	217,049	DCOM8	1,014	DCOM7
BA27	BT45X70	675,000	147,027	DCOM5	310,110	DCOM6	1,777	DCOM8
BA27	BT45X70	1850,000	678,000	DCOM5	890,604	DCOM6	1,374	DCOM8
BA28	BT45X70	0,000	0,000	DCOM1	241,607	DCOM2	2,407	DCOM2
BA28	BT45X70	1375,000	488,582	DCOM6	1003,993	DCOM5	2,043	DCOM2
BA28	BT45X70	2750,000	1409,877	DCOM5	1011,143	DCOM10	0,846	DCOM2
BA29	BT45X70	0,000	0,000	DCOM1	1154,039	DCOM4	4,447	DCOM7
BA29	BT45X70	1375,000	958,451	DCOM6	890,510	DCOM5	5,163	DCOM2
BA29	BT45X70	2750,000	2159,096	DCOM5	1050,056	DCOM5	5,615	DCOM2
BA30	BT45X70	0,000	0,000	DCOM1	1310,061	DCOM4	2,747	DCOM2
BA30	BT45X70	1375,000	1011,143	DCOM5	937,787	DCOM6	6,042	DCOM2
BA30	BT45X70	2750,000	2558,238	DCOM5	1102,629	DCOM5	6,404	DCOM2
BA31	BT45X70	0,000	0,000	DCOM1	1145,041	DCOM7	0,734	DCOM6
BA31	BT45X70	1375,000	1011,143	DCOM5	738,511	DCOM10	2,970	DCOM5
BA31	BT45X70	2750,000	2771,127	DCOM5	977,405	DCOM2	1,287	DCOM5
BA32	BT45X70	0,000	0,000	DCOM1	1011,143	DCOM7	3,872	DCOM2
BA32	BT45X70	1375,000	528,159	DCOM5	323,563	DCOM2	4,172	DCOM2
BA32	BT45X70	2750,000	1548,104	DCOM5	271,118	DCOM2	4,534	DCOM2
BA33	BT45X70	0,000	0,000	DCOM1	874,269	DCOM7	4,498	DCOM2
BA33	BT45X70	1375,000	535,288	DCOM7	439,827	DCOM2	4,794	DCOM2
BA33	BT45X70	2750,000	2001,822	DCOM5	1011,143	DCOM2	5,185	DCOM2
BA34	BT45X70	0,000	0,000	DCOM1	1011,045	DCOM7	2,872	DCOM2
BA34	BT45X70	1375,000	528,846	DCOM5	388,040	DCOM2	4,179	DCOM2
BA34	BT45X70	2750,000	1566,456	DCOM5	772,164	DCOM2	4,535	DCOM2
BA35	BT45X70	0,000	0,000	DCOM1	1293,055	DCOM5	0,745	DCOM5
BA35	BT45X70	1375,000	1011,143	DCOM5	738,589	DCOM10	0,987	DCOM5
BA35	BT45X70	2750,000	2790,029	DCOM5	1011,143	DCOM5	1,275	DCOM5
BA36	BT45X70	0,000	0,000	DCOM1	1320,212	DCOM4	5,849	DCOM2
BA36	BT45X70	1375,000	1011,143	DCOM5	832,690	DCOM5	6,235	DCOM2
BA36	BT45X70	2750,000	2543,135	DCOM5	1271,885	DCOM5	5,802	DCOM2
BA37	BT45X70	0,000	0,000	DCOM1	1175,143	DCOM5	5,023	DCOM2
BA37	BT45X70	1375,000	1011,143	DCOM5	699,244	DCOM5	5,324	DCOM2
BA37	BT45X70	2750,000	2147,436	DCOM5	1054,456	DCOM5	3,885	DCOM2
BA38	BT45X70	0,000	0,000	DCOM1	241,005	DCOM7	2,638	DCOM2
BA38	BT45X70	1375,000	448,148	DCOM5	1011,143	DCOM5	1,964	DCOM2
BA38	BT45X70	2750,000	1881,539	DCOM5	1011,143	DCOM2	2,491	DCOM2
BA39	BT45X70	0,000	44,981	DCOM10	612,548	DCOM5	2,041	DCOM2
BA39	BT45X70	1375,000	478,115	DCOM5	805,628	DCOM6	2,428	DCOM2
BA39	BT45X70	2750,000	1479,411	DCOM5	1045,260	DCOM10	2,817	DCOM2
BA40	BT45X70	150,000	267,913	DCOM5	551,898	DCOM6	5,175	DCOM2
BA40	BT45X70	200,000	1011,143	DCOM5	917,115	DCOM5	5,338	DCOM2
BA40	BT45X70	1150,000	1285,057	DCOM5	1011,143	DCOM5	5,473	DCOM2
BA41	BT45X70	250,000	594,952	DCOM4	450,084	DCOM3	0,786	DCOM1
BA41	BT45X70	2262,500	217,895	DCOM4	145,772	DCOM3	0,703	DCOM1
BA41	BT45X70	4175,000	370,314	DCOM5	184,464	DCOM3	0,914	DCOM1
BA42	BT45X70	225,000	377,020	DCOM4	132,797	DCOM4	0,945	DCOM1
BA42	BT45X70	2237,500	209,562	DCOM3	142,104	DCOM3	0,734	DCOM1
BA42	BT45X70	4250,000	573,391	DCOM3	424,079	DCOM4	0,792	DCOM1
BA43	BT45X70	0,000	0,000	DCOM1	415,036	DCOM2	0,730	DCOM2
BA43	BT45X70	675,000	678,090	DCOM5	639,088	DCOM6	1,497	DCOM2
BA43	BT45X70	1750,000	1274,092	DCOM5	634,420	DCOM5	2,775	DCOM2
BA44	BT45X70	0,000	0,000	DCOM1	241,617	DCOM2	2,430	DCOM2
BA44	BT45X70	875,000	749,302	DCOM5	205,735	DCOM6	1,637	DCOM2
BA44	BT45X70	1750,000	1361,712	DCOM5	690,662	DCOM5	2,816	DCOM2
BA10	BT30X50	0,000	474,147	DCOM4	580,455	DCOM3	2,742	DCOM2
BA10	BT30X50	375,000	721,922	DCOM4	582,799	DCOM7	2,931	DCOM2
BA10	BT30X50	750,000	1024,654	DCOM4	722,647	DCOM7	2,410	DCOM2
BA11	BT30X50	225,000	870,471	DCOM3	474,147	DCOM3	2,130	DCOM2
BA11	BT30X50	1862,500	279,085	DCOM3	179,085	DCOM3	1,960	DCOM2
BA11	BT30X50	3500,000	531,852	DCOM3	737,170	DCOM3	1,809	DCOM1
BA12	BT30X50	225,000	887,471	DCOM4	474,147	DCOM4	2,144	DCOM2
BA12	BT30X50	1862,500	282,774	DCOM4	282,774	DCOM4	1,823	DCOM2
BA12	BT30X50	3500,000	521,986	DCOM7	750,783	DCOM4	1,809	DCOM1
BA13	BT30X50	0,000	474,147	DCOM3	622,757	DCOM4	0,907	DCOM2
BA13	BT30X50	375,000	206,717	DCOM3	893,932	DCOM2	2,326	DCOM2
BA13	BT30X50	750,000	1005,535	DCOM3	786,290	DCOM3	2,365	DCOM2
BA14	BT30X50	250,000	1288,874	DCOM4	877,440	DCOM7	0,247	DCOM2
BA14	BT30X50	2262,500	383,825	DCOM7	239,825	DCOM3	1,524	DCOM2
BA14	BT30X50	4275,000	1136,520	DCOM3	602,092	DCOM3	2,187	DCOM2

30X6	B2SX40	4500,000	311,148	DCON1	155,888	DCON2	1,080	EM
30X6	B2SX40	0,000	373,583	DCON3	431,824	DCON3	1,259	EM
30X6	B2SX40	2250,000	210,410	DCON1	308,031	DCON2	0,781	EM
30X6	B2SX40	4500,000	313,811	DCON2	154,083	DCON2	1,081	EM
30X7	B2SX40	0,000	1124,450	DCON4	331,371	DCON4	1,574	EM
30X7	B2SX40	2250,000	272,627	DCON2	301,343	DCON2	1,057	EM
30X7	B2SX40	4500,000	311,148	DCON3	291,410	DCON4	1,109	EM
30X8	B2SX40	0,000	375,896	DCON4	190,653	DCON2	0,912	DCON10
30X8	B2SX40	2250,000	159,357	DCON2	311,148	DCON2	0,891	DCON10
30X8	B2SX40	4500,000	325,354	DCON3	311,148	DCON2	1,371	DCON10
30X9	B2SX40	0,000	522,473	DCON4	121,593	DCON2	1,030	EM
30X9	B2SX40	2250,000	144,436	DCON1	311,148	DCON2	0,853	EM
30X9	B2SX40	4500,000	437,313	DCON3	233,123	DCON2	0,943	EM
30Y1	B2SX40	150,000	505,422	DCON3	377,984	DCON3	1,075	DCON1
30Y1	B2SX40	2250,000	162,602	DCON3	274,903	DCON2	0,630	DCON1
30Y1	B2SX40	4350,000	508,940	DCON4	375,533	DCON2	1,075	DCON3
30Y2	B2SX40	150,000	513,150	DCON4	370,056	DCON2	1,089	DCON2
30Y2	B2SX40	2250,000	161,345	DCON2	234,937	DCON2	0,640	DCON2
30Y2	B2SX40	4350,000	506,733	DCON3	281,234	DCON2	1,075	DCON2
30Y3	B2SX40	150,000	353,113	DCON10	452,978	DCON3	1,374	DCON1
30Y3	B2SX40	1200,000	155,888	DCON3	155,888	DCON3	1,516	DCON2
30Y3	B2SX40	2250,000	436,550	DCON5	311,148	DCON5	1,709	DCON2
30Y4	B2SX40	150,000	420,790	DCON6	435,053	DCON2	1,590	DCON2
30Y4	B2SX40	1200,000	194,043	DCON5	194,043	DCON5	1,644	DCON2
30Y4	B2SX40	2250,000	384,758	DCON5	333,531	DCON10	1,638	DCON2
30Y5	B2SX40	150,000	400,770	DCON6	451,143	DCON3	1,579	DCON2
30Y5	B2SX40	1200,000	243,159	DCON5	203,288	DCON5	1,733	DCON2
30Y5	B2SX40	2250,000	534,953	DCON5	334,593	DCON10	1,787	DCON2
30Y6	B2SX40	150,000	395,373	DCON10	477,428	DCON5	1,443	DCON1
30Y6	B2SX40	1500,000	166,673	DCON5	166,673	DCON5	1,590	DCON2
30Y6	B2SX40	2250,000	513,513	DCON5	311,148	DCON5	1,721	DCON2
30Y7	B2SX40	250,000	378,455	DCON3	311,148	DCON5	1,340	DCON1
30Y7	B2SX40	1425,000	157,192	DCON5	115,130	DCON2	0,910	DCON2
30Y7	B2SX40	2600,000	331,742	DCON5	311,148	DCON5	1,340	DCON2
30Y8	B2SX40	150,000	339,460	DCON5	311,148	DCON5	1,156	DCON1
30Y8	B2SX40	1375,000	110,813	DCON5	110,813	DCON5	0,814	DCON2
30Y8	B2SX40	2600,000	333,551	DCON6	311,148	DCON5	1,139	DCON1
30Y9	B2SX40	250,000	312,828	DCON10	376,864	DCON5	1,152	DCON2
30Y9	B2SX40	1425,000	132,485	DCON5	135,522	DCON2	1,002	DCON2
30Y9	B2SX40	2600,000	311,745	DCON5	294,933	DCON5	1,356	DCON2
4A10	BI4SX70	250,000	1207,588	DCON6	1011,143	DCON5	2,463	DCON2
4A10	BI4SX70	1825,000	414,763	DCON6	830,070	DCON5	2,219	DCON2
4A10	BI4SX70	3000,000	0,000	DCON1	645,825	DCON2	2,003	DCON1
4A11	BI4SX70	0,000	0,000	DCON1	383,580	DCON2	1,088	EM
4A11	BI4SX70	550,000	35,340	DCON2	173,020	DCON6	1,143	EM
4A11	BI4SX70	1100,000	436,694	DCON5	214,409	DCON5	1,211	EM
4A12	BI4SX70	0,000	0,000	DCON1	381,211	DCON2	1,245	DCON6
4A12	BI4SX70	550,000	94,754	DCON2	171,778	DCON5	1,310	DCON6
4A12	BI4SX70	1100,000	436,400	DCON5	212,277	DCON5	1,293	DCON6
4A13	BI4SX70	0,000	0,000	DCON1	694,477	DCON2	2,511	DCON2
4A13	BI4SX70	875,000	530,511	DCON5	735,537	DCON6	2,626	DCON2
4A13	BI4SX70	1750,000	1188,345	DCON5	779,233	DCON5	2,813	DCON2
4A14	BI4SX70	0,000	0,000	DCON1	689,105	DCON2	2,590	DCON2
4A14	BI4SX70	875,000	563,787	DCON5	742,513	DCON5	2,704	DCON2
4A14	BI4SX70	1750,000	1251,690	DCON5	820,015	DCON5	2,890	DCON2
4A17	BI4SX70	0,000	0,000	DCON1	1271,586	DCON5	1,435	DCON1
4A17	BI4SX70	2000,000	373,506	DCON2	1524,172	DCON2	0,878	DCON6
4A17	BI4SX70	4000,000	0,000	DCON1	1185,249	DCON5	1,575	DCON1
4A18	BI4SX70	0,000	0,000	DCON1	1543,837	DCON5	1,491	DCON2
4A18	BI4SX70	2000,000	444,538	DCON2	1706,999	DCON2	1,101	DCON2
4A18	BI4SX70	4000,000	0,000	DCON1	1307,155	DCON5	1,847	DCON2
4A19	BI4SX70	0,000	0,000	DCON1	1312,170	DCON5	1,279	DCON2
4A19	BI4SX70	2000,000	363,921	DCON2	1373,419	DCON2	0,926	DCON2
4A19	BI4SX70	4000,000	0,000	DCON1	1373,444	DCON5	1,480	DCON2
4A20	BI4SX70	0,000	0,000	DCON1	1313,483	DCON5	1,381	DCON2
4A20	BI4SX70	2000,000	364,363	DCON2	1374,004	DCON2	0,932	DCON2
4A20	BI4SX70	4000,000	0,000	DCON1	1374,235	DCON5	1,445	DCON2
4A21	BI4SX70	0,000	0,000	DCON1	1528,090	DCON5	1,574	DCON2

4A21	BT4SX70	0000,000	410,104	DOON7	1670,104	DOON7	1,100	DOON7
4A21	BT4SX70	9000,000	0,000	DOON1	1173,234	DOON6	1,008	DOON1
4A22	BT4SX70	0,000	0,000	DOON1	1152,004	DOON6	1,161	DOON1
4A22	BT4SX70	1000,000	100,000	DOON7	1130,000	DOON7	0,551	DOON6
4A22	BT4SX70	4000,000	75,513	DOON9	1037,500	DOON6	1,408	DOON2
4A24	BT4SX70	0,000	0,000	DOON1	561,474	DOON2	1,420	DOON1
4A24	BT4SX70	1000,000	104,008	DOON2	556,416	DOON2	1,549	DOON1
4A24	BT4SX70	2500,000	489,170	DOON6	556,130	DOON6	1,018	DOON2
4A25	BT4SX70	0,000	0,000	DOON1	564,325	DOON1	1,467	DOON1
4A25	BT4SX70	1000,000	100,000	DOON7	562,077	DOON6	1,009	DOON1
4A25	BT4SX70	2500,000	463,004	DOON6	559,070	DOON6	1,008	DOON1
4A26	BT4SX70	250,000	123,508	DOON4	1093,000	DOON9	1,414	DOON6
4A26	BT4SX70	1100,000	205,040	DOON6	1011,148	DOON6	1,166	DOON2
4A26	BT4SX70	2000,000	85,411	DOON10	809,337	DOON6	1,901	DOON2
4A27	BT4SX70	0,000	0,000	DOON1	756,877	DOON1	4,185	DOON2
4A27	BT4SX70	800,000	471,510	DOON4	740,161	DOON6	4,478	DOON2
4A27	BT4SX70	1750,000	1207,777	DOON4	731,023	DOON6	4,761	DOON2
4A28	BT4SX70	0,000	0,000	DOON1	861,754	DOON2	3,305	DOON2
4A28	BT4SX70	875,000	517,573	DOON6	856,714	DOON6	4,116	DOON2
4A28	BT4SX70	1750,000	1038,191	DOON6	810,000	DOON6	4,552	DOON2
4A29	BT4SX70	150,000	123,245	DOON6	1104,565	DOON6	2,442	DOON2
4A29	BT4SX70	1100,000	250,010	DOON6	1011,043	DOON6	2,018	DOON2
4A29	BT4SX70	2000,000	84,643	DOON10	822,175	DOON6	2,000	DOON2
4A30	BT4SX70	0,000	82,778	DOON10	805,787	DOON6	1,618	DOON6
4A30	BT4SX70	1000,000	412,140	DOON6	803,740	DOON6	2,104	DOON2
4A30	BT4SX70	2750,000	1270,570	DOON6	1011,143	DOON10	1,564	DOON2
4A31	BT4SX70	0,000	0,000	DOON1	710,506	DOON2	2,939	DOON2
4A31	BT4SX70	1000,000	530,006	DOON6	684,504	DOON6	2,884	DOON2
4A31	BT4SX70	2750,000	1845,586	DOON6	1011,143	DOON6	3,891	DOON2
4A32	BT4SX70	0,000	0,000	DOON1	1203,810	DOON6	2,573	EM
4A32	BT4SX70	1000,000	1005,847	DOON6	1095,861	DOON6	2,561	EM
4A32	BT4SX70	2750,000	2840,245	DOON6	1361,860	DOON6	3,218	EM
4A33	BT4SX70	0,000	0,000	DOON1	1306,357	DOON6	1,900	EM
4A33	BT4SX70	1000,000	1045,354	DOON4	1268,837	DOON2	2,208	EM
4A33	BT4SX70	2750,000	3027,748	DOON6	1447,320	DOON6	2,546	EM
4A34	BT4SX70	0,000	0,000	DOON1	1081,197	DOON6	2,854	EM
4A34	BT4SX70	1000,000	1011,148	DOON6	584,484	DOON7	2,841	EM
4A34	BT4SX70	2750,000	2426,314	DOON6	1171,123	DOON6	2,757	EM
4A35	BT4SX70	0,000	0,000	DOON1	542,652	DOON2	2,183	DOON2
4A35	BT4SX70	1000,000	759,978	DOON6	535,156	DOON6	2,491	DOON2
4A35	BT4SX70	2750,000	1620,264	DOON6	1011,143	DOON6	2,579	DOON2
4A36	BT4SX70	0,000	0,000	DOON1	545,449	DOON2	3,126	DOON2
4A36	BT4SX70	1000,000	759,386	DOON6	530,280	DOON6	2,494	DOON2
4A36	BT4SX70	2750,000	1620,983	DOON6	1011,143	DOON6	2,892	DOON2
4A37	BT4SX70	0,000	0,000	DOON1	1094,112	DOON6	2,303	EM
4A37	BT4SX70	1000,000	1011,143	DOON6	583,889	DOON7	2,560	EM
4A37	BT4SX70	2750,000	2449,786	DOON6	1162,004	DOON6	2,776	EM
4A38	BT4SX70	0,000	0,000	DOON1	1283,149	DOON6	2,985	EM
4A38	BT4SX70	1000,000	1094,694	DOON6	758,491	DOON7	2,193	EM
4A38	BT4SX70	2750,000	3046,102	DOON6	1455,658	DOON6	2,591	EM
4A39	BT4SX70	0,000	69,287	DOON6	1049,871	DOON6	1,461	EM
4A39	BT4SX70	1000,000	1094,489	DOON6	644,640	DOON6	2,468	EM
4A39	BT4SX70	2750,000	2883,029	DOON6	1269,941	DOON6	1,884	EM
4A40	BT4SX70	0,000	0,000	DOON1	632,793	DOON2	3,126	DOON2
4A40	BT4SX70	1000,000	897,804	DOON6	587,968	DOON6	2,572	DOON2
4A40	BT4SX70	2750,000	1865,444	DOON6	1011,143	DOON6	4,079	DOON2
4A41	BT4SX70	0,000	92,612	DOON10	615,794	DOON6	1,909	DOON2
4A41	BT4SX70	1000,000	481,048	DOON6	700,974	DOON6	2,066	DOON2
4A41	BT4SX70	2750,000	1331,039	DOON6	1011,143	DOON10	2,655	DOON2
4A43	BT4SX70	0,000	642,136	DOON2	318,974	DOON2	1,988	DOON2
4A43	BT4SX70	1000,000	440,544	DOON4	674,156	DOON3	1,487	DOON2
4A43	BT4SX70	2250,000	324,806	DOON4	701,503	DOON3	1,386	DOON2
4A45	BT4SX70	0,000	0,000	DOON1	229,465	DOON2	1,979	DOON2
4A45	BT4SX70	1000,000	137,506	DOON2	137,506	DOON2	1,569	DOON2
4A45	BT4SX70	2000,000	554,678	DOON2	275,780	DOON2	2,039	DOON2
4A50	BT4SX70	0,000	0,000	DOON1	244,003	DOON2	2,047	DOON2
4A50	BT4SX70	1000,000	158,609	DOON2	188,001	DOON2	2,100	DOON2
4A50	BT4SX70	2000,000	626,832	DOON2	311,401	DOON2	2,027	DOON2

4A59	BT30X50	0,000	579,480	DOON3	768,340	DOON2	2,440	DOON2
4A62	BT30X50	1135,000	427,837	DOON3	346,908	DOON4	2,319	DOON2
4A63	BT30X50	3250,000	320,644	DOON3	708,848	DOON4	2,218	DOON2
4B10	BT30X50	150,000	387,955	DOON3	494,159	DOON7	1,547	DOON7
4B10	BT30X50	3802,500	314,940	DOON3	314,940	DOON7	1,391	DOON1
4B10	BT30X50	4275,000	1029,787	DOON4	618,430	DOON7	2,055	DOON2
4B11	BT30X50	1060,000	370,431	DOON3	320,431	DOON3	1,764	DOON1
4B11	BT30X50	4175,000	1012,401	DOON3	628,777	DOON6	1,926	DOON1
4B12	BT30X50	225,000	571,118	DOON4	616,145	DOON7	1,391	DOON2
4B12	BT30X50	1450,000	713,672	DOON3	317,501	DOON7	1,144	DOON7
4B12	BT30X50	4275,000	596,139	DOON3	616,984	DOON6	1,543	DOON2
4B13	BT30X50	175,000	1019,502	DOON4	532,407	DOON7	2,161	DOON2
4B13	BT30X50	1330,000	374,418	DOON4	367,701	DOON3	1,700	DOON1
4B13	BT30X50	3500,000	474,147	DOON3	618,839	DOON4	1,908	DOON2
4B14	BT30X50	330,000	1069,093	DOON3	636,773	DOON3	0,435	DOON3
4B14	BT30X50	430,000	778,025	DOON3	432,373	DOON6	0,397	DOON3
4B14	BT30X50	1000,000	474,147	DOON3	608,502	DOON4	0,194	DOON3
4B15	BT30X50	0,000	478,336	DOON7	744,942	DOON4	1,968	DOON2
4B15	BT30X50	1887,500	431,346	DOON4	430,617	DOON3	1,838	DOON1
4B16	BT30X50	3775,000	1230,017	DOON4	571,834	DOON7	2,491	DOON1
4B16	BT30X50	125,000	1017,174	DOON3	738,970	DOON6	1,316	DOON1
4B16	BT30X50	570,000	704,354	DOON7	269,147	DOON4	2,396	DOON1
4B16	BT30X50	1000,000	474,147	DOON3	702,944	DOON4	2,083	DOON1
4B17	BT30X50	345,000	1032,061	DOON4	716,660	DOON7	1,360	DOON1
4B17	BT30X50	410,000	710,860	DOON4	303,833	DOON7	2,150	DOON1
4B17	BT30X50	1000,000	474,147	DOON4	639,956	DOON7	2,127	DOON1
4B18	BT30X50	0,000	479,131	DOON3	942,948	DOON3	1,959	DOON2
4B18	BT30X50	1637,000	346,883	DOON7	346,889	DOON3	1,350	DOON1
4B18	BT30X50	3775,000	1258,447	DOON3	689,236	DOON3	2,455	DOON1
4B19	BT30X50	125,000	308,393	DOON3	259,434	DOON4	2,501	DOON2
4B19	BT30X50	1700,000	445,348	DOON4	473,147	DOON3	1,134	DOON7
4B19	BT30X50	4275,000	1149,162	DOON4	834,075	DOON7	3,579	DOON2
4B20	BT30X50	225,000	917,283	DOON3	738,170	DOON6	2,237	DOON2
4B20	BT30X50	1800,000	393,457	DOON3	474,147	DOON4	1,790	DOON7
4B20	BT30X50	1875,000	804,475	DOON4	282,096	DOON3	2,170	DOON3
4B21	BT30X50	225,000	1008,113	DOON3	646,112	DOON3	2,236	DOON2
4B21	BT30X50	2150,000	370,150	DOON3	335,144	DOON7	1,385	DOON7
4B22	BT30X50	225,000	1059,556	DOON3	609,488	DOON3	2,210	DOON2
4B22	BT30X50	2680,000	332,977	DOON3	356,926	DOON2	1,219	DOON1
4B23	BT30X50	4275,000	1063,763	DOON4	589,348	DOON7	2,322	DOON7
4B23	BT30X50	225,000	1082,702	DOON3	619,249	DOON6	2,220	DOON2
4B23	BT30X50	2250,000	343,669	DOON3	340,653	DOON2	1,618	DOON2
4B23	BT30X50	4275,000	1077,678	DOON4	591,740	DOON7	2,735	DOON7
4B24	BT30X50	150,000	788,655	DOON3	474,147	DOON3	1,945	DOON1
4B24	BT30X50	1262,500	253,818	DOON3	340,764	DOON2	1,064	DOON6
4B24	BT30X50	4275,000	921,470	DOON4	571,366	DOON7	1,867	DOON1
4B25	BT30X50	250,000	802,716	DOON4	474,147	DOON4	1,946	DOON1
4B25	BT30X50	3261,500	287,189	DOON3	713,064	DOON2	1,065	DOON6
4B25	BT30X50	4275,000	398,849	DOON3	547,638	DOON3	1,837	DOON1
4B26	BT30X50	125,000	1126,303	DOON4	580,748	DOON7	2,309	DOON3
4B26	BT30X50	2150,000	327,612	DOON3	340,696	DOON2	1,301	DOON2
4B26	BT30X50	4275,000	1029,564	DOON3	421,991	DOON3	2,023	DOON7
4B27	BT30X50	225,000	1987,760	DOON4	384,033	DOON7	2,262	DOON2
4B27	BT30X50	2250,000	309,677	DOON3	359,418	DOON2	1,250	DOON2
4B27	BT30X50	4275,000	1036,329	DOON3	609,420	DOON3	2,003	DOON7
4B28	BT30X50	225,000	1062,370	DOON4	597,301	DOON7	2,221	DOON2
4B28	BT30X50	2250,000	367,697	DOON3	317,550	DOON2	1,271	DOON2
4B28	BT30X50	4275,000	1126,414	DOON3	687,969	DOON6	2,021	DOON7
4B29	BT30X50	305,000	1115,159	DOON4	569,983	DOON7	2,166	DOON1
4B29	BT30X50	3500,000	401,554	DOON3	461,073	DOON2	1,191	DOON6
4B29	BT30X50	4275,000	1076,868	DOON7	646,089	DOON6	2,149	DOON1
4B30	BT30X50	225,000	102,119	DOON4	36,466	DOON3	0,204	DOON6
4B30	BT30X50	1362,500	36,446	DOON4	59,639	DOON3	0,117	DOON6
4B30	BT30X50	3500,000	22,370	DOON1	11,180	DOON1	0,185	RM
4B31	BT30X50	205,000	100,714	DOON3	50,248	DOON3	0,202	DOON6
4B31	BT30X50	1862,500	28,097	DOON3	59,379	DOON4	0,115	DOON6
4B31	BT30X50	3500,000	27,473	DOON1	11,096	DOON1	0,184	DOON6
4B32	BT30X50	0,000	26,288	DOON6	15,539	DOON5	0,130	DOON1

4B33	B130X50	540,000	57,867	DOCM4	47,570	DOCM5	0,133	DOCM5
4B33	B130X50	1775,000	57,481	DOCM5	47,159	DOCM5	0,198	DOCM5
4B33	B130X50	0,000	86,378	DOCM6	15,427	DOCM5	0,194	DOCM1
4B33	B130X50	887,500	58,103	DOCM5	47,108	DOCM5	0,131	DOCM5
4B33	B130X50	1775,000	58,532	DOCM5	47,172	DOCM5	0,198	DOCM1
4B34	B130X50	0,000	0,000	DOCM3	34,031	DOCM1	0,171	DOCM1
4B34	B130X50	804,000	5,814	DOCM1	34,138	DOCM1	0,138	DOCM1
4B34	B130X50	1000,000	0,000	DOCM1	74,024	DOCM2	0,138	DOCM1
4B35	B130X50	0,000	0,000	DOCM1	14,124	DOCM1	0,170	DOCM1
4B35	B130X50	500,000	5,100	DOCM1	34,132	DOCM1	0,138	DOCM1
4B35	B130X50	1000,000	0,000	DOCM1	6,388	DOCM2	0,136	DOCM1
4B36	B130X50	0,000	0,128	DOCM3	18,607	DOCM2	0,045	EH
4B36	B130X50	1000,000	5,100	DOCM1	3,738	DOCM4	0,045	EH
4B36	B130X50	3000,000	7,787	DOCM5	3,801	DOCM5	0,045	EH
4B37	B130X50	0,000	15,213	DOCM2	11,690	DOCM5	0,050	EH
4B37	B130X50	1000,000	0,000	DOCM1	3,738	DOCM4	0,050	EH
4B37	B130X50	2000,000	7,718	DOCM5	3,859	DOCM5	0,050	EH
4B38	B130X50	0,000	0,000	DOCM1	531,987	DOCM5	1,513	DOCM5
4B38	B130X50	1000,000	115,823	DOCM1	245,258	DOCM5	1,533	DOCM5
4B38	B130X50	3000,000	350,823	DOCM4	115,759	DOCM4	1,533	DOCM5
4B39	B130X50	0,000	35,965	DOCM4	16,468	DOCM4	0,045	EH
4B39	B130X50	1750,000	4,133	DOCM4	45,062	DOCM1	0,045	EH
4B39	B130X50	3500,000	86,225	DOCM1	13,106	DOCM1	0,045	EH
4B40	B130X50	0,000	35,553	DOCM3	18,267	DOCM3	0,045	EH
4B40	B130X50	1750,000	4,133	DOCM3	45,062	DOCM1	0,045	EH
4B40	B130X50	3500,000	85,158	DOCM1	13,077	DOCM1	0,045	EH
4B41	B130X50	0,000	0,000	DOCM1	531,987	DOCM5	1,513	DOCM5
4B41	B130X50	3000,000	115,821	DOCM3	245,220	DOCM4	1,533	DOCM5
4B41	B130X50	750,000	247,577	DOCM3	114,559	DOCM3	1,553	DOCM5
4B42	B130X50	250,000	139,343	DOCM4	69,435	DOCM3	0,134	EH
4B42	B130X50	2100,000	39,221	DOCM1	105,038	DOCM1	0,134	EH
4B42	B130X50	4100,000	157,582	DOCM1	78,574	DOCM1	0,134	EH
4B43	B130X50	250,000	140,343	DOCM4	69,962	DOCM5	0,135	EH
4B43	B130X50	2100,000	39,244	DOCM1	104,510	DOCM1	0,135	EH
4B43	B130X50	4100,000	157,778	DOCM1	78,621	DOCM1	0,135	EH
4B44	B130X50	250,000	200,552	DOCM4	39,542	DOCM4	0,238	EH
4B44	B130X50	2300,000	55,185	DOCM1	133,477	DOCM1	0,238	EH
4B44	B130X50	4500,000	222,210	DOCM1	110,572	DOCM1	0,238	EH
4B45	B130X50	250,000	199,636	DOCM3	39,364	DOCM3	0,237	EH
4B45	B130X50	2300,000	54,136	DOCM1	134,542	DOCM1	0,237	EH
4B45	B130X50	4500,000	222,112	DOCM1	110,523	DOCM1	0,237	EH
4BK1	B130X50	0,000	0,000	DOCM1	67,982	DOCM4	3,610	DOCM1
4BK1	B130X50	400,000	218,471	DOCM1	178,646	DOCM1	3,640	DOCM1
4BK1	B130X50	850,000	549,034	DOCM1	360,109	DOCM1	3,670	DOCM1
4BK2	B130X50	150,000	550,817	DOCM1	361,249	DOCM1	3,608	DOCM1
4BK2	B130X50	575,000	322,075	DOCM1	179,212	DOCM1	3,578	DOCM1
4BK2	B130X50	1000,000	0,178	EH	70,423	DOCM3	3,548	DOCM1
4BK3	B130X50	150,000	598,841	DOCM1	353,431	DOCM1	3,549	DOCM1
4BK3	B130X50	575,000	327,836	DOCM1	181,757	DOCM1	3,619	DOCM1
4BK3	B130X50	1000,000	0,182	EH	69,839	DOCM4	3,589	DOCM1
4BK4	B130X50	0,000	0,000	DOCM1	87,425	DOCM3	3,593	DOCM1
4BK4	B130X50	400,000	217,844	DOCM1	178,188	DOCM1	3,623	DOCM1
4BK4	B130X50	850,000	549,590	DOCM1	359,178	DOCM1	3,593	DOCM1
4BK5	B130X50	150,000	447,723	DOCM1	321,679	DOCM1	3,585	DOCM1
4BK5	B130X50	575,000	190,530	DOCM1	110,309	DOCM1	3,555	DOCM1
4BK5	B130X50	1000,000	0,773	EH	52,776	DOCM1	3,625	DOCM1
4BK6	B130X50	0,000	0,969	EH	83,032	DOCM3	2,956	DOCM1
4BK6	B130X50	400,000	198,200	DOCM4	114,145	DOCM1	2,880	DOCM1
4BK6	B130X50	850,000	463,544	DOCM1	329,429	DOCM1	2,917	DOCM1
4BK7	B130X50	0,000	0,960	EH	82,633	DOCM4	2,846	DOCM1
4BK7	B130X50	100,000	197,201	DOCM3	113,768	DOCM1	2,870	DOCM1
4BK7	B130X50	950,000	461,987	DOCM1	328,566	DOCM1	2,900	DOCM1
4BK8	B130X50	150,000	446,570	DOCM1	320,870	DOCM1	2,668	DOCM1
4BK8	B130X50	575,000	190,065	DOCM1	109,804	DOCM1	2,638	DOCM1
4BK8	B130X50	1000,000	0,854	EH	51,705	DOCM1	2,608	DOCM1
4BK9	B130X50	0,000	0,187	DOCM3	61,586	DOCM4	3,292	DOCM1
4BK9	B130X50	387,500	514,000	DOCM1	151,515	DOCM3	3,314	DOCM1
4BK9	B130X50	775,000	474,147	DOCM3	308,046	DOCM3	3,347	DOCM1

40X1	B2 SX40	10,000	571,243	DCCM3	489,785	DCCM3	1,325	DCCM3
40X1	B2 SX40	2250,000	277,087	DCCM4	277,087	DCCM4	1,103	DCCM2
40X1	B2 SX40	4500,000	384,187	DCCM4	428,728	DCCM4	1,583	DCCM3
40X2	B2 SX40	10,000	571,015	DCCM4	479,057	DCCM3	1,321	DCCM3
40X2	B2 SX40	2250,000	273,378	DCCM2	273,378	DCCM2	1,076	DCCM2
40X2	B2 SX40	4500,000	371,553	DCCM3	417,339	DCCM3	1,557	DCCM3
40X3	B2 SX40	0,000	411,148	DCCM3	311,148	DCCM3	1,141	EM
40X3	B2 SX40	2250,000	368,436	DCCM2	368,436	DCCM2	1,111	EM
40X3	B2 SX40	4500,000	422,149	DCCM4	500,457	DCCM4	1,582	EM
40X4	B2 SX40	0,000	443,741	DCCM3	343,011	DCCM3	0,418	DCCM10
40X4	B2 SX40	2250,000	130,703	DCCM4	311,148	DCCM2	0,500	DCCM10
40X4	B2 SX40	4500,000	400,159	DCCM4	421,614	DCCM3	0,500	DCCM10
40X5	B2 SX40	0,000	454,144	DCCM3	343,011	DCCM3	1,003	EM
40X5	B2 SX40	2250,000	131,013	DCCM2	311,148	DCCM2	0,523	EM
40X5	B2 SX40	4500,000	458,316	DCCM4	539,203	DCCM3	0,963	EM
40X6	B2 SX40	0,000	394,147	DCCM3	490,737	DCCM3	1,355	EM
40X6	B2 SX40	2250,000	187,584	DCCM2	311,148	DCCM2	0,781	EM
40X6	B2 SX40	4500,000	138,031	DCCM4	228,709	DCCM4	1,039	EM
40X7	B2 SX40	0,000	532,943	DCCM3	447,868	DCCM4	1,350	EM
40X7	B2 SX40	2250,000	159,538	DCCM3	311,148	DCCM2	0,782	EM
40X7	B2 SX40	4500,000	331,121	DCCM3	357,447	DCCM3	1,089	EM
40X8	B2 SX40	0,000	489,808	DCCM4	343,011	DCCM3	1,003	EM
40X8	B2 SX40	2250,000	130,658	DCCM2	311,148	DCCM2	0,527	EM
40X8	B2 SX40	4500,000	440,473	DCCM3	546,767	DCCM2	0,956	EM
40X9	B2 SX40	0,000	419,578	DCCM4	311,148	DCCM3	0,903	DCCM10
40X9	B2 SX40	2250,000	131,783	DCCM2	311,148	DCCM2	0,516	DCCM10
40X9	B2 SX40	4500,000	467,732	DCCM3	468,911	DCCM3	0,945	DCCM10
40X10	B2 SX50	0,000	141,444	DCCM1	88,305	DCCM1	0,391	DCCM1
40X10	B2 SX50	500,000	80,210	DCCM1	40,050	DCCM1	0,754	DCCM1
40X10	B2 SX50	1000,000	75,355	DCCM3	87,587	DCCM3	0,659	DCCM1
40X11	B2 SX50	0,000	168,711	DCCM4	137,193	DCCM4	1,041	DCCM1
40X11	B2 SX50	1250,000	87,168	DCCM3	87,168	DCCM3	0,555	DCCM2
40X11	B2 SX50	2500,000	319,634	DCCM3	175,321	DCCM3	1,043	DCCM1
40X12	B2 SX50	0,000	219,306	DCCM5	158,008	DCCM5	1,008	DCCM1
40X12	B2 SX50	1250,000	88,164	DCCM5	79,601	DCCM5	0,620	DCCM1
40X12	B2 SX50	2500,000	238,819	DCCM6	147,966	DCCM5	1,113	DCCM1
40X13	B2 SX50	0,000	297,457	DCCM3	147,599	DCCM3	0,903	DCCM2
40X13	B2 SX50	1250,000	73,302	DCCM5	73,302	DCCM5	0,591	DCCM2
40X13	B2 SX50	2500,000	264,640	DCCM2	142,619	DCCM6	1,013	DCCM2
40X14	B2 SX50	0,000	355,503	DCCM3	131,510	DCCM3	1,035	DCCM1
40X14	B2 SX50	1250,000	86,737	DCCM4	86,737	DCCM4	0,560	DCCM2
40X14	B2 SX50	2500,000	319,634	DCCM4	178,497	DCCM4	1,049	DCCM1
40X15	B2 SX50	0,000	314,836	DCCM3	156,793	DCCM3	0,844	EM
40X15	B2 SX50	1500,000	78,003	DCCM3	160,117	DCCM4	0,366	EM
40X15	B2 SX50	3000,000	68,093	DCCM2	32,974	DCCM2	0,566	EM
40X16	B2 SX50	0,000	319,634	DCCM4	158,746	DCCM4	0,365	EM
40X16	B2 SX50	1500,000	78,966	DCCM4	161,511	DCCM3	0,365	EM
40X16	B2 SX50	3000,000	59,059	DCCM2	29,474	DCCM2	0,365	EM
40X17	B2 SX50	0,000	31,587	DCCM5	34,413	DCCM3	0,594	DCCM4
40X17	B2 SX50	1000,000	41,513	DCCM3	124,787	DCCM5	0,399	DCCM10
40X17	B2 SX50	2000,000	166,594	DCCM5	62,862	DCCM5	0,620	DCCM6
40X18	B2 SX50	0,000	43,487	DCCM4	31,274	DCCM4	0,598	DCCM4
40X18	B2 SX50	1500,000	44,746	DCCM5	128,437	DCCM6	0,367	EM
40X18	B2 SX50	2000,000	180,544	DCCM5	30,749	DCCM5	0,649	EM
40X19	B2 SX50	125,000	330,304	DCCM3	217,248	DCCM3	1,359	DCCM2
40X19	B2 SX50	1250,000	107,890	DCCM3	107,890	DCCM3	0,944	DCCM2
40X19	B2 SX50	2375,000	385,347	DCCM4	319,634	DCCM3	1,103	DCCM1
40X20	B2 SX50	0,000	31,513	DCCM10	133,433	DCCM5	0,792	DCCM2
40X20	B2 SX50	1187,500	107,002	DCCM2	107,002	DCCM2	0,937	DCCM2
40X20	B2 SX50	2375,000	384,731	DCCM5	215,438	DCCM2	1,197	DCCM2
40X21	B2 SX50	0,000	133,000	DCCM3	76,129	DCCM3	0,325	EM
40X21	B2 SX50	2250,000	87,973	DCCM3	258,446	DCCM2	0,149	EM
40X21	B2 SX50	4500,000	128,055	DCCM4	61,386	DCCM4	0,121	EM
40X22	B2 SX50	0,000	132,237	DCCM3	60,877	DCCM3	0,713	EM
40X22	B2 SX50	2250,000	28,527	DCCM2	286,245	DCCM2	0,142	EM
40X22	B2 SX50	4500,000	114,736	DCCM2	57,157	DCCM2	0,219	EM
40X23	B2 SX50	125,000	474,122	DCCM3	241,514	DCCM3	0,469	EM
40X23	B2 SX50	2312,500	119,817	DCCM2	119,817	DCCM2	0,447	EM
40X23	B2 SX50	4500,000	100,966	DCCM6	87,303	DCCM5	0,476	EM

4D24	B20X50	1250,000	1250,000	DOCN3	24,307	DOCN3	0,511	EM
4E24	B20X50	1250,000	1250,000	DOCN4	128,537	DOCN4	0,423	EM
4E24	B20X50	4275,000	4275,411	DOCN4	279,526	DOCN4	0,628	EM
4D25	B20X50	0,000	0,000	DOCN1	39,062	DOCN1	0,163	EM
4E25	B20X50	2187,500	19,010	DOCN1	19,010	DOCN1	0,036	EM
4E25	B20X50	4275,000	64,777	DOCN3	32,323	DOCN3	0,451	EM
4D26	B20X50	0,000	0,000	DOCN1	37,064	DOCN1	0,173	DOCN4
4D26	B20X50	2187,500	19,510	DOCN2	19,510	DOCN1	0,036	DOCN6
4D26	B20X50	4275,000	66,596	DOCN4	33,227	DOCN4	0,154	DOCN6
4D27	B20X50	1250,000	1250,000	DOCN4	75,007	DOCN3	0,509	EM
4D27	B20X50	2350,000	1250,000	DOCN3	125,001	DOCN3	0,423	EM
4D27	B20X50	4275,000	410,992	DOCN3	274,840	DOCN3	0,628	EM
4D28	B20X50	1250,000	444,348	DOCN4	249,443	DOCN3	0,757	EM
4D28	B20X50	2312,500	113,719	DOCN2	133,719	DOCN2	0,173	EM
4D28	B20X50	4800,000	31,349	DOCN3	79,326	DOCN3	0,188	EM
4D29	B20X50	0,000	115,000	DOCN2	57,494	DOCN1	0,000	DOCN1
4D29	B20X50	2250,000	37,723	DOCN2	204,583	DOCN2	0,000	DOCN1
4D29	B20X50	4800,000	143,017	DOCN2	78,638	DOCN2	0,000	DOCN1
4D30	B20X50	0,000	187,207	DOCN1	83,071	DOCN3	0,000	DOCN1
4D30	B20X50	2250,000	46,397	DOCN2	227,472	DOCN2	0,000	DOCN1
4D30	B20X50	4500,000	69,331	DOCN3	34,564	DOCN3	0,000	DOCN1
4D31	B20X50	0,000	54,007	DOCN4	117,051	DOCN3	0,234	EM
4D31	B20X50	2487,500	141,847	DOCN3	307,650	DOCN4	0,187	EM
4D31	B20X50	4875,000	501,259	DOCN3	319,634	DOCN3	0,278	EM
4D32	B20X50	0,000	394,532	DOCN1	259,228	DOCN1	0,513	DOCN1
4D32	B20X50	3500,000	128,531	DOCN1	319,634	DOCN1	0,282	EM
4D32	B20X50	7000,000	393,076	DOCN1	268,832	DOCN1	0,318	DOCN1
4D33	B20X50	0,000	158,451	DOCN4	38,823	DOCN3	1,012	DOCN1
4D33	B20X50	7007,107	352,763	DOCN1	103,417	DOCN1	1,172	DOCN1
4D33	B20X50	1414,214	332,329	DOCN1	219,309	DOCN1	1,331	DOCN1
4D34	B20X50	0,000	169,326	DOCN3	79,256	DOCN4	1,011	DOCN1
4D34	B20X50	7007,107	263,772	DOCN1	108,564	DOCN1	1,170	DOCN1
4D34	B20X50	1414,214	331,273	DOCN1	218,038	DOCN1	1,330	DOCN1
4D35	B20X50	2500,000	319,634	DOCN5	129,252	DOCN3	0,265	EM
4D35	B20X50	2525,000	85,550	DOCN5	180,555	DOCN1	0,265	EM
4D35	B20X50	5000,000	173,260	DOCN5	86,490	DOCN5	0,265	EM
4D36	B20X50	2500,000	319,634	DOCN5	122,120	DOCN5	0,265	EM
4D36	B20X50	2525,000	85,510	DOCN5	180,744	DOCN1	0,265	EM
4D36	B20X50	5000,000	173,036	DOCN5	87,027	DOCN5	0,265	EM
4F10	B20X30	0,000	31,211	DOCN1	10,043	DOCN1	0,036	EM
4F10	B20X30	1547,427	5,946	DOCN5	17,332	DOCN1	0,036	EM
4F10	B20X30	3094,855	23,828	DOCN5	11,896	DOCN5	0,036	EM
4F11	B20X30	0,000	23,850	DOCN5	11,409	DOCN5	0,036	EM
4F11	B20X30	1547,427	5,950	DOCN5	17,389	DOCN1	0,036	EM
4F11	B20X30	3094,855	21,250	DOCN1	10,612	DOCN1	0,036	EM
4F12	B20X30	0,000	24,813	DOCN1	12,389	DOCN1	0,036	EM
4F12	B20X30	1422,427	6,130	DOCN1	17,732	DOCN4	0,036	EM
4F12	B20X30	2844,855	19,102	DOCN3	9,590	DOCN3	0,036	EM
4F13	B20X30	3094,855	15,459	DOCN4	7,901	DOCN4	0,036	EM
4F13	B20X30	1548,855	5,743	DOCN4	15,853	DOCN3	0,036	EM
4F13	B20X30	3094,855	23,016	DOCN4	11,493	DOCN4	0,036	EM
4F14	B20X30	0,000	21,316	DOCN1	11,443	DOCN1	0,034	EM
4F14	B20X30	1547,427	5,718	DOCN1	17,606	DOCN1	0,034	EM
4F14	B20X30	3094,855	22,423	DOCN1	11,197	DOCN1	0,034	EM
4F15	B20X30	0,000	22,874	DOCN1	11,422	DOCN1	0,034	EM
4F15	B20X30	1547,427	5,707	DOCN1	17,830	DOCN1	0,034	EM
4F15	B20X30	3094,855	22,417	DOCN1	11,194	DOCN1	0,034	EM
4F16	B20X30	0,000	22,900	DOCN3	11,435	DOCN3	0,034	EM
4F16	B20X30	1446,000	5,714	DOCN3	15,929	DOCN4	0,035	EM
4F16	B20X30	2892,000	15,901	DOCN3	7,893	DOCN3	0,035	EM
5A10	B14 SX70	250,000	1011,143	DOCN5	581,373	DOCN5	1,504	DOCN2
5A10	B14 SX70	1625,000	333,862	DOCN6	581,096	DOCN5	1,622	DOCN2
5A10	B14 SX70	3000,000	0,000	DOCN1	300,071	DOCN2	1,450	DOCN2
5A11	B14 SX70	0,000	0,000	DOCN1	406,692	DOCN3	1,125	EM
5A11	B14 SX70	550,000	101,048	DOCN2	116,153	DOCN2	1,180	EM
5A11	B14 SX70	1100,000	290,003	DOCN5	134,233	DOCN5	1,249	EM
5A12	B14 SX70	0,000	0,000	DOCN1	408,255	DOCN3	1,126	EM
5A12	B14 SX70	550,000	101,435	DOCN2	120,255	DOCN2	1,181	EM

SA12	BT4 SX70	1100,000	441,452	DCON5	1401,441	DCON5	1,124	EM
SA13	BT4 SX70	0,000	0,000	DCON1	844,739	DCON2	1,320	DCON2
SA13	BT4 SX70	875,000	449,233	DCON5	534,994	DCON5	1,935	DCON2
SA13	BT4 SX70	1250,000	1011,143	DCON4	547,129	DCON4	2,121	DCON2
SA14	BT4 SX70	0,000	0,000	DCON1	323,163	DCON2	1,377	DCON2
SA14	BT4 SX70	875,000	509,297	DCON5	520,731	DCON2	1,291	DCON2
SA14	BT4 SX70	1250,000	1011,143	DCON5	531,748	DCON5	1,177	DCON2
SA15	BT4 SX70	0,000	0,000	DCON1	1095,943	DCON5	1,121	DCON2
SA15	BT4 SX70	2500,000	140,040	DCON2	1248,373	DCON2	0,214	DCON2
SA15	BT4 SX70	4000,000	0,000	DCON1	1011,143	DCON2	1,129	DCON2
SA16	BT4 SX70	0,000	0,000	DCON1	1400,343	DCON2	1,470	DCON1
SA16	BT4 SX70	1000,000	401,890	DCON2	1435,419	DCON2	0,300	DCON1
SA16	BT4 SX70	4000,000	0,000	DCON1	1150,603	DCON5	1,691	DCON1
SA17	BT4 SX70	0,000	0,000	DCON1	1193,900	DCON5	1,119	DCON2
SA17	BT4 SX70	2000,000	150,943	DCON2	1149,211	DCON2	0,353	DCON2
SA17	BT4 SX70	4000,000	0,000	DCON1	1011,143	DCON2	1,408	DCON2
SA18	BT4 SX70	0,000	0,000	DCON1	1217,537	DCON5	1,210	DCON2
SA18	BT4 SX70	2100,000	354,797	DCON2	1275,331	DCON2	0,301	DCON2
SA18	BT4 SX70	4000,000	0,000	DCON1	1011,143	DCON2	1,425	DCON2
SA19	BT4 SX70	0,000	0,000	DCON1	1429,086	DCON5	1,431	DCON1
SA19	BT4 SX70	2000,000	440,536	DCON2	1450,643	DCON2	1,014	DCON1
SA19	BT4 SX70	4000,000	0,000	DCON1	1167,512	DCON4	1,720	DCON1
SA20	BT4 SX70	0,000	0,000	DCON1	1116,896	DCON5	1,122	DCON2
SA20	BT4 SX70	2000,000	344,636	DCON2	1231,281	DCON2	0,346	DCON2
SA20	BT4 SX70	4000,000	0,000	DCON1	1011,143	DCON2	1,400	DCON2
SA21	BT4 SX70	0,000	0,000	DCON1	509,376	DCON2	1,437	DCON2
SA21	BT4 SX70	1300,000	141,821	DCON2	501,466	DCON2	1,415	DCON1
SA21	BT4 SX70	2500,000	342,794	DCON5	776,663	DCON5	1,849	DCON2
SA22	BT4 SX70	0,000	0,000	DCON1	571,496	DCON2	1,444	DCON2
SA22	BT4 SX70	1500,000	141,992	DCON5	501,141	DCON2	1,472	DCON1
SA22	BT4 SX70	2500,000	352,321	DCON5	737,123	DCON5	1,842	DCON2
SA23	BT4 SX70	350,000	1011,143	DCON5	919,263	DCON5	0,157	DCON2
SA23	BT4 SX70	1100,000	478,846	DCON4	858,421	DCON4	1,431	DCON2
SA23	BT4 SX70	2200,000	0,000	DCON1	693,900	DCON5	1,724	DCON2
SA24	BT4 SX70	0,000	0,000	DCON1	827,001	DCON2	3,591	DCON2
SA24	BT4 SX70	1300,000	204,137	DCON2	734,349	DCON5	4,134	DCON2
SA24	BT4 SX70	1750,000	1011,143	DCON5	591,046	DCON5	4,467	DCON2
SA25	BT4 SX70	0,000	0,000	DCON1	766,941	DCON2	3,753	DCON2
SA25	BT4 SX70	500,000	781,563	DCON5	716,264	DCON2	0,496	DCON2
SA25	BT4 SX70	1750,000	1011,143	DCON5	605,151	DCON5	4,330	DCON2
SA26	BT4 SX70	250,000	1011,143	DCON5	1006,816	DCON5	1,131	DCON2
SA26	BT4 SX70	1100,000	478,763	DCON5	917,443	DCON5	1,905	DCON2
SA26	BT4 SX70	2000,000	0,000	DCON1	712,566	DCON5	1,658	DCON2
SA27	BT4 SX70	0,000	0,000	DCON1	521,437	DCON5	1,466	DCON2
SA27	BT4 SX70	1375,000	318,673	DCON5	534,413	DCON5	1,325	DCON2
SA27	BT4 SX70	2750,000	1011,143	DCON5	527,400	DCON5	2,214	DCON2
SA28	BT4 SX70	0,000	0,000	DCON1	739,791	DCON2	2,796	DCON2
SA28	BT4 SX70	1375,000	439,554	DCON5	443,248	DCON5	3,242	DCON2
SA28	BT4 SX70	2750,000	1356,222	DCON5	867,142	DCON5	0,749	DCON2
SA29	BT4 SX70	0,000	0,000	DCON1	1011,143	DCON2	2,310	EM
SA29	BT4 SX70	1375,000	1011,143	DCON5	507,209	DCON2	2,392	EM
SA29	BT4 SX70	2750,000	2355,103	DCON5	1138,026	DCON5	2,213	EM
SA30	BT4 SX70	0,000	0,000	DCON1	1163,550	DCON5	0,611	DCON10
SA30	BT4 SX70	1375,000	1011,143	DCON5	757,530	DCON2	2,898	DCON10
SA30	BT4 SX70	2750,000	2736,051	DCON5	1315,033	DCON5	3,190	DCON10
SA31	BT4 SX70	0,000	0,000	DCON1	1011,143	DCON2	2,222	EM
SA31	BT4 SX70	1375,000	370,865	DCON5	588,400	DCON2	2,409	EM
SA31	BT4 SX70	2750,000	2194,170	DCON5	1062,927	DCON5	2,625	EM
SA32	BT4 SX70	0,000	0,000	DCON1	550,321	DCON2	3,257	DCON2
SA32	BT4 SX70	1375,000	782,498	DCON5	538,098	DCON5	3,614	DCON2
SA32	BT4 SX70	2750,000	1672,235	DCON5	1011,143	DCON5	4,003	DCON2
SA33	BT4 SX70	0,000	0,000	DCON1	552,186	DCON2	3,258	DCON2
SA33	BT4 SX70	1375,000	782,766	DCON5	538,504	DCON5	3,615	DCON2
SA33	BT4 SX70	2750,000	1672,264	DCON5	1011,143	DCON5	4,004	DCON2
SA34	BT4 SX70	0,000	0,000	DCON1	1011,143	DCON2	2,234	EM
SA34	BT4 SX70	1375,000	329,469	DCON5	589,779	DCON2	2,421	EM
SA34	BT4 SX70	2750,000	2208,627	DCON5	1063,755	DCON5	2,537	EM

SA35	RT4SK70	0,000	0,000	DC001	1170,430	DC004	0,000	DC0010
SA35	RT4SK70	1375,000	1011,143	DC003	058,604	DC002	2,902	DC0010
SA35	RT4SK70	2750,000	2750,232	DC005	1025,257	DC005	0,000	DC0010
SA36	RT4SK70	0,000	0,000	DC003	1011,143	DC007	0,000	BM
SA36	RT4SK70	1375,000	1011,143	DC005	038,625	DC002	2,530	BM
SA36	RT4SK70	2750,000	2750,465	DC005	1166,087	DC005	0,000	BM
SA37	RT4SK70	0,000	0,000	DC003	730,000	DC007	0,000	DC007
SA37	RT4SK70	1375,000	470,811	DC003	173,911	DC003	0,000	DC003
SA37	RT4SK70	2750,000	1484,510	DC005	968,237	DC005	0,000	DC003
SA38	RT4SK70	0,000	0,000	DC001	710,775	DC007	0,000	DC007
SA38	RT4SK70	1375,000	130,533	DC003	574,117	DC006	0,000	DC001
SA38	RT4SK70	2750,000	1010,848	DC005	666,166	DC005	0,000	DC002
SA40	RT4SK70	0,000	0,000	DC003	232,900	DC007	0,000	DC007
SA40	RT4SK70	1175,000	390,261	DC004	159,930	DC002	0,000	DC003
SA40	RT4SK70	2350,000	186,987	DC004	576,786	DC003	0,000	DC002
SA42	RT4SK70	0,000	0,000	DC001	137,483	DC007	0,000	DC007
SA42	RT4SK70	1000,000	137,483	DC003	137,483	DC002	0,000	DC002
SA42	RT4SK70	2000,000	274,966	DC002	274,966	DC002	0,000	DC002
SA47	RT4SK70	0,000	0,000	DC001	241,488	DC007	0,000	DC007
SA47	RT4SK70	1000,000	161,081	DC002	156,087	DC002	0,000	DC002
SA47	RT4SK70	2000,000	320,162	DC002	312,174	DC002	0,000	DC007
SA49	RT4SK70	0,000	0,000	DC007	269,941	DC007	0,000	DC007
SA49	RT4SK70	1175,000	364,204	DC003	110,207	DC003	0,000	DC002
SA49	RT4SK70	2350,000	199,398	DC003	570,792	DC004	0,000	DC002
SB10	RT30X50	0,000	1166,016	DC004	267,419	DC007	0,000	DC007
SB10	RT30X50	2262,500	275,034	DC003	329,131	DC003	0,000	DC001
SB10	RT30X50	4525,000	870,468	DC003	540,140	DC006	0,000	DC002
SB11	RT30X50	0,000	267,412	DC004	420,721	DC007	0,000	DC007
SB11	RT30X50	2262,500	235,612	DC003	242,719	DC002	0,000	DC002
SB11	RT30X50	4525,000	730,112	DC003	474,147	DC003	0,000	DC003
SB12	RT30X50	0,000	267,412	DC004	474,147	DC003	0,000	DC007
SB12	RT30X50	2262,500	261,246	DC003	246,923	DC002	0,000	DC002
SB12	RT30X50	4525,000	780,367	DC003	474,147	DC003	0,000	DC002
SB13	RT30X50	0,000	261,246	DC003	420,749	DC003	0,000	DC007
SB13	RT30X50	2262,500	261,246	DC003	167,180	DC002	0,000	DC002
SB13	RT30X50	4525,000	906,392	DC004	474,147	DC003	0,000	DC002
SB14	RT30X50	0,000	267,412	DC004	420,749	DC003	0,000	DC007
SB14	RT30X50	2262,500	267,412	DC003	270,784	DC002	0,000	DC002
SB14	RT30X50	4525,000	868,748	DC003	431,596	DC006	0,000	DC002
SB15	RT30X50	0,000	178,565	DC003	178,565	DC004	0,000	DC007
SB15	RT30X50	2262,500	300,874	DC003	422,688	DC003	0,000	DC002
SB15	RT30X50	4525,000	602,488	DC004	545,813	DC007	0,000	DC002
SB16	RT30X50	0,000	201,327	DC003	509,564	DC006	0,000	DC007
SB16	RT30X50	2262,500	228,552	DC003	362,250	DC004	0,000	DC001
SB16	RT30X50	4525,000	246,028	DC004	237,076	DC003	0,000	DC002
SB17	RT30X50	0,000	261,246	DC003	420,749	DC003	0,000	DC007
SB17	RT30X50	2262,500	261,246	DC003	474,147	DC002	0,000	DC001
SB17	RT30X50	4525,000	968,418	DC004	474,147	DC002	0,000	DC001
SB18	RT30X50	0,000	852,469	DC003	474,147	DC003	0,000	DC001
SB18	RT30X50	2262,500	273,547	DC003	350,577	DC007	0,000	DC007
SB18	RT30X50	4525,000	862,166	DC004	422,954	DC003	0,000	DC001
SB19	RT30X50	0,000	399,759	DC003	474,147	DC003	0,000	DC001
SB19	RT30X50	2262,500	262,000	DC003	222,443	DC007	0,000	DC007
SB19	RT30X50	4525,000	825,855	DC004	466,542	DC003	0,000	DC001
SB20	RT30X50	0,000	705,224	DC003	473,696	DC003	0,000	DC006
SB20	RT30X50	2262,500	234,399	DC003	348,296	DC007	0,000	DC006
SB20	RT30X50	4525,000	709,671	DC004	467,966	DC003	0,000	DC006
SB21	RT30X50	0,000	726,650	DC004	473,968	DC004	0,000	DC006
SB21	RT30X50	2262,500	228,408	DC003	247,609	DC007	0,000	DC006
SB21	RT30X50	4525,000	707,030	DC003	461,468	DC003	0,000	DC006
SB22	RT30X50	0,000	921,362	DC004	474,147	DC004	0,000	DC001
SB22	RT30X50	2262,500	267,145	DC003	342,334	DC007	0,000	DC007
SB22	RT30X50	4525,000	799,456	DC003	474,147	DC003	0,000	DC001
SB23	RT30X50	0,000	881,235	DC004	474,147	DC004	0,000	DC001
SB23	RT30X50	2262,500	268,398	DC003	348,863	DC007	0,000	DC006
SB23	RT30X50	4525,000	835,716	DC003	474,147	DC003	0,000	DC001
SB24	RT30X50	0,000	884,406	DC004	466,117	DC003	0,000	DC001
SB24	RT30X50	2262,500	244,367	DC003	328,714	DC007	0,000	DC006
SB24	RT30X50	4525,000	920,246	DC003	474,147	DC003	0,000	DC001

SB25	B130X150	100,000	866,490	DOON4	474,147	DOON4	1,800	DOON4
SB26	B130X150	1500,000	361,458	DOON5	455,291	DOON2	1,515	DOON5
SB28	B130X150	4775,000	1043,808	DOON5	504,785	DOON3	1,943	DOON5
SB29	B130X150	100,000	794,449	DOON4	474,147	DOON4	2,336	DOON4
SB30	B130X150	1567,500	275,215	DOON5	438,952	DOON3	1,971	DOON5
SB36	B130X150	2500,000	0,000	DOON1	690,450	DOON1	1,735	DOON1
SB37	B130X150	100,000	741,010	DOON5	474,147	DOON5	2,344	DOON5
SB37	B130X150	1862,500	117,045	DOON2	440,126	DOON4	2,044	DOON2
SB38	B130X150	0,000	390,911	DOON5	154,205	DOON5	0,718	EM
SB38	B130X150	1367,500	108,844	DOON5	371,410	DOON5	0,353	EM
SB38	B130X150	4775,000	543,973	DOON5	300,715	DOON5	0,704	EM
SB39	B130X150	0,000	881,389	DOON2	164,993	DOON2	0,504	EM
SB39	B130X150	1500,000	54,488	DOON2	474,147	DOON2	0,330	EM
SB39	B130X150	5000,000	342,111	DOON2	169,785	DOON2	0,501	EM
SB39	B130X150	0,000	797,804	DOON5	168,169	DOON5	0,717	EM
SB39	B130X150	2387,500	181,000	DOON5	253,004	DOON5	0,438	EM
SB39	B130X150	4775,000	550,484	DOON5	364,150	DOON5	0,800	EM
SB31	B130X150	250,000	1567,607	DOON2	0,000	DOON1	1,312	DOON2
SB31	B130X150	675,000	843,785	DOON4	0,000	DOON1	1,227	DOON2
SB31	B130X150	1000,000	394,054	DOON4	88,027	DOON7	1,304	DOON2
SB32	B130X150	0,000	0,000	DOON1	1690,683	DOON2	3,090	DOON2
SB32	B130X150	1750,000	474,147	DOON2	718,405	DOON3	1,563	DOON2
SB32	B130X150	3500,000	1104,663	DOON4	533,786	DOON4	4,118	DOON2
SB33	B130X150	0,000	0,000	DOON1	1690,562	DOON2	3,073	DOON2
SB33	B130X150	1750,000	474,147	DOON2	220,855	DOON4	3,855	DOON2
SB33	B130X150	3500,000	1039,701	DOON3	521,510	DOON3	4,111	DOON2
SB34	B130X150	250,000	1358,929	DOON3	0,000	DOON2	1,205	DOON2
SB34	B130X150	675,000	1450,401	DOON3	0,000	DOON2	1,241	DOON2
SB34	B130X150	1000,000	588,232	DOON3	89,201	DOON3	1,197	DOON2
SB35	B130X150	250,000	510,489	DOON5	347,860	DOON5	2,283	DOON2
SB35	B130X150	1180,500	165,998	DOON5	412,310	DOON5	0,938	DOON2
SB35	B130X150	2135,000	0,000	DOON1	447,516	DOON2	1,821	DOON2
SB36	B130X150	250,000	513,368	DOON5	348,824	DOON5	0,290	DOON2
SB36	B130X150	1180,500	147,910	DOON5	415,055	DOON5	2,648	DOON2
SB36	B130X150	2125,000	0,000	DOON1	446,941	DOON2	1,828	DOON2
SB37	B130X150	0,000	0,000	DOON1	482,519	DOON2	2,187	DOON2
SB37	B130X150	987,500	222,797	DOON5	277,105	DOON5	2,418	DOON2
SB37	B130X150	1875,000	590,298	DOON5	452,050	DOON5	2,668	DOON2
SB38	B130X150	0,000	0,000	DOON1	451,921	DOON2	2,179	DOON2
SB38	B130X150	987,500	222,959	DOON5	329,688	DOON5	2,409	DOON2
SB38	B130X150	1875,000	639,617	DOON5	450,839	DOON5	2,659	DOON2
SB39	B130X150	250,000	1939,894	DOON4	566,212	DOON4	4,037	DOON5
SB39	B130X150	2375,000	434,147	DOON2	445,573	DOON3	3,187	DOON5
SB39	B130X150	4500,000	0,000	DOON1	1439,696	DOON2	2,961	DOON5
SB40	B130X150	250,000	1838,104	DOON5	386,848	DOON3	3,022	DOON5
SB40	B130X150	2375,000	474,147	DOON1	622,946	DOON4	2,172	DOON5
SB40	B130X150	4500,000	0,000	DOON1	1439,803	DOON2	2,245	DOON5
SBK1	B30X150	250,000	489,154	DOON6	347,851	DOON5	1,920	DOON1
SBK1	B30X150	1425,000	88,548	DOON5	125,543	DOON5	0,943	EM
SBK1	B30X150	2600,000	358,034	DOON5	247,137	DOON6	1,309	DOON2
SBK2	B30X150	150,000	316,717	DOON5	161,713	DOON5	1,115	DOON1
SBK2	B30X150	1325,000	80,524	DOON5	87,857	DOON1	0,821	DOON2
SBK2	B30X150	2600,000	245,080	DOON5	284,446	DOON5	1,011	DOON1
SBK3	B30X150	250,000	677,887	DOON2	442,841	DOON2	1,546	DOON1
SBK3	B30X150	1500,000	261,266	DOON2	219,084	DOON3	1,267	DOON1
SBK3	B30X150	2750,000	0,000	DOON1	25,588	DOON2	1,040	DOON1
SBK4	B30X150	250,000	1387,338	DOON2	665,927	DOON2	3,024	DOON2
SBK4	B30X150	1500,000	513,028	DOON2	433,913	DOON2	2,641	DOON2
SBK4	B30X150	2750,000	0,000	DOON1	49,798	DOON2	2,377	DOON2
SBK5	B30X150	250,000	1135,780	DOON2	546,253	DOON2	2,649	DOON2
SBK5	B30X150	1500,000	474,147	DOON3	259,608	DOON2	2,185	DOON2
SBK5	B30X150	2750,000	0,000	DOON1	27,429	DOON2	1,902	DOON2
SBK6	B30X150	150,000	474,147	DOON5	247,137	DOON5	1,436	DOON2
SBK6	B30X150	1325,000	120,595	DOON5	150,396	DOON5	1,157	DOON1
SBK6	B30X150	2500,000	474,147	DOON5	290,948	DOON5	1,329	DOON2
SBK7	B30X150	150,000	57,106	DOON2	28,519	DOON2	0,242	EM
SBK7	B30X150	1325,000	14,250	DOON2	22,158	DOON2	0,128	EM
SBK7	B30X150	2500,000	54,903	DOON2	27,413	DOON2	0,240	EM

6A10	BI45X70	2000,000	0,000	DCCN1	1312,469	DCCN2	1,243	EH
6A11	BI45X70	0,000	169,089	DCCN10	677,173	DCCN4	0,862	EH
6A11	BI45X70	800,000	203,660	DCCN2	819,584	DCCN2	0,864	EH
6A11	BI45X70	1000,000	0,000	DCCN3	1011,143	DCCN3	0,864	EH
6A12	BI45X40	0,000	353,415	DCCN5	389,047	DCCN5	2,109	DCCN2
6A12	BI45X40	500,000	311,143	DCCN2	427,483	DCCN3	1,788	DCCN2
6A12	BI45X40	1000,000	0,000	DCCN1	1167,034	DCCN3	1,667	DCCN3
6A13	BI45X70	250,000	550,056	DCCN4	361,176	DCCN5	1,004	DCCN2
6A13	BI45X70	1625,000	136,370	DCCN4	256,043	DCCN5	0,309	DCCN2
6A13	BI45X70	2000,000	14,340	DCCN10	780,745	DCCN4	0,283	DCCN3
6A14	BI45X70	250,000	702,948	DCCN5	352,768	DCCN5	1,486	DCCN2
6A14	BI45X70	1400,000	179,732	DCCN5	250,811	DCCN4	1,243	DCCN2
6A14	BI45X70	2000,000	1,663	DCCN10	329,820	DCCN5	1,001	DCCN3
6A15	BI45X70	0,000	0,000	DCCN1	418,181	DCCN2	1,424	DCCN2
6A15	BI45X70	500,000	103,102	DCCN2	176,035	DCCN2	1,487	DCCN2
6A15	BI45X70	1000,000	89,163	DCCN3	41,514	DCCN3	1,674	DCCN3
6A16	BI45X70	0,000	0,000	DCCN1	413,881	DCCN2	1,490	DCCN2
6A16	BI45X70	500,000	102,774	DCCN2	173,340	DCCN2	1,493	DCCN2
6A16	BI45X70	1000,000	88,147	DCCN3	46,880	DCCN3	1,585	DCCN3
6A17	BI45X70	0,000	0,000	DCCN1	1011,143	DCCN2	1,500	DCCN3
6A17	BI45X70	1000,000	421,486	DCCN2	1211,595	DCCN2	1,161	DCCN2
6A17	BI45X70	2000,000	0,000	DCCN3	1298,843	DCCN3	0,837	DCCN3
6A18	BI45X70	0,000	0,000	DCCN1	804,110	DCCN2	1,280	DCCN6
6A18	BI45X70	1000,000	339,860	DCCN2	1011,143	DCCN2	1,002	DCCN6
6A18	BI45X70	2000,000	0,000	DCCN3	1041,706	DCCN3	0,702	DCCN4
6A19	BI45X70	0,000	0,000	DCCN1	1463,537	DCCN2	1,317	DCCN2
6A19	BI45X70	2000,000	477,283	DCCN2	1667,074	DCCN2	1,060	DCCN2
6A19	BI45X70	4000,000	0,000	DCCN3	1134,840	DCCN3	1,677	DCCN3
6A20	BI45X70	0,000	0,000	DCCN1	1367,040	DCCN2	1,309	DCCN2
6A20	BI45X70	2000,000	440,355	DCCN2	1623,569	DCCN2	0,962	DCCN2
6A20	BI45X70	4000,000	0,000	DCCN3	1145,404	DCCN3	1,514	DCCN3
6A21	BI45X70	0,000	0,000	DCCN1	1153,453	DCCN2	1,189	DCCN2
6A21	BI45X70	2000,000	377,361	DCCN2	1418,751	DCCN2	0,832	DCCN2
6A21	BI45X70	4000,000	0,000	DCCN3	1031,143	DCCN3	1,285	DCCN3
6A22	BI45X70	0,000	0,000	DCCN1	1097,835	DCCN2	1,194	DCCN2
6A22	BI45X70	2000,000	471,186	DCCN2	1473,901	DCCN2	0,943	DCCN2
6A22	BI45X70	4000,000	0,000	DCCN3	1011,143	DCCN3	1,547	DCCN3
6A23	BI45X70	150,000	335,734	DCCN6	592,455	DCCN5	1,492	DCCN2
6A23	BI45X70	1450,000	148,380	DCCN2	576,384	DCCN2	1,010	DCCN1
6A23	BI45X70	2750,000	0,000	DCCN3	598,450	DCCN3	0,915	DCCN1
6A24	BI45X70	150,000	344,107	DCCN6	595,921	DCCN5	1,486	DCCN2
6A24	BI45X70	1450,000	148,651	DCCN2	578,489	DCCN2	1,014	DCCN1
6A24	BI45X70	2750,000	0,000	DCCN3	600,051	DCCN3	0,914	DCCN1
6A25	BI45X70	250,000	725,304	DCCN6	303,453	DCCN5	1,563	DCCN2
6A25	BI45X70	1125,000	179,333	DCCN6	481,172	DCCN5	1,515	DCCN2
6A25	BI45X70	2000,000	0,000	DCCN1	600,433	DCCN3	1,385	DCCN3
6A26	BI45X70	0,000	0,000	DCCN1	739,413	DCCN2	0,026	DCCN2
6A26	BI45X70	875,000	182,356	DCCN2	555,813	DCCN3	0,250	DCCN2
6A26	BI45X70	1750,000	615,115	DCCN3	260,777	DCCN5	2,513	DCCN3
6A27	BI45X70	0,000	0,000	DCCN1	1303,762	DCCN2	1,101	DCCN1
6A27	BI45X70	1000,000	423,825	DCCN2	1085,469	DCCN3	1,363	DCCN2
6A27	BI45X70	2000,000	0,000	DCCN3	988,504	DCCN3	1,551	DCCN3
6A28	BI45X70	0,000	0,000	DCCN1	1052,419	DCCN2	0,862	DCCN1
6A28	BI45X70	1000,000	343,236	DCCN2	1011,143	DCCN2	1,141	DCCN2
6A28	BI45X70	2000,000	0,000	DCCN3	765,219	DCCN3	1,335	DCCN3
6A29	BI45X70	0,000	0,000	DCCN1	706,924	DCCN2	2,848	DCCN2
6A29	BI45X70	975,000	174,839	DCCN2	507,708	DCCN5	3,073	DCCN2
6A29	BI45X70	1750,000	619,714	DCCN3	298,384	DCCN5	3,335	DCCN3
6A30	BI45X70	250,000	686,276	DCCN6	393,062	DCCN5	1,677	DCCN2
6A30	BI45X70	1125,000	169,786	DCCN6	504,814	DCCN5	1,369	DCCN2
6A30	BI45X70	2000,000	0,000	DCCN1	469,863	DCCN3	1,280	DCCN3
6A31	BI45X70	0,000	0,000	DCCN1	439,575	DCCN2	1,113	DCCN2
6A31	BI45X70	1375,000	191,868	DCCN3	389,843	DCCN6	1,506	DCCN2
6A31	BI45X70	2750,000	726,618	DCCN3	385,237	DCCN5	1,530	DCCN3
6A32	BI45X70	0,000	0,000	DCCN1	752,065	DCCN2	2,433	DCCN2
6A32	BI45X70	1375,000	332,717	DCCN3	332,717	DCCN5	2,850	DCCN2
6A32	BI45X70	2750,000	1019,271	DCCN3	869,846	DCCN5	3,329	DCCN3
6A33	BI45X70	0,000	0,000	DCCN1	1005,330	DCCN2	2,060	DCCN10

6A31	BT45X70	1375,000	903,450	DCCM5	419,437	DCCM7	1,375	DCCM10	
6A32	BT45X70	2750,000	2040,829	DCCM5	1011,143	DCCM2	2,432	DCCM10	
6A34	BT45X70	0,000	0,000	DCCM1	1135,110	DCCM2	1,750	BH	
6A34	BT45X70	1375,000	711,313	DCCM7	711,313	DCCM7	1,479	DCCM3	
6A34	BT45X70	2750,000	2262,183	DCCM5	1034,719	DCCM5	2,341	DCCM3	
6A35	BT45X70	0,000	0,000	DCCM1	1444,804	DCCM7	1,575	BH	
6A35	BT45X70	1375,000	617,454	DCCM7	617,454	DCCM7	1,459	DCCM7	
6A35	BT45X70	2750,000	2022,319	DCCM5	1011,143	DCCM5	2,321	DCCM2	
6A36	BT45X70	0,000	0,000	DCCM1	579,539	DCCM2	1,476	DCCM2	
6A36	BT45X70	1375,000	706,874	DCCM7	706,874	DCCM7	1,569	DCCM5	
6A36	BT45X70	2750,000	1588,505	DCCM5	1011,143	DCCM5	1,193	DCCM7	
6A37	BT45X70	0,000	0,000	DCCM1	579,486	DCCM2	1,488	DCCM2	
6A37	BT45X70	1375,000	608,464	DCCM7	610,330	DCCM5	1,081	DCCM7	
6A37	BT45X70	2750,000	1590,835	DCCM5	1011,143	DCCM5	2,303	DCCM2	
6A38	BT45X70	0,000	0,000	DCCM1	1011,143	DCCM1	1,924	DCCM10	
6A38	BT45X70	1375,000	755,643	DCCM7	755,643	DCCM7	1,049	DCCM7	
6A38	BT45X70	2750,000	1681,305	DCCM5	1011,143	DCCM2	2,287	DCCM10	
6A39	BT45X70	0,000	0,000	DCCM1	1011,143	DCCM2	2,197	DCCM10	
6A39	BT45X70	1375,000	687,314	DCCM7	688,462	DCCM7	1,443	DCCM10	
6A39	BT45X70	2750,000	2150,836	DCCM5	1046,413	DCCM5	2,560	DCCM10	
6A40	BT45X70	0,000	0,000	DCCM1	790,644	DCCM2	2,179	BH	
6A40	BT45X70	1375,000	1011,143	DCCM5	646,161	DCCM7	2,366	PM	
6A40	BT45X70	2750,000	2146,461	DCCM5	1040,865	DCCM5	2,582	BM	
6A41	BT45X70	0,000	0,000	DCCM1	675,234	DCCM2	2,533	DCCM2	
6A41	BT45X70	1375,000	677,477	DCCM5	677,477	DCCM5	2,951	DCCM7	
6A41	BT45X70	2750,000	1144,885	DCCM5	750,641	DCCM5	3,430	DCCM2	
6A42	BT45X70	0,000	0,000	DCCM1	473,008	DCCM1	1,262	DCCM2	
6A42	BT45X70	1375,000	135,002	DCCM5	368,983	DCCM5	1,531	DCCM7	
6A42	BT45X70	2750,000	802,988	DCCM5	308,506	DCCM5	1,896	DCCM2	
6A44	BT45X70	0,000	563,049	DCCM2	379,817	DCCM2	1,929	DCCM2	
6A44	BT45X70	1375,000	642,123	DCCM4	139,533	DCCM7	1,729	DCCM7	
6A44	BT45X70	2750,000	118,906	DCCM8	644,223	DCCM3	1,627	DCCM2	
6A46	BT45X70	0,000	0,000	DCCM1	430,262	DCCM2	1,978	DCCM2	
6A46	BT45X70	1375,000	318,113	DCCM7	118,113	DCCM7	2,063	DCCM7	
6A46	BT45X70	2750,000	475,875	DCCM2	336,791	DCCM3	2,159	DCCM2	
6A47	BT45X70	0,000	0,000	DCCM1	443,128	DCCM2	2,203	DCCM2	
6A47	BT45X70	1375,000	138,163	DCCM7	138,163	DCCM7	2,293	DCCM7	
6A47	BT45X70	2750,000	557,358	DCCM2	277,101	DCCM2	2,383	DCCM2	
6A49	BT45X70	0,000	470,186	DCCM2	288,990	DCCM2	1,608	DCCM2	
6A49	BT45X70	1375,000	230,691	DCCM7	116,714	DCCM7	1,599	DCCM7	
6A49	BT45X70	2750,000	129,471	DCCM7	327,810	DCCM4	1,407	DCCM2	
6B10	BT30X50	225,000	713,440	DCCM3	465,546	DCCM3	2,682	DCCM1	
6B10	BT30X50	1125,000	230,404	DCCM3	371,705	DCCM4	2,331	DCCM7	
6B10	BT30X50	2250,000	0,000	DCCM1	415,664	DCCM2	1,900	DCCM1	
6B11	BT30X50	250,000	642,087	DCCM3	474,147	DCCM3	1,592	DCCM2	
6B11	BT30X50	2250,000	308,946	DCCM3	353,946	DCCM7	2,955	DCCM7	
6B11	BT30X50	4225,000	718,838	DCCM4	465,988	DCCM4	1,766	DCCM2	
6B12	BT30X50	250,000	631,136	DCCM4	474,147	DCCM3	1,590	DCCM2	
6B12	BT30X50	2250,000	220,817	DCCM3	313,671	DCCM7	0,927	DCCM7	
6B12	BT30X50	4275,000	662,779	DCCM3	445,969	DCCM3	1,713	DCCM2	
6B13	BT30X50	225,000	672,339	DCCM4	439,300	DCCM4	1,485	DCCM6	
6B13	BT30X50	2250,000	104,704	DCCM3	343,452	DCCM7	0,874	DCCM6	
6B13	BT30X50	4275,000	633,760	DCCM3	382,760	DCCM3	1,415	DCCM6	
6B14	BT30X50	225,000	633,753	DCCM4	414,584	DCCM4	1,798	DCCM2	
6B14	BT30X50	1862,500	205,421	DCCM4	259,758	DCCM7	1,164	DCCM7	
6B14	BT30X50	3500,000	307,968	DCCM3	420,142	DCCM4	1,485	DCCM2	
6B15	BT30X50	225,000	599,930	DCCM3	332,285	DCCM4	0,000	DCCM1	
6B15	BT30X50	612,500	474,147	DCCM3	343,811	DCCM4	0,000	DCCM1	
6B15	BT30X50	1000,000	282,313	DCCM3	425,313	DCCM4	0,000	DCCM1	
6B16	BT30X50	0,000	385,674	DCCM3	176,464	DCCM3	1,195	DCCM2	
6B16	BT30X50	1887,500	142,418	DCCM4	241,260	DCCM7	0,866	DCCM1	
6B16	BT30X50	3775,000	474,147	DCCM4	593,924	DCCM3	1,213	DCCM2	
6B17	BT30X50	225,000	591,349	DCCM3	387,356	DCCM3	1,444	DCCM6	
6B17	BT30X50	612,500	474,147	DCCM3	192,047	DCCM3	1,355	DCCM6	
6B17	BT30X50	1000,000	330,277	DCCM3	163,555	DCCM3	1,273	DCCM6	
6B18	BT30X50	225,000	602,623	DCCM4	394,602	DCCM4	1,470	DCCM6	
6B18	BT30X50	612,500	474,147	DCCM4	195,608	DCCM4	1,347	DCCM6	
6B18	BT30X50	1000,000	338,233	DCCM4	179,014	DCCM3	1,239	DCCM6	

EB19	RT30X50	0,000	344,074	DOCN4	141,337	DOCN3	1,304	DOCN3
EB19	BI30X50	1827,500	136,415	DOCN3	247,537	DOCN2	0,654	DOCN1
EB19	BI30X50	3775,000	474,147	DOCN3	229,503	DOCN3	1,139	DOCN2
EB20	RT30X50	0,000	74,475	DOCN5	141,337	DOCN4	1,359	DOCN3
EB20	BI30X50	1100,000	169,932	DOCN4	255,871	DOCN3	1,176	DOCN2
EB20	BI30X50	2175,000	515,014	DOCN4	356,573	DOCN4	1,559	DOCN2
EB21	RT30X50	0,000	474,147	DOCN3	141,337	DOCN3	1,312	DOCN3
EB21	BI30X50	1300,000	145,690	DOCN3	111,391	DOCN4	1,117	DOCN1
EB21	BI30X50	2775,000	176,563	DOCN4	167,537	DOCN3	1,417	DOCN2
EB22	RT30X50	0,000	574,135	DOCN3	347,124	DOCN3	1,334	EM
EB22	BI30X50	2250,000	121,035	DOCN4	323,112	DOCN2	0,311	EM
EB22	BI30X50	4075,000	583,635	DOCN4	448,515	DOCN4	1,334	EM
EB23	RT30X50	0,000	664,013	DOCN3	443,170	DOCN3	1,312	EM
EB23	BI30X50	2250,000	231,936	DOCN3	363,966	DOCN1	0,833	EM
EB23	BI30X50	4275,000	542,182	DOCN4	366,563	DOCN4	1,432	EM
EB24	RT30X50	0,000	0,000	DOCN1	474,147	DOCN3	0,307	EM
EB24	BI30X50	1012,500	135,482	DOCN4	405,571	DOCN3	1,373	EM
EB24	BI30X50	2015,000	602,223	DOCN4	194,345	DOCN4	1,675	EM
EB25	RT30X50	0,000	304,733	DOCN3	167,403	DOCN3	1,349	EM
EB25	BI30X50	1237,500	227,891	DOCN3	341,465	DOCN4	1,323	EM
EB25	BI30X50	2150,000	0,000	DOCN1	474,147	DOCN1	1,202	EM
EB26	RT30X50	0,000	641,350	DOCN3	321,238	DOCN3	1,413	DOCN10
EB26	BI30X50	2262,500	159,495	DOCN2	324,885	DOCN2	0,789	DOCN10
EB26	BI30X50	4275,000	530,919	DOCN4	350,353	DOCN4	1,312	DOCN10
EB27	RT30X50	0,000	650,703	DOCN4	338,180	DOCN3	1,450	DOCN10
EB27	BI30X50	2262,500	162,302	DOCN2	344,966	DOCN2	0,796	DOCN10
EB27	BI30X50	4275,000	437,978	DOCN3	327,125	DOCN3	1,284	DOCN10
EB28	RT30X50	0,000	669,730	DOCN4	437,533	DOCN4	1,503	EM
EB28	BI30X50	2250,000	180,211	DOCN3	364,534	DOCN3	0,808	EM
EB28	BI30X50	4275,000	563,365	DOCN3	363,288	DOCN3	1,416	EM
EB29	RT30X50	0,000	654,266	DOCN4	427,252	DOCN4	1,481	EM
EB29	BI30X50	2150,000	135,875	DOCN3	334,330	DOCN2	0,766	EM
EB29	BI30X50	4175,000	571,832	DOCN3	374,799	DOCN3	1,423	EM
EB30	RT30X50	0,000	632,927	DOCN4	381,938	DOCN4	1,332	EM
EB30	BI30X50	2150,000	206,727	DOCN3	304,394	DOCN2	0,768	EM
EB30	BI30X50	4275,000	637,902	DOCN3	417,244	DOCN3	1,346	EM
EB31	RT30X50	0,000	668,481	DOCN4	322,930	DOCN4	1,357	EM
EB31	BI30X50	2500,000	238,204	DOCN3	420,287	DOCN2	0,766	EM
EB31	BI30X50	4775,000	738,425	DOCN3	474,147	DOCN3	1,431	EM
EBK1	RT30X50	150,000	65,189	DOCN1	32,548	DOCN1	0,481	DOCN1
EBK1	BI30X50	575,000	23,339	DOCN1	16,263	DOCN1	0,451	DOCN1
EBK1	BI30X50	1000,000	7,545	DOCN3	21,632	DOCN4	0,401	DOCN1
EBK2	RT30X50	150,000	63,043	DOCN3	41,451	DOCN3	0,565	DOCN1
EBK2	BI30X50	675,000	35,533	DOCN1	20,707	DOCN3	0,535	DOCN1
EBK2	BI30X50	1000,000	3,872	DOCN4	13,692	DOCN3	0,565	DOCN1
EBK3	RT30X50	150,000	34,533	DOCN4	12,197	DOCN4	0,505	DOCN1
EBK3	BI30X50	575,000	30,252	DOCN1	13,585	DOCN4	0,495	DOCN1
EBK3	BI30X50	1000,000	2,706	DOCN3	15,243	DOCN4	0,465	DOCN1
EBK4	RT30X50	150,000	68,698	DOCN1	34,196	DOCN1	0,434	DOCN1
EBK4	BI30X50	575,000	25,606	DOCN1	17,137	DOCN1	0,464	DOCN1
EBK4	BI30X50	1000,000	8,436	DOCN4	20,754	DOCN3	0,434	DOCN1
EBK5	RT30X50	150,000	66,875	DOCN4	33,289	DOCN4	0,386	DOCN1
EBK5	BI30X50	575,000	30,831	DOCN4	16,583	DOCN4	0,356	DOCN1
EBK5	BI30X50	1000,000	3,088	DOCN5	1,459	DOCN10	0,326	DOCN1
EBK6	RT30X50	0,000	9,538	DOCN4	14,677	DOCN3	0,763	DOCN2
EBK6	BI30X50	425,000	51,251	DOCN2	28,014	DOCN2	0,731	DOCN1
EBK6	BI30X50	850,000	112,463	DOCN2	56,095	DOCN2	0,761	DOCN1
EBK7	RT30X50	0,000	9,849	DOCN3	14,696	DOCN4	0,710	DOCN1
EBK7	BI30X50	425,000	52,315	DOCN2	28,493	DOCN2	0,740	DOCN1
EBK7	BI30X50	850,000	114,387	DOCN2	57,053	DOCN2	0,770	DOCN1
EBK8	RT30X50	150,000	62,935	DOCN3	31,435	DOCN3	0,367	DOCN1
EBK8	BI30X50	575,000	28,500	DOCN3	15,702	DOCN3	0,337	DOCN1
EBK8	BI30X50	1000,000	2,113	DOCN5	2,721	DOCN10	0,307	DOCN1
EBK9	RT30X50	0,000	10,509	DOCN3	24,370	DOCN4	1,013	DOCN1
EBK9	BI30X50	387,500	39,763	DOCN3	43,478	DOCN3	1,043	DOCN1
EBK9	BI30X50	775,000	174,897	DOCN3	87,119	DOCN3	1,070	DOCN1
EC10	RT30X40	0,000	346,161	DOCN2	241,365	DOCN2	0,874	DOCN10
EC10	BI30X40	2250,000	145,881	DOCN2	311,148	DOCN2	0,478	DOCN10
EC10	BI30X40	4500,000	481,193	DOCN2	294,647	DOCN2	0,907	DOCN10

6011	B2 SX40	0,000	526,129	DCOM3	311,148	DCOM3	0,443	BH
6011	B2 SX40	2050,000	189,867	DCOM2	229,865	DCOM1	0,443	BH
6011	B2 SX40	4500,000	221,672	DCOM1	116,034	DCOM2	0,443	BH
6012	B2 SX40	0,000	511,232	DCOM4	311,148	DCOM3	0,443	BH
6012	B2 SX40	2382,500	169,545	DCOM2	195,673	DCOM1	0,564	BH
6012	B2 SX40	4500,000	114,754	DCOM3	105,401	DCOM4	0,564	BH
6013	B2 SX40	0,000	51,232	DCOM4	50,176	DCOM3	0,517	BH
6013	B2 SX40	1137,107	155,151	DCOM2	130,426	DCOM1	0,517	BH
6013	B2 SX40	4275,000	213,241	DCOM3	311,148	DCOM2	0,517	BH
6014	B2 SX40	0,000	535,108	DCOM3	311,148	DCOM3	0,441	DCOM10
6014	B2 SX40	2500,000	171,033	DCOM2	311,148	DCOM1	0,441	DCOM10
6014	B2 SX40	5000,000	327,489	DCOM4	228,816	DCOM2	0,441	DCOM10
6015	B2 SX40	0,000	541,144	DCOM3	311,148	DCOM3	0,441	DCOM10
6015	B2 SX40	2250,000	189,265	DCOM2	229,369	DCOM1	0,575	DCOM10
6015	B2 SX40	4500,000	502,327	DCOM3	311,148	DCOM2	0,575	DCOM10
6016	B2 SX40	0,000	152,165	DCOM3	311,148	DCOM3	0,443	BH
6016	B2 SX40	4500,000	345,035	DCOM2	228,453	DCOM1	0,443	BH
6017	B2 SX40	0,000	0,000	DCOM1	801,280	DCOM2	2,135	DCOM1
6017	B2 SX40	1125,000	182,213	DCOM3	207,213	DCOM3	0,711	DCOM1
6017	B2 SX40	2250,000	636,804	DCOM2	311,148	DCOM1	1,363	DCOM2
6018	B2 SX40	0,000	555,208	DCOM2	311,148	DCOM2	1,818	DCOM3
6018	B2 SX40	1125,000	127,221	DCOM3	229,132	DCOM1	2,547	DCOM3
6018	B2 SX40	2250,000	0,000	DCOM1	500,806	DCOM2	1,538	DCOM1
6019	B2 SX40	0,000	599,889	DCOM3	311,148	DCOM2	1,008	DCOM10
6019	B2 SX40	2250,000	184,129	DCOM2	311,148	DCOM3	0,529	DCOM10
6019	B2 SX40	4500,000	311,752	DCOM4	178,340	DCOM2	0,206	DCOM10
6020	B2 SX40	0,000	584,304	DCOM4	311,148	DCOM3	0,932	DCOM10
6020	B2 SX40	2250,000	129,857	DCOM3	311,148	DCOM1	0,563	DCOM10
6020	B2 SX40	4500,000	226,313	DCOM2	136,838	DCOM2	0,872	DCOM10
6021	B2 SX40	0,000	860,290	DCOM2	236,764	DCOM2	0,866	DCOM10
6021	B2 SX40	2250,000	142,469	DCOM3	311,148	DCOM3	0,443	DCOM10
6021	B2 SX40	4500,000	441,839	DCOM3	236,489	DCOM2	0,327	DCOM10
6022	B2 SX40	0,000	411,651	DCOM2	263,343	DCOM2	0,642	BH
6022	B2 SX40	2250,000	122,429	DCOM3	311,148	DCOM3	0,443	BH
6022	B2 SX40	4500,000	337,836	DCOM2	221,857	DCOM2	0,628	BH
6023	B2 SX40	0,000	277,071	DCOM1	127,556	DCOM3	0,751	DCOM10
6023	B2 SX40	2250,000	181,424	DCOM3	276,143	DCOM2	0,449	DCOM10
6023	B2 SX40	4500,000	565,638	DCOM2	311,148	DCOM2	0,524	DCOM10
6024	B2 SX40	0,000	524,153	DCOM2	311,148	DCOM2	0,333	DCOM10
6024	B2 SX40	2500,000	163,414	DCOM3	311,148	DCOM3	0,503	DCOM10
6024	B2 SX40	5000,000	397,915	DCOM3	219,551	DCOM2	0,861	DCOM10
60Y1	B2 SX40	0,000	236,206	DCOM4	117,179	DCOM4	0,305	BH
60Y1	B2 SX40	3500,000	58,198	DCOM3	118,241	DCOM1	0,164	BH
60Y1	B2 SX40	7000,000	235,430	DCOM3	116,627	DCOM3	0,204	BH
60Y2	B2 SX40	0,000	175,606	DCOM5	157,560	DCOM5	0,361	DCOM2
60Y2	B2 SX40	700,107	122,820	DCOM5	50,819	DCOM4	0,297	DCOM3
60Y3	B2 SX40	225,000	196,392	DCOM5	37,280	DCOM5	1,299	DCOM1
60Y3	B2 SX40	612,500	67,181	DCOM5	48,624	DCOM5	1,275	DCOM1
60Y3	B2 SX40	1000,000	16,738	DCOM7	136,134	DCOM4	1,452	DCOM1
60Y4	B2 SX40	0,000	17,162	DCOM5	129,639	DCOM3	1,536	DCOM2
60Y4	B2 SX40	387,500	58,063	DCOM3	43,138	DCOM5	1,531	DCOM1
60Y4	B2 SX40	725,000	138,489	DCOM3	98,594	DCOM5	1,204	DCOM1
60Y5	B2 SX40	0,000	177,311	DCOM6	160,636	DCOM5	0,366	DCOM2
60Y5	B2 SX40	707,167	122,725	DCOM6	50,833	DCOM3	0,302	DCOM2
60Y5	B2 SX40	1414,214	264,794	DCOM3	121,705	DCOM3	0,440	DCOM1
60Y6	B2 SX40	0,000	98,307	DCOM5	114,850	DCOM6	0,856	DCOM1
60Y6	B2 SX40	387,500	13,094	DCOM3	28,551	DCOM6	0,973	DCOM1
60Y6	B2 SX40	725,000	81,937	DCOM3	60,240	DCOM4	0,903	DCOM1
60Y7	B2 SX40	225,000	441,532	DCOM4	238,522	DCOM4	0,334	BH
60Y7	B2 SX40	3500,000	142,518	DCOM3	299,557	DCOM1	0,334	BH
60Y7	B2 SX40	7275,000	440,441	DCOM3	237,737	DCOM3	0,334	BH
60Y8	B2 SX40	225,000	31,294	DCOM4	60,134	DCOM3	0,907	DCOM1
60Y8	B2 SX40	612,500	17,863	DCOM4	11,794	DCOM3	0,884	DCOM1
60Y8	B2 SX40	1000,000	100,031	DCOM5	115,692	DCOM5	0,360	DCOM1
60Y9	B2 SX40	250,000	311,148	DCOM5	161,516	DCOM5	0,505	DCOM1
60Y9	B2 SX40	2625,000	60,372	DCOM5	60,372	DCOM5	0,370	DCOM2
60Y9	B2 SX40	5000,000	208,718	DCOM5	211,067	DCOM5	0,448	DCOM1

ED10	B20X50	0,000	8,911	DCCM2	17,258	DCCM4	0,145	DCCM7
ED10	B20X50	500,000	12,072	DCCM2	6,034	DCCM2	0,213	DCCM2
ED10	B20X50	1000,000	32,184	DCCM2	16,076	DCCM2	0,235	DCCM2
ED11	B20X50	0,000	44,944	DCCM4	21,451	DCCM4	0,165	DCCM7
ED11	B20X50	1250,000	55,545	DCCM2	44,060	DCCM3	0,212	DCCM2
ED11	B20X50	2500,000	181,045	DCCM3	89,056	DCCM3	0,302	DCCM4
ED12	B20X50	0,000	94,436	DCCM5	40,138	DCCM5	0,243	DCCM7
ED12	B20X50	1250,000	73,630	DCCM2	30,191	DCCM2	0,248	DCCM2
ED12	B20X50	2500,000	223,491	DCCM2	51,501	DCCM2	0,335	DCCM4
ED13	B20X50	0,000	137,133	DCCM4	67,024	DCCM4	0,289	DCCM7
ED13	B20X50	1250,000	75,655	DCCM2	34,277	DCCM2	0,277	DCCM2
ED13	B20X50	2500,000	136,016	DCCM2	63,003	DCCM2	0,236	DCCM4
ED14	B20X50	0,000	43,166	DCCM3	21,145	DCCM3	0,275	DCCM7
ED14	B20X50	1250,000	36,003	DCCM2	34,450	DCCM2	0,333	DCCM2
ED14	B20X50	2500,000	120,314	DCCM2	66,851	DCCM2	0,370	DCCM4
ED15	B20X50	0,000	50,670	DCCM4	15,004	DCCM4	0,293	DCCM7
ED15	B20X50	1000,000	38,634	DCCM3	30,836	DCCM3	0,313	DCCM4
ED15	B20X50	2000,000	142,632	DCCM3	71,946	DCCM3	0,365	DCCM4
ED16	B20X50	0,000	40,744	DCCM3	20,105	DCCM3	0,247	DCCM7
ED16	B20X50	1000,000	80,324	DCCM4	38,905	DCCM4	0,307	DCCM4
ED16	B20X50	2000,000	144,313	DCCM4	71,774	DCCM4	0,354	DCCM4
ED17	B20X50	0,000	34,373	DCCM3	22,060	DCCM3	0,167	DCCM4
ED17	B20X50	1500,000	16,462	DCCM2	38,311	DCCM3	0,141	DCCM2
ED17	B20X50	3000,000	36,812	DCCM2	18,287	DCCM2	0,206	DCCM4
ED18	B20X50	0,000	47,806	DCCM5	23,781	DCCM4	0,143	DCCM7
ED18	B20X50	1500,000	15,337	DCCM5	35,504	DCCM5	0,140	DCCM2
ED18	B20X50	3000,000	43,082	DCCM2	21,812	DCCM2	0,204	DCCM4
ED19	B20X50	125,000	175,804	DCCM7	87,406	DCCM3	0,233	DCCM4
ED19	B20X50	1250,000	59,978	DCCM4	56,331	DCCM3	0,463	DCCM4
ED19	B20X50	2375,000	340,273	DCCM4	113,510	DCCM4	0,502	DCCM4
ED20	B20X50	0,000	0,000	DCCM1	41,382	DCCM7	0,651	DCCM5
ED20	B20X50	1187,500	111,021	DCCM2	111,021	DCCM2	0,768	DCCM4
ED20	B20X50	2375,000	342,401	DCCM4	223,851	DCCM2	0,964	DCCM4
ED21	B20X50	0,000	73,428	DCCM3	34,713	DCCM3	0,170	EH
ED21	B20X50	2050,000	24,920	DCCM4	277,036	DCCM2	0,096	EH
ED21	B20X50	4500,000	97,737	DCCM4	48,716	DCCM4	0,172	EH
ED22	B20X50	0,000	119,128	DCCM2	59,322	DCCM7	0,185	EH
ED22	B20X50	2250,000	29,611	DCCM2	162,352	DCCM2	0,108	EH
ED22	B20X50	4500,000	54,443	DCCM2	27,174	DCCM2	0,173	EH
ED23	B20X50	0,000	30,014	DCCM4	25,538	DCCM7	0,385	DCCM10
ED23	B20X50	2187,500	123,012	DCCM2	127,012	DCCM2	0,373	DCCM10
ED23	B20X50	4375,000	330,892	DCCM2	266,140	DCCM2	0,570	DCCM10
ED24	B20X50	125,000	127,378	DCCM3	93,136	DCCM3	0,456	EH
ED24	B20X50	2250,000	87,558	DCCM2	87,558	DCCM2	0,339	EH
ED24	B20X50	4375,000	319,634	DCCM2	176,112	DCCM2	0,543	EH
ED25	B20X50	0,000	163,470	DCCM3	101,603	DCCM7	0,060	EH
ED25	B20X50	2187,500	15,320	DCCM1	24,781	DCCM1	0,060	EH
ED25	B20X50	4375,000	38,853	DCCM3	19,930	DCCM3	0,060	EH
ED26	B20X50	0,000	62,618	DCCM1	31,345	DCCM1	0,060	EH
ED26	B20X50	2187,500	15,558	DCCM1	24,510	DCCM1	0,060	EH
ED26	B20X50	4375,000	40,332	DCCM4	20,142	DCCM4	0,060	EH
ED27	B20X50	125,000	100,000	DCCM4	98,081	DCCM4	0,463	EH
ED27	B20X50	2250,000	88,287	DCCM2	88,287	DCCM2	0,340	EH
ED27	B20X50	4375,000	319,634	DCCM2	177,586	DCCM2	0,545	EH
ED28	B20X50	0,000	73,792	DCCM3	33,014	DCCM4	0,247	DCCM10
ED28	B20X50	2187,500	133,163	DCCM2	133,163	DCCM3	0,411	DCCM10
ED28	B20X50	4375,000	410,378	DCCM2	268,667	DCCM2	0,602	DCCM10
ED29	B20X50	0,000	106,435	DCCM2	52,818	DCCM7	0,201	EH
ED29	B20X50	2150,000	31,138	DCCM2	223,206	DCCM2	0,178	EH
ED29	B20X50	4500,000	126,544	DCCM2	62,820	DCCM2	0,196	EH
ED30	B20X50	0,000	143,093	DCCM7	81,130	DCCM3	0,208	EH
ED30	B20X50	2250,000	40,455	DCCM2	245,245	DCCM2	0,132	EH
ED30	B20X50	4500,000	89,766	DCCM2	19,858	DCCM3	0,194	EH
ED31	B20X50	0,000	1,500	DCCM2	60,521	DCCM3	0,244	EH
ED31	B20X50	2437,500	114,936	DCCM2	206,338	DCCM1	0,316	EH
ED31	B20X50	4875,000	364,437	DCCM3	231,721	DCCM2	0,407	EH
EDY1	B20X40	0,000	0,000	DCCM1	148,606	DCCM1	0,556	DCCM1
EDY1	B20X40	1637,500	90,494	DCCM4	126,390	DCCM3	0,653	DCCM1
EDY1	B20X40	3275,000	311,148	DCCM4	161,831	DCCM4	0,753	DCCM1

70Y2	B2 SX40	0,000	0,000	DCOM1	142,545	DCOM1	0,545	DCOM1
70Y2	B2 SX40	1627,500	80,183	DCOM3	126,960	DCOM4	0,654	DCOM1
70Y2	B2 SX40	3075,000	311,148	DCOM5	141,238	DCOM7	0,732	DCOM1
70Y3	B2 SX40	0,000	242,114	DCOM6	113,022	DCOM6	0,393	DCOM1
70Y3	B2 SX40	1412,500	61,270	DCOM6	73,543	DCOM5	0,249	DCOM1
70Y3	B2 SX40	8000,000	32,745	DCOM5	89,611	DCOM6	0,325	DCOM1
70Y4	B2 SX40	0,000	14,504	DCOM5	7,351	DCOM5	0,155	BH
70Y4	B2 SX40	2500,000	19,327	DCOM2	93,642	DCOM1	0,035	BH
70Y4	B2 SX40	5000,000	73,617	DCOM6	35,755	DCOM6	0,045	BH
70Y5	B2 SX40	0,000	148,914	DCOM6	173,148	DCOM6	0,335	DCOM1
70Y5	B2 SX40	2512,500	61,271	DCOM2	90,567	DCOM5	0,249	DCOM1
70Y5	B2 SX40	5000,000	97,238	DCOM5	88,994	DCOM6	0,308	DCOM1
70Y6	B2 SX40	0,000	437,183	DCOM4	142,635	DCOM4	0,394	DCOM1
70Y6	B2 SX40	625,000	131,231	DCOM4	139,612	DCOM4	2,817	DCOM1
70Y6	B2 SX40	1000,000	311,148	DCOM4	155,135	DCOM4	3,734	DCOM1
70Y7	B2 SX40	0,000	0,000	DCOM1	311,148	DCOM1	0,658	DCOM1
70Y7	B2 SX40	1750,000	83,521	DCOM4	188,127	DCOM3	0,773	DCOM1
70Y7	B2 SX40	3500,000	311,148	DCOM4	168,731	DCOM4	0,873	DCOM1
70Y8	B2 SX40	0,000	0,000	DCOM1	311,148	DCOM1	0,658	DCOM1
70Y8	B2 SX40	1750,000	83,527	DCOM3	188,156	DCOM4	0,773	DCOM1
70Y8	B2 SX40	3500,000	311,148	DCOM3	168,873	DCOM3	0,873	DCOM1
70Y9	B2 SX40	250,000	412,943	DCOM3	270,131	DCOM3	1,843	DCOM1
70Y9	B2 SX40	625,000	321,789	DCOM5	133,888	DCOM3	1,820	DCOM1
70Y9	B2 SX40	1000,000	311,148	DCOM3	155,305	DCOM3	2,738	DCOM1
8B10	B130X50	0,000	29,731	DCOM10	310,108	DCOM5	1,784	DCOM7
8B10	B130X50	625,000	116,788	DCOM5	128,258	DCOM2	2,838	DCOM2
8B10	B130X50	1250,000	311,984	DCOM6	257,955	DCOM2	2,904	DCOM2
8B11	B130X50	150,000	7,588	DCOM10	42,977	DCOM5	1,185	DCOM1
8B11	B130X50	500,000	47,127	DCOM1	127,506	DCOM2	1,147	DCOM1
8B11	B130X50	850,000	0,000	DCOM1	134,688	DCOM1	1,115	DCOM1
8B12	B130X50	150,000	8,502	DCOM10	147,667	DCOM5	1,213	DCOM1
8B12	B130X50	500,000	48,079	DCOM1	120,385	DCOM2	1,174	DCOM1
8B12	B130X50	850,000	0,000	DCOM1	173,524	DCOM1	1,143	DCOM1
8B13	B130X50	150,000	12,213	DCOM9	35,619	DCOM7	0,000	BH
8B13	B130X50	1375,000	18,225	DCOM1	77,489	DCOM2	0,188	BH
8B13	B130X50	2500,000	0,737	BH	73,072	DCOM1	0,163	DCOM2
8B14	B130X50	150,000	40,023	DCOM9	42,670	DCOM6	0,273	DCOM1
8B14	B130X50	1375,000	19,341	DCOM1	74,833	DCOM2	0,186	DCOM1
8B14	B130X50	2500,000	2,702	BH	77,557	DCOM1	0,189	DCOM2
8B15	B130X50	0,000	284,118	DCOM5	142,173	DCOM5	0,272	BH
8B15	B130X50	3500,000	70,963	DCOM5	466,175	DCOM2	0,231	BH
8B15	B130X50	7000,000	43,694	DCOM10	223,397	DCOM5	0,256	BH
8B16	B130X50	150,000	233,265	DCOM5	111,035	DCOM2	0,232	BH
8B16	B130X50	3500,000	55,415	DCOM2	370,528	DCOM2	0,192	BH
8B16	B130X50	6850,000	57,473	DCOM6	125,755	DCOM5	0,216	BH
8B17	B30X30	150,000	348,963	DCOM7	235,172	DCOM2	0,294	BH
8B17	B30X30	3500,000	111,510	DCOM2	267,304	DCOM2	0,223	BH
8B17	B30X30	6850,000	217,971	DCOM2	108,069	DCOM2	0,279	BH
8B18	B130X50	0,000	282,009	DCOM5	191,875	DCOM5	0,345	BH
8B18	B130X50	3500,000	95,541	DCOM5	497,645	DCOM2	0,315	BH
8B18	B130X50	7000,000	39,846	DCOM10	306,072	DCOM5	0,323	BH
8B19	B130X50	150,000	230,040	DCOM5	183,663	DCOM6	0,622	DCOM2
8B19	B130X50	2125,000	86,666	DCOM5	115,632	DCOM2	0,507	DCOM2
8B19	B130X50	4100,000	190,535	DCOM6	250,636	DCOM5	0,571	DCOM1
8B20	B130X50	150,000	173,451	DCOM5	128,840	DCOM10	0,574	DCOM2
8B20	B130X50	2125,000	82,874	DCOM5	149,220	DCOM5	0,454	DCOM2
8B20	B130X50	4100,000	177,999	DCOM6	335,125	DCOM5	0,509	DCOM1
8B21	B130X50	150,000	328,603	DCOM5	185,285	DCOM5	0,262	DCOM1
8B21	B130X50	500,000	221,127	DCOM5	187,444	DCOM6	3,223	DCOM1
8B21	B130X50	850,000	77,612	DCOM5	242,129	DCOM6	3,191	DCOM1
8B22	B20X30	150,000	237,761	DCOM5	132,295	DCOM5	0,507	DCOM1
8B22	B20X30	500,000	111,085	DCOM5	163,530	DCOM10	2,464	DCOM1
8B22	B20X30	850,000	0,000	DCOM1	176,246	DCOM6	2,434	DCOM1
8B23	B130X50	0,000	269,544	DCOM5	134,011	DCOM5	0,303	DCOM2
8B23	B130X50	625,000	574,726	DCOM5	258,222	DCOM3	3,863	DCOM2
8B23	B130X50	1250,000	924,077	DCOM5	477,425	DCOM5	3,928	DCOM2
8B24	B130X50	0,000	79,144	DCOM7	39,505	DCOM7	0,323	DCOM2
8B24	B130X50	675,000	46,213	DCOM6	87,315	DCOM6	0,345	DCOM2

BE14	BT30X50	1350,000	1,947	DOON9	135,947	DOON6	11,545	DOON1
BE15	BT30X50	150,000	544,452	DOON2	474,147	DOON2	4,154	DOON2
BE16	BT30X50	500,000	399,454	DOON2	241,558	DOON2	4,054	DOON1
BE17	BT30X50	1350,000	0,000	DOON2	153,137	DOON2	4,012	DOON2
BE18	BT30X50	250,000	474,147	DOON2	310,307	DOON1	2,551	DOON2
BE19	BT30X50	500,000	148,775	DOON5	154,357	DOON1	2,512	DOON2
BE20	BT30X50	1350,000	0,000	DOON1	370,230	DOON2	2,543	DOON1
BE21	BT30X50	250,000	501,750	DOON1	329,501	DOON1	2,715	DOON2
BE22	BT30X50	200,000	173,077	DOON2	153,511	DOON1	2,535	DOON1
BE23	BT30X50	1350,000	0,000	DOON1	247,215	DOON1	2,555	DOON1
BE24	BT30X50	250,000	754,431	DOON2	474,147	DOON2	4,127	DOON1
BE25	BT30X50	500,000	414,072	DOON2	240,257	DOON2	4,047	DOON1
BE26	BT30X50	1350,000	0,000	DOON1	131,334	DOON2	2,575	DOON2
BE27	BT30X50	0,000	79,968	DOON2	39,914	DOON2	0,755	DOON1
BE28	BT30X50	474,000	52,478	DOON2	58,573	DOON2	0,700	DOON1
BE29	BT30X50	1350,000	0,000	DOON1	130,459	DOON2	0,525	DOON1
BE30	BT30X50	0,000	354,202	DOON2	133,350	DOON1	4,005	DOON2
BE31	BT30X50	521,000	234,203	DOON2	234,203	DOON1	4,050	DOON2
BE32	BT30X50	1750,000	1031,333	DOON2	499,461	DOON1	4,135	DOON2
BE33	BT30X50	250,000	519,198	DOON5	113,574	DOON10	0,967	DOON2
BE34	BT30X50	200,000	474,147	DOON5	151,338	DOON10	0,552	DOON2
BE35	BT30X50	1350,000	474,147	DOON5	129,228	DOON10	0,955	DOON2
BE36	BT30X50	250,000	474,147	DOON5	30,150	DOON10	0,914	DOON2
BE37	BT30X50	300,000	470,343	DOON5	57,539	DOON10	0,910	DOON2
BE38	BT30X50	250,000	465,852	DOON5	104,940	DOON10	0,905	DOON2
BE39	BT30X50	0,000	0,000	DOON1	474,147	DOON2	0,898	DOON1
BE40	BT30X50	2155,000	172,315	DOON2	253,908	DOON3	1,173	DOON1
BE41	BT30X50	4550,000	537,072	DOON4	345,467	DOON7	1,453	DOON1
BE42	BT30X50	0,000	0,000	DOON1	474,147	DOON2	0,852	DOON1
BE43	BT30X50	0,000	170,508	DOON2	255,072	DOON4	1,157	DOON1
BE44	BT30X50	4550,000	533,064	DOON3	343,774	DOON7	1,452	DOON1
BE45	BT30X50	150,000	75,955	DOON5	37,555	DOON5	0,412	DOON2
BE46	BT30X50	1325,000	36,438	DOON5	55,197	DOON5	0,270	DOON2
BE47	BT30X50	2500,000	145,442	DOON5	105,593	DOON5	0,455	DOON1
BE48	BT30X50	150,000	474,147	DOON2	274,066	DOON2	1,158	DOON2
BE49	BT30X50	1500,000	154,715	DOON2	135,319	DOON2	0,915	DOON2
BE50	BT30X50	2500,000	5,605	DOON4	13,595	DOON5	0,713	DOON2
BE51	BT30X50	0,000	0,000	DOON1	46,013	DOON2	1,304	DOON2
BE52	BT30X50	1250,000	474,147	DOON2	321,871	DOON2	2,007	DOON2
BE53	BT30X50	2300,000	1010,554	DOON2	493,843	DOON2	2,553	DOON2
BE54	BT30X50	0,000	0,000	DOON1	59,574	DOON2	1,031	DOON2
BE55	BT30X50	1250,000	154,251	DOON2	193,253	DOON2	1,254	DOON2
BE56	BT30X50	2500,000	599,257	DOON2	329,572	DOON2	1,454	DOON2
BE57	BT30X50	150,000	129,430	DOON2	64,565	DOON2	0,937	DOON2
BE58	BT30X50	0,000	39,965	DOON5	125,258	DOON2	0,774	DOON2
BE59	BT30X50	2500,000	75,347	DOON10	352,117	DOON6	0,534	DOON1
BE60	BT30X50	150,000	25,537	DOON5	31,783	DOON6	0,445	DOON1
BE61	BT30X50	1225,000	67,575	DOON2	67,575	DOON2	0,495	DOON5
BE62	BT30X50	2500,000	152,765	DOON2	125,595	DOON2	0,539	DOON1
BE63	BT30X50	0,000	0,000	DOON1	21,159	DOON2	0,101	DOON1
BE64	BT30X50	1755,000	37,000	DOON2	88,391	DOON2	0,154	DOON1
BE65	BT30X50	2750,000	111,712	DOON2	55,722	DOON2	0,125	DOON1
BE66	BT30X50	150,000	34,282	DOON5	30,862	DOON6	0,424	DOON1
BE67	BT30X50	1725,000	53,990	DOON2	53,990	DOON2	0,432	DOON5
BE68	BT30X50	2500,000	217,483	DOON2	108,231	DOON2	0,634	DOON1
BE69	BT30X50	150,000	104,125	DOON2	55,870	DOON2	0,949	DOON2
BE70	BT30X50	1725,000	54,425	DOON5	107,431	DOON2	0,735	DOON2
BE71	BT30X50	2500,000	111,300	DOON10	359,582	DOON5	0,537	DOON1
BE72	BT30X50	0,000	0,000	DOON1	28,832	DOON2	1,015	DOON2
BE73	BT30X50	1250,000	201,105	DOON2	193,943	DOON2	1,212	DOON2
BE74	BT30X50	2500,000	597,352	DOON2	391,215	DOON2	1,470	DOON2
BE75	BT30X50	0,000	0,000	DOON1	35,015	DOON2	0,007	DOON2
BE76	BT30X50	1250,000	474,147	DOON2	380,651	DOON2	2,210	DOON2
BE77	BT30X50	2500,000	1135,213	DOON2	549,959	DOON2	2,452	DOON2
BE78	BT30X50	350,000	781,493	DOON2	474,147	DOON2	1,852	DOON2
BE79	BT30X50	1500,000	257,713	DOON2	251,595	DOON2	1,610	DOON2
BE80	BT30X50	2750,000	0,000	DOON1	55,410	DOON2	1,407	DOON2

8645	B20X40	150,000	141,849	DOCN4	50,835	DOCN5	0,488	DOCN2
8647	B20X50	1325,000	81,895	DOCN5	65,350	DOCN5	0,345	DOCN2
8647	B20X50	2500,000	187,854	DOCN5	126,982	DOCN5	0,413	DOCN2
8650	B25X40	0,000	0,000	DOCN1	448,091	DOCN2	0,457	EM
8671	B25X40	1800,000	176,175	DOCN2	176,175	DOCN2	0,462	EM
8671	B25X40	2999,999	548,934	DOCN2	311,148	DOCN2	0,462	EM
8672	B25X40	0,000	0,000	DOCN1	493,870	DOCN2	0,379	DOCN1
8672	B25X40	1850,000	145,968	DOCN2	463,739	DOCN2	0,399	DOCN1
8672	B25X40	2700,000	0,000	DOCN1	488,983	DOCN2	0,379	DOCN1
8673	B25X40	150,000	649,584	DOCN2	511,148	DOCN2	0,443	EM
8673	B25X40	1850,000	176,849	DOCN2	175,849	DOCN2	0,452	EM
8673	B25X40	2149,999	0,000	DOCN1	435,500	DOCN2	0,462	EM
8674	B25X40	150,000	141,068	DOCN2	50,307	DOCN2	1,547	DOCN2
8674	B25X40	500,000	38,081	DOCN5	35,023	DOCN2	1,524	DOCN2
8674	B25X40	849,999	0,000	DOCN1	80,290	DOCN2	1,406	DOCN2
8675	B25X40	150,000	0,000	DOCN1	24,883	DOCN2	1,477	DOCN2
8675	B25X40	500,000	45,753	DOCN5	35,605	DOCN2	1,504	DOCN2
8675	B25X40	849,999	143,925	DOCN2	71,176	DOCN2	1,522	DOCN2
8676	B25X40	0,000	0,000	DOCN1	182,844	DOCN2	0,314	EM
8676	B25X40	1975,000	57,215	DOCN2	57,215	DOCN2	0,360	EM
8676	B25X40	2150,000	231,543	DOCN2	114,834	DOCN2	0,406	EM
8677	B25X40	0,000	0,000	DOCN1	174,534	DOCN2	0,269	DOCN10
8677	B25X40	1075,000	49,824	DOCN2	45,824	DOCN2	0,311	DOCN10
8677	B25X40	2150,000	201,290	DOCN2	99,975	DOCN2	0,352	DOCN10
8678	B25X40	0,000	0,000	DOCN1	143,601	DOCN2	0,233	DOCN2
8678	B25X40	1200,000	40,297	DOCN2	176,501	DOCN2	0,161	DOCN2
8678	B25X40	2400,000	0,000	DOCN1	162,884	DOCN2	0,211	DOCN1
8679	B25X40	150,000	320,313	DOCN2	112,245	DOCN2	0,150	EM
8679	B25X40	3500,000	35,924	DOCN2	87,124	DOCN1	0,150	EM
8679	B25X40	5500,000	135,066	DOCN5	87,723	DOCN5	0,150	EM
8610	B20X50	0,000	0,000	DOCN1	147,703	DOCN2	0,391	EM
8610	B20X50	2197,500	115,448	DOCN2	115,448	DOCN2	0,491	EM
8610	B20X50	4508,000	254,435	DOCN2	232,639	DOCN2	0,553	EM
8611	B20X50	0,000	115,750	DOCN2	58,159	DOCN2	0,155	EM
8611	B20X50	2250,000	39,825	DOCN2	195,049	DOCN2	0,130	EM
8611	B20X50	4500,000	8,154	DOCN10	52,087	DOCN3	0,146	EM
8612	B20X50	0,000	0,000	DOCN1	69,094	DOCN2	0,179	EM
8612	B20X50	2250,000	35,409	DOCN2	195,721	DOCN2	0,172	EM
8612	B20X50	4500,000	146,665	DOCN2	72,989	DOCN2	0,208	EM
8613	B20X50	0,000	0,000	DOCN1	137,112	DOCN2	0,396	EM
8613	B20X50	2437,500	87,076	DOCN2	252,319	DOCN2	0,377	EM
8613	B20X50	4875,000	319,634	DOCN2	175,135	DOCN2	0,573	EM
8610	B20X30	225,000	265,398	DOCN4	154,604	DOCN4	0,654	DOCN1
8610	B20X30	1237,500	75,810	DOCN4	117,423	DOCN3	0,573	DOCN1
8610	B20X30	2250,000	0,000	DOCN1	152,885	DOCN2	0,499	DOCN1
8611	B20X30	0,000	0,000	DOCN1	130,213	DOCN2	0,488	EM
8611	B20X30	1200,000	32,627	DOCN3	125,743	DOCN4	0,623	EM
8611	B20X30	2000,000	287,493	DOCN3	175,203	DOCN3	0,779	EM
8612	B20X30	0,000	0,000	DOCN1	98,247	DOCN3	0,507	DOCN1
8612	B20X30	635,000	55,585	DOCN4	44,012	DOCN1	0,760	DOCN1
8612	B20X30	1250,000	178,203	DOCN1	88,474	DOCN1	0,849	DOCN1
8613	B20X30	0,000	0,000	DOCN1	35,636	DOCN4	0,305	DOCN1
8613	B20X30	635,000	57,319	DOCN3	44,205	DOCN1	0,758	DOCN1
8613	B20X30	1250,000	178,203	DOCN1	88,364	DOCN1	0,847	DOCN1
8614	B20X30	0,000	0,000	DOCN1	128,535	DOCN3	0,473	EM
8614	B20X30	1000,000	90,746	DOCN4	129,870	DOCN3	0,608	EM
8614	B20X30	2000,000	281,447	DOCN4	178,203	DOCN4	0,764	EM
8615	B20X30	115,000	245,506	DOCN3	160,502	DOCN3	0,315	DOCN1
8615	B20X30	1237,500	78,504	DOCN3	111,110	DOCN4	0,595	DOCN1
8615	B20X30	2250,000	0,000	DOCN1	151,243	DOCN2	0,459	DOCN1
8616	B20X30	115,000	251,963	DOCN3	164,638	DOCN3	0,599	EM
8616	B20X30	1250,000	81,533	DOCN3	127,366	DOCN2	0,809	EM
8616	B20X30	4275,000	249,930	DOCN4	162,761	DOCN4	0,601	EM
8617	B20X30	0,000	50,615	DOCN2	178,203	DOCN4	0,407	DOCN2
8617	B20X30	1637,500	75,396	DOCN4	106,327	DOCN2	0,406	DOCN2
8617	B20X30	3275,000	232,427	DOCN4	152,120	DOCN4	0,685	DOCN2
8618	B20X30	115,000	329,214	DOCN3	178,203	DOCN3	0,695	DOCN2
8618	B20X30	612,500	172,896	DOCN3	105,624	DOCN3	0,636	DOCN2
8618	B20X30	1000,000	0,000	DOCN1	205,454	DOCN4	0,603	DOCN2

8F19	B20X30	0,000	184,831	DCCM4	121,480	DCCM4	0,194	DCCM2
8F19	B20X30	425,000	59,761	DCCM2	114,283	DCCM3	2,138	DCCM2
8F19	B20X30	850,000	0,000	DCCM1	212,089	DCCM3	2,058	DCCM2
8F20	B20X30	150,000	134,511	DCCM2	112,291	DCCM2	0,957	DCCM2
8F20	B20X30	1750,000	75,834	DCCM1	106,041	DCCM1	0,806	DCCM2
8F20	B20X30	3350,000	0,000	DCCM1	145,642	DCCM2	0,513	DCCM2
8F21	B20X30	150,000	133,303	DCCM1	96,471	DCCM3	0,464	DCCM10
8F21	B20X30	2250,000	45,274	DCCM2	97,868	DCCM1	0,034	DCCM10
8F21	B20X30	4050,000	179,690	DCCM4	83,721	DCCM4	0,430	DCCM10
8F22	B20X30	150,000	171,411	DCCM1	85,149	DCCM2	0,267	BH
8F22	B20X30	2250,000	45,432	DCCM1	103,341	DCCM2	0,208	BH
8F22	B20X30	4350,000	168,238	DCCM4	78,668	DCCM4	0,244	BH
8F23	B20X30	150,000	173,003	DCCM2	85,463	DCCM2	0,207	BH
8F23	B20X30	2250,000	42,553	DCCM1	103,006	DCCM2	0,202	BH
8F23	B20X30	4350,000	158,568	DCCM3	78,530	DCCM3	0,215	BH
8F24	B20X30	150,000	181,333	DCCM2	95,837	DCCM2	0,445	DCCM10
8F24	B20X30	2250,000	45,732	DCCM2	99,510	DCCM3	0,255	DCCM10
8F24	B20X30	4350,000	174,137	DCCM3	88,515	DCCM3	0,433	DCCM10
8F25	B20X30	150,000	172,513	DCCM2	110,301	DCCM2	0,644	DCCM2
8F25	B20X30	1750,000	54,918	DCCM2	105,263	DCCM2	0,536	DCCM2
8F25	B20X30	3350,000	0,000	DCCM1	140,119	DCCM2	0,509	DCCM2
8F26	B20X30	0,000	260,168	DCCM3	100,503	DCCM2	1,355	DCCM2
8F26	B20X30	425,000	64,793	DCCM2	121,102	DCCM4	2,298	DCCM3
8F26	B20X30	850,000	0,000	DCCM1	221,352	DCCM4	2,215	DCCM2
8F27	B20X30	0,000	130,646	DCCM4	99,057	DCCM2	0,597	DCCM3
8F27	B20X30	425,000	79,744	DCCM2	79,744	DCCM2	0,580	DCCM3
8F27	B20X30	850,000	0,000	DCCM1	305,937	DCCM2	0,494	DCCM3
8F28	B20X30	150,000	181,856	DCCM2	104,000	DCCM2	0,995	DCCM3
8F28	B20X30	1750,000	51,658	DCCM2	111,685	DCCM2	0,763	DCCM3
8F28	B20X30	3350,000	0,000	DCCM1	267,304	DCCM2	0,563	DCCM3
8F29	B20X30	150,000	189,847	DCCM2	90,830	DCCM2	0,390	BH
8F29	B20X30	2250,000	68,648	DCCM2	187,790	DCCM2	0,268	BH
8F29	B20X30	4350,000	267,304	DCCM2	138,027	DCCM2	0,311	BH
8F30	B20X30	150,000	182,304	DCCM2	141,440	DCCM3	0,311	BH
8F30	B20X30	2250,000	70,336	DCCM2	157,098	DCCM2	0,269	BH
8F30	B20X30	4350,000	186,073	DCCM4	90,370	DCCM4	0,294	BH
8F31	B20X30	150,000	185,219	DCCM2	174,880	DCCM2	0,312	BH
8F31	B20X30	2250,000	62,141	DCCM2	162,757	DCCM2	0,270	BH
8F31	B20X30	4350,000	195,399	DCCM3	96,565	DCCM3	0,300	BH
8F32	B20X30	150,000	181,256	DCCM2	99,995	DCCM2	0,298	BH
8F32	B20X30	2250,000	68,228	DCCM2	139,470	DCCM2	0,260	BH
8F32	B20X30	4350,000	267,304	DCCM2	137,177	DCCM2	0,311	BH
8F33	B20X30	150,000	267,304	DCCM2	173,943	DCCM2	0,995	DCCM1
8F33	B20X30	1750,000	95,393	DCCM2	106,786	DCCM2	0,759	DCCM1
8F33	B20X30	3350,000	0,000	DCCM1	267,304	DCCM2	0,530	DCCM3
8F34	B20X30	0,000	173,114	DCCM3	54,304	DCCM2	0,476	DCCM2
8F34	B20X30	425,000	71,644	DCCM2	71,644	DCCM2	0,369	DCCM2
8F34	B20X30	850,000	0,000	DCCM1	273,213	DCCM2	0,286	DCCM2
8F35	B20X30	225,000	195,335	DCCM4	113,489	DCCM3	0,288	BH
8F35	B20X30	2500,000	59,086	DCCM2	169,721	DCCM2	0,212	BH
8F35	B20X30	4775,000	183,099	DCCM3	111,805	DCCM2	0,283	BH
8F36	B20X30	225,000	178,303	DCCM3	162,516	DCCM3	0,430	DCCM10
8F36	B20X30	2250,000	50,634	DCCM2	131,376	DCCM2	0,329	DCCM10
8F36	B20X30	4275,000	155,320	DCCM4	101,664	DCCM2	0,452	DCCM10
8F37	B20X30	227,500	112,760	DCCM4	79,499	DCCM2	0,638	DCCM2
8F37	B20X30	775,000	279,791	DCCM4	160,420	DCCM2	0,711	DCCM2
8F38	B20X30	225,000	251,065	DCCM3	136,943	DCCM2	0,205	DCCM10
8F38	B20X30	1362,500	68,913	DCCM2	128,703	DCCM2	0,457	DCCM10
8F38	B20X30	3500,000	30,639	DCCM4	106,430	DCCM3	0,552	DCCM10
8F39	B20X30	225,000	261,331	DCCM3	149,244	DCCM2	0,413	BH
8F39	B20X30	2250,000	73,937	DCCM2	178,203	DCCM2	0,306	BH
8F39	B20X30	4275,000	225,433	DCCM4	120,020	DCCM2	0,405	BH
8F40	B20X30	250,000	346,098	DCCM3	175,203	DCCM2	0,468	BH
8F40	B20X30	2262,500	49,039	DCCM2	176,840	DCCM2	0,361	BH
8F40	B20X30	4275,000	190,566	DCCM4	125,230	DCCM4	0,437	BH
8F41	B20X30	350,000	344,412	DCCM4	178,203	DCCM2	0,471	BH
8F41	B20X30	2262,500	47,808	DCCM2	174,569	DCCM2	0,363	BH
8F41	B20X30	4275,000	193,217	DCCM3	130,096	DCCM3	0,440	BH

BF42	B20X30	215,000	228,190	DOON4	147,640	DOON2	0,411	EH
BF42	B20X30	2250,000	53,180	DOON2	178,203	DOON2	0,304	EH
BF42	B20X30	4075,000	233,235	DOON3	118,478	DOON2	0,403	EH
BF43	B20X30	215,000	241,444	DOON4	124,409	DOON2	0,703	DOON10
BF43	B20X30	1852,500	59,177	DOON2	178,203	DOON2	0,456	DOON10
BF43	B20X30	3500,500	28,863	DOON3	96,592	DOON4	0,562	DOON10
BF44	B20X30	0,000	0,000	DOON4	174,839	DOON2	0,514	EH
BF44	B20X30	387,500	119,380	DOON3	77,436	DOON2	0,567	DOON2
BF44	B20X30	775,000	271,045	DOON3	156,589	DOON2	0,640	DOON2
BF45	B20X30	225,000	178,203	DOON4	111,053	DOON4	0,426	DOON10
BF45	B20X30	3250,000	45,750	DOON2	138,152	DOON2	0,704	EH
BF45	B20X30	4295,000	178,203	DOON2	91,177	DOON2	0,436	DOON10
BF46	B20X30	215,000	198,503	DOON3	118,315	DOON2	0,288	EH
BF46	B20X30	2500,000	58,783	DOON2	178,203	DOON2	0,213	EH
BF46	B20X30	4775,000	178,203	DOON2	103,116	DOON2	0,222	EH
BF47	B20X30	100,000	24,784	DOON4	24,608	DOON3	0,145	DOON2
BF47	B20X30	1750,000	18,511	DOON2	18,511	DOON2	0,148	DOON2
BF48	B20X30	150,000	33,938	DOON4	11,976	DOON4	0,063	EH
BF48	B20X30	2250,000	17,588	DOON3	38,400	DOON3	0,063	EH
BF48	B20X30	4350,000	70,781	DOON3	35,247	DOON3	0,063	EH
BF49	B20X30	150,000	16,027	DOON10	32,011	DOON5	0,161	EH
BF49	B20X30	2250,000	32,149	DOON2	32,147	DOON2	0,150	EH
BF49	B20X30	4350,000	130,043	DOON2	64,533	DOON2	0,226	EH
BF50	B20X30	150,000	14,295	DOON10	33,481	DOON5	0,153	EH
BF50	B20X30	2250,000	32,500	DOON2	32,500	DOON2	0,153	EH
BF50	B20X30	4350,000	131,570	DOON2	65,285	DOON2	0,229	EH
BF51	B20X30	150,000	22,003	DOON3	10,988	DOON2	0,064	EH
BF51	B20X30	2250,000	16,077	DOON4	30,930	DOON3	0,064	EH
BF51	B20X30	4350,000	72,763	DOON4	36,230	DOON4	0,064	EH
BF52	B20X30	150,000	27,660	DOON3	30,034	DOON4	0,141	DOON2
BF52	B20X30	1750,000	15,439	DOON2	15,439	DOON3	0,134	DOON2
BF52	B20X30	3350,000	62,894	DOON2	41,834	DOON2	0,203	DOON2
BF53	B20X30	150,000	0,000	DOON1	64,056	DOON2	0,227	DOON2
BF53	B20X30	2250,000	33,674	DOON2	33,574	DOON3	0,246	DOON2
BF53	B20X30	4350,000	135,834	DOON2	67,403	DOON3	0,368	DOON1
BF54	B20X30	150,000	72,145	DOON2	35,903	DOON2	0,065	EH
BF54	B20X30	2250,000	17,925	DOON2	23,536	DOON3	0,065	EH
BF54	B20X30	4350,000	14,964	DOON3	7,426	DOON3	0,065	EH
BF55	B20X30	150,000	3,854	DOON3	45,455	DOON2	0,182	EH
BF55	B20X30	2250,000	36,493	DOON2	36,493	DOON2	0,205	DOON2
BF55	B20X30	4350,000	148,673	DOON2	73,697	DOON2	0,284	DOON6
BF56	B20X30	150,000	146,081	DOON2	72,418	DOON2	0,277	DOON6
BF56	B20X30	2250,000	36,064	DOON2	36,064	DOON2	0,138	DOON6
BF56	B20X30	4350,000	5,527	DOON7	41,284	DOON2	0,178	EH
BF57	B20X30	150,000	14,638	DOON6	7,263	DOON6	0,065	EH
BF57	B20X30	2250,000	18,371	DOON2	23,445	DOON4	0,065	EH
BF57	B20X30	4350,000	73,954	DOON2	26,220	DOON2	0,065	EH
BF58	B20X30	150,000	124,277	DOON2	61,633	DOON2	0,336	DOON1
BF58	B20X30	1750,000	20,737	DOON2	30,737	DOON2	0,244	DOON2
BF58	B20X30	3350,000	0,000	DOON1	54,969	DOON2	0,196	DOON2
BFX10	B25X40	0,000	303,258	DOON4	231,170	DOON4	1,108	EH
BFX10	B25X40	2250,000	261,556	DOON3	311,148	DOON2	0,824	EH
BFX10	B25X40	4500,000	899,473	DOON3	430,704	DOON3	1,313	EH
BFX11	B25X40	0,000	754,073	DOON3	363,836	DOON3	1,143	EH
BFX11	B25X40	2500,000	238,593	DOON3	311,148	DOON2	0,668	EH
BFX11	B25X40	5000,000	730,276	DOON4	352,781	DOON4	1,102	EH
BFX12	B25X40	0,000	322,372	DOON3	211,818	DOON3	1,038	EH
BFX12	B25X40	2250,000	226,103	DOON2	310,185	DOON2	0,822	EH
BFX12	B25X40	4500,000	875,687	DOON4	419,943	DOON4	1,304	EH
BFX13	B25X40	0,000	431,563	DOON4	231,999	DOON2	0,988	EH
BFX13	B25X40	2250,000	146,589	DOON2	311,148	DOON2	0,558	EH
BFX13	B25X40	4500,000	505,564	DOON3	236,090	DOON2	1,037	EH
BFX14	B25X40	0,000	430,559	DOON3	227,287	DOON2	0,986	EH
BFX14	B25X40	2250,000	152,488	DOON2	311,148	DOON2	0,585	EH
BFX14	B25X40	4500,000	547,291	DOON4	310,178	DOON2	1,063	EH
BFX15	B25X40	0,000	0,000	DOON1	426,255	DOON2	1,280	DOON6
BFX15	B25X40	1125,000	138,064	DOON2	311,148	DOON2	1,298	DOON1
BFX15	B25X40	2250,000	460,207	DOON4	300,417	DOON4	2,260	DOON1

3CY14	R2 SX40	0,000	1167,848	DOON3	311,148	DOON3	3,429	DOON1
3CY15	R2 SX40	1125,000	211,148	DOON2	311,148	DOON2	3,182	DOON2
3CY16	R2 SX40	1250,000	0,000	DOON1	431,457	DOON2	2,331	DOON2
3CY17	R2 SX40	0,000	767,212	DOON4	339,710	DOON4	1,082	DOON10
3CY17	R2 SX40	2150,000	217,068	DOON2	174,330	DOON2	0,658	DOON10
3CY17	R2 SX40	4500,000	311,148	DOON2	175,591	DOON2	0,912	DOON10
3CY18	R2 SX40	0,000	294,954	DOON3	327,275	DOON3	1,083	DOON10
3CY18	R2 SX40	2040,000	311,148	DOON2	177,406	DOON2	0,658	DOON10
3CY18	R2 SX40	4400,000	311,148	DOON2	175,597	DOON2	0,912	DOON10
3CY19	R2 SX40	0,000	1106,910	DOON4	314,637	DOON4	3,487	DOON2
3CY19	R2 SX40	1125,000	311,148	DOON3	311,148	DOON2	3,191	DOON2
3CY19	R2 SX40	2150,000	0,000	DOON1	428,750	DOON2	2,330	DOON2
3CY20	R2 SX40	0,000	0,000	DOON1	424,545	DOON2	1,798	DOON2
3CY20	R2 SX40	1125,000	137,527	DOON2	311,148	DOON2	1,794	DOON2
3CY20	R2 SX40	2350,000	459,939	DOON3	299,606	DOON2	2,254	DOON1
3CY21	R2 SX40	0,000	452,351	DOON2	313,740	DOON1	0,947	EM
3CY21	R2 SX40	2350,000	134,687	DOON2	311,148	DOON2	0,862	EM
3CY21	R2 SX40	4500,000	532,875	DOON3	292,048	DOON2	1,340	EM
3CY22	R2 SX40	0,000	515,714	DOON4	285,247	DOON2	1,035	EM
3CY22	R2 SX40	2250,000	143,844	DOON2	311,148	DOON2	0,540	EM
3CY22	R2 SX40	4500,000	438,075	DOON3	126,007	DOON2	0,991	EM
3CY23	R2 SX40	0,000	135,149	DOON4	270,095	DOON4	1,047	EM
3CY23	R2 SX40	2250,000	239,556	DOON2	308,236	DOON2	0,823	EM
3CY23	R2 SX40	4500,000	270,090	DOON3	417,283	DOON3	1,300	EM
3CY24	R2 SX40	0,000	220,447	DOON4	321,415	DOON4	1,155	EM
3CY24	R2 SX40	2500,000	243,484	DOON4	311,148	DOON2	0,878	EM
3CY24	R2 SX40	5000,000	694,305	DOON3	235,019	DOON3	1,087	EM
3CY10	R2 SX40	0,000	311,237	DOON4	407,077	DOON2	1,045	DOON2
3CY10	R2 SX40	1425,000	131,687	DOON5	131,687	DOON5	1,048	DOON1
3CY10	R2 SX40	2600,000	325,837	DOON5	214,061	DOON5	1,243	DOON2
3CY11	R2 SX40	150,000	470,605	DOON5	395,308	DOON10	1,301	DOON2
3CY11	R2 SX40	1325,000	151,958	DOON5	151,958	DOON5	1,290	DOON2
3CY11	R2 SX40	2500,000	613,140	DOON6	311,148	DOON5	1,515	DOON2
3CY12	R2 SX40	150,000	51,545	DOON2	30,710	DOON3	0,281	EM
3CY12	R2 SX40	1325,000	21,451	DOON6	44,870	DOON2	0,161	EM
3CY12	R2 SX40	2500,000	86,169	DOON6	42,963	DOON5	0,275	EM
3CY13	R2 SX40	0,000	19,449	DOON4	9,718	DOON4	0,115	DOON2
3CY13	R2 SX40	1262,500	9,249	DOON5	15,296	DOON6	0,064	DOON2
3CY13	R2 SX40	2525,000	39,873	DOON5	19,911	DOON5	0,121	DOON6
3CY14	R2 SX40	150,000	61,403	DOON2	30,540	DOON2	0,285	EM
3CY14	R2 SX40	1325,000	21,684	DOON6	44,465	DOON2	0,162	EM
3CY14	R2 SX40	2500,000	87,107	DOON6	43,429	DOON6	0,278	EM
3CY15	R2 SX40	150,000	321,847	DOON5	342,837	DOON10	1,312	DOON2
3CY15	R2 SX40	1325,000	152,282	DOON5	152,282	DOON5	1,316	DOON2
3CY15	R2 SX40	2500,000	623,053	DOON6	311,148	DOON5	1,541	DOON2
3CY16	R2 SX40	250,000	440,091	DOON5	155,291	DOON2	1,184	DOON2
3CY16	R2 SX40	1425,000	128,160	DOON5	151,514	DOON5	0,999	DOON1
3CY16	R2 SX40	2600,000	327,491	DOON5	219,073	DOON5	1,275	DOON2
3CY17	R2 SX40	250,000	312,455	DOON10	431,850	DOON5	1,300	DOON2
3CY17	R2 SX40	1425,000	129,825	DOON5	151,650	DOON2	1,132	DOON2
3CY17	R2 SX40	2600,000	329,457	DOON5	216,402	DOON5	1,486	DOON2
3CY18	R2 SX40	250,000	329,451	DOON4	334,304	DOON5	1,137	DOON2
3CY18	R2 SX40	1425,000	129,449	DOON5	129,449	DOON5	0,850	DOON1
3CY18	R2 SX40	2600,000	398,397	DOON5	334,552	DOON10	1,150	DOON2
3CY19	R2 SX40	125,000	183,309	DOON3	311,148	DOON4	1,328	DOON2
3CY19	R2 SX40	1250,000	143,168	DOON4	135,691	DOON2	1,201	DOON2
3CY19	R2 SX40	2375,000	942,512	DOON4	311,148	DOON3	1,604	DOON2
3CY20	R2 SX40	125,000	245,255	DOON3	225,512	DOON3	1,395	DOON2
3CY20	R2 SX40	1250,000	112,457	DOON3	112,457	DOON3	1,306	DOON2
3CY20	R2 SX40	2375,000	159,810	DOON4	311,148	DOON3	0,919	DOON1
3CY21	R2 SX40	125,000	291,124	DOON3	145,324	DOON8	0,522	EM
3CY21	R2 SX40	2250,000	80,645	DOON2	194,471	DOON2	0,414	EM
3CY21	R2 SX40	4375,000	311,148	DOON2	157,157	DOON2	0,677	EM
3CY22	R2 SX40	125,000	311,148	DOON3	189,191	DOON3	0,845	DOON2
3CY22	R2 SX40	2250,000	94,005	DOON3	227,295	DOON2	0,477	DOON2
3CY22	R2 SX40	4375,000	382,001	DOON4	308,279	DOON3	0,778	DOON1
3CY23	R2 SX40	0,000	104,079	DOON4	52,011	DOON4	0,193	DOON10

30Y23	B2 SX40	2130,000	75,101	D00N4	75,101	D00N4	0,100	D00N10
30Y23	B2 SX40	4375,000	75,116	D00N3	75,116	D00N3	0,178	D00N10
30Y24	B2 SX40	0,000	103,100	D00N3	103,100	D00N3	0,100	D00N10
30Y24	B2 SX40	2130,000	75,144	D00N3	75,144	D00N3	0,100	D00N10
30Y24	B2 SX40	4375,000	75,114	D00N4	75,114	D00N4	0,178	D00N10
30Y25	B2 SX40	125,000	111,148	D00N4	111,148	D00N4	0,444	D00N6
30Y25	B2 SX40	2130,000	111,144	D00N3	111,144	D00N3	0,444	D00N6
30Y25	B2 SX40	4375,000	111,148	D00N3	111,148	D00N3	0,708	D00N1
30Y26	B2 SX40	144,000	136,651	D00N4	136,651	D00N4	0,664	EH
30Y26	B2 SX40	2130,000	136,650	D00N3	136,650	D00N3	0,400	EH
30Y26	B2 SX40	4375,000	131,148	D00N2	131,148	D00N2	0,665	EH
30Y27	B2 SX40	100,000	175,633	D00N4	175,633	D00N4	0,700	EH
30Y27	B2 SX40	2130,000	175,631	D00N3	175,631	D00N3	0,428	EH
30Y27	B2 SX40	4075,000	166,701	D00N3	166,701	D00N3	0,491	EH
4EK10	B130X50	0,000	24,361	D00N4	24,361	D00N4	0,113	D00N1
4EK10	B130X50	200,000	119,104	D00N4	119,104	D00N4	0,341	D00N1
4EK10	B130X50	275,000	477,430	D00N1	477,430	D00N1	0,368	D00N1
4EK11	B130X50	0,000	11,015	D00N4	11,015	D00N4	0,289	D00N1
4EK11	B130X50	500,000	131,579	D00N4	131,579	D00N4	0,404	D00N1
4EK11	B130X50	1000,000	474,147	D00N1	474,147	D00N1	0,460	D00N1
4EK12	B130X50	0,000	30,704	D00N4	30,704	D00N4	0,370	D00N1
4EK12	B130X50	500,000	271,031	D00N3	271,031	D00N3	0,404	D00N1
4EK12	B130X50	1000,000	474,147	D00N1	474,147	D00N1	0,444	D00N1
4EK13	B30X50	0,000	463,661	D00N5	463,661	D00N5	1,605	D00N1
4EK13	B30X50	1250,000	120,406	D00N5	120,406	D00N5	1,023	D00N1
4EK13	B30X50	2500,000	461,428	D00N5	461,428	D00N5	1,656	D00N1
4EK14	B30X50	150,000	422,731	D00N5	422,731	D00N5	1,325	D00N1
4EK14	B30X50	1250,000	105,939	D00N5	105,939	D00N5	1,006	D00N1
4EK14	B30X50	2500,000	388,068	D00N5	388,068	D00N5	1,209	D00N1
4EK15	B30X50	250,000	667,762	D00N5	667,762	D00N5	1,508	D00N1
4EK15	B30X50	1250,000	239,424	D00N5	239,424	D00N5	1,229	D00N1
4EK15	B30X50	2500,000	0,000	D00N5	0,000	D00N5	1,002	D00N1
4EK16	B30X50	150,000	1437,862	D00N2	1437,862	D00N2	3,110	D00N2
4EK16	B30X50	1250,000	486,214	D00N2	486,214	D00N2	2,747	D00N2
4EK16	B30X50	2500,000	0,000	D00N1	0,000	D00N1	2,463	D00N2
4EK17	B30X50	0,000	0,000	D00N1	0,000	D00N1	1,961	D00N2
4EK17	B30X50	1250,000	474,147	D00N2	474,147	D00N2	2,215	D00N2
4EK17	B30X50	2500,000	1161,678	D00N2	1161,678	D00N2	2,578	D00N2
4EK18	B30X50	150,000	474,147	D00N5	474,147	D00N5	1,530	D00N2
4EK18	B30X50	1250,000	148,500	D00N5	148,500	D00N5	1,063	D00N1
4EK18	B30X50	2500,000	606,455	D00N5	606,455	D00N5	1,641	D00N2
4EK19	B30X50	150,000	56,940	D00N2	56,940	D00N2	0,316	D00N5
4EK19	B30X50	1250,000	23,541	D00N5	23,541	D00N5	0,175	D00N5
4EK19	B30X50	2500,000	94,449	D00N5	94,449	D00N5	0,317	D00N5
4EK20	B30X50	0,000	21,427	D00N5	21,427	D00N5	0,087	EH
4EK20	B30X50	1250,000	7,836	D00N5	7,836	D00N5	0,087	EH
4EK20	B30X50	2500,000	31,371	D00N5	31,371	D00N5	0,087	EH
4EK21	B30X50	150,000	96,898	D00N2	96,898	D00N2	0,319	D00N5
4EK21	B30X50	1250,000	24,047	D00N5	24,047	D00N5	0,170	D00N5
4EK21	B30X50	2500,000	96,189	D00N5	96,189	D00N5	0,311	D00N5
4EK22	B30X50	150,000	474,147	D00N5	474,147	D00N5	1,523	D00N2
4EK22	B30X50	1250,000	200,049	D00N5	200,049	D00N5	1,000	D00N1
4EK22	B30X50	2500,000	616,784	D00N5	616,784	D00N5	1,548	D00N2
4EK23	B30X50	0,000	0,000	D00N1	0,000	D00N1	1,914	D00N2
4EK23	B30X50	1250,000	474,147	D00N2	474,147	D00N2	0,198	D00N2
4EK23	B30X50	2500,000	1148,940	D00N2	1148,940	D00N2	2,561	D00N2
4EK24	B30X50	250,000	1504,112	D00N2	1504,112	D00N2	3,192	D00N2
4EK24	B30X50	1500,000	572,212	D00N2	572,212	D00N2	2,829	D00N2
4EK24	B30X50	2750,000	0,000	D00N1	0,000	D00N1	2,545	D00N2
4EK25	B30X50	250,000	1135,980	D00N2	1135,980	D00N2	2,700	D00N2
4EK25	B30X50	1500,000	474,147	D00N2	474,147	D00N2	2,337	D00N2
4EK25	B30X50	2750,000	0,000	D00N1	0,000	D00N1	2,050	D00N2
4EK26	B30X50	250,000	474,147	D00N5	474,147	D00N5	1,364	D00N2
4EK26	B30X50	1430,000	144,847	D00N5	144,847	D00N5	1,066	D00N1
4EK26	B30X50	2500,000	474,147	D00N5	474,147	D00N5	1,465	D00N2
4EK27	B130X50	325,000	367,776	D00N1	367,776	D00N1	3,335	D00N1
4EK27	B130X50	512,500	90,851	D00N1	90,851	D00N1	1,908	D00N1
4EK27	B130X50	1000,000	0,178	EH	0,178	D00N1	3,880	D00N1

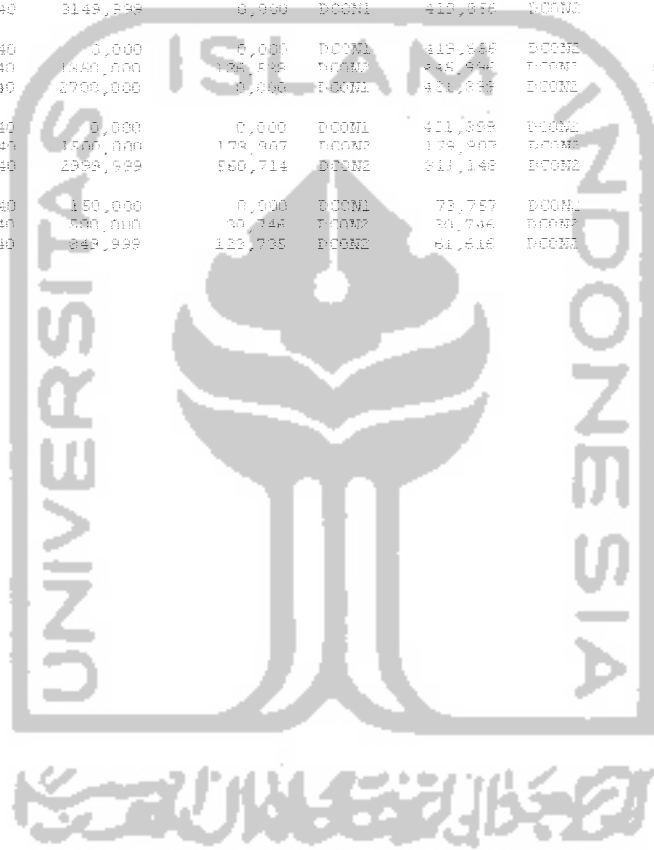
4EK08	BT30X50	115,000	320,190	DOON1	130,174	DOON1	3,430	DOON1
4EK08	BT30X50	610,500	90,730	DOON1	90,730	DOON1	2,492	DOON1
4EK08	BT30X50	1000,000	0,318	EM	300,689	DOON1	3,876	DOON1
4EK09	BT30X50	0,000	3,750	EM	138,744	DOON1	1,180	DOON1
4EK09	BT30X50	387,500	32,083	DOON1	32,083	DOON1	1,207	DOON1
4EK09	BT30X50	775,000	72,742	DOON3	30,114	DOON3	1,335	DOON1
4EK10	BT30X50	0,000	0,145	EM	123,154	DOON1	1,165	DOON1
4EK10	BT30X50	387,500	32,184	DOON1	32,184	DOON1	1,214	DOON1
4EK10	BT30X50	775,000	72,240	DOON4	36,562	DOON4	1,241	DOON1
4CX10	B2 SX40	0,000	370,134	DOON4	240,120	DOON4	1,110	EM
4CX10	B2 SX40	2050,000	250,055	DOON2	261,139	DOON2	0,966	EM
4CX10	B2 SX40	4500,000	1029,192	DOON3	493,869	DOON3	1,443	EM
4CX11	B2 SX40	0,000	304,788	DOON1	341,364	DOON1	1,104	EM
4CX11	B2 SX40	1500,000	334,093	DOON3	311,148	DOON2	0,625	EM
4CX11	B2 SX40	5000,000	468,864	DOON4	324,118	DOON4	1,058	EM
4CX12	B2 SX40	0,000	311,148	DOON3	193,577	DOON3	1,027	EM
4CX12	B2 SX40	2050,000	254,364	DOON2	287,437	DOON2	0,960	EM
4CX12	B2 SX40	4500,000	321,123	DOON4	440,568	DOON4	1,365	EM
4CX13	B2 SX40	0,000	471,208	DOON3	168,834	DOON1	0,335	DOON10
4CX13	B2 SX40	2050,000	133,151	DOON2	311,148	DOON2	0,505	DOON10
4CX13	B2 SX40	4500,000	408,868	DOON4	234,181	DOON2	0,907	DOON10
4CX14	B2 SX40	0,000	474,735	DOON1	264,737	DOON1	1,009	EM
4CX14	B2 SX40	2050,000	181,107	DOON2	311,148	DOON2	0,530	EM
4CX14	B2 SX40	4500,000	462,837	DOON4	260,897	DOON3	0,977	EM
4CX15	B2 SX40	0,000	453,288	DOON1	313,588	DOON1	1,133	EM
4CX15	B2 SX40	2050,000	177,480	DOON2	311,148	DOON2	0,657	EM
4CX15	B2 SX40	4500,000	388,351	DOON4	283,095	DOON4	1,012	EM
4CX16	B2 SX40	0,000	560,404	DOON4	320,394	DOON4	1,135	EM
4CX16	B2 SX40	2050,000	178,243	DOON2	311,148	DOON1	0,653	EM
4CX16	B2 SX40	4500,000	383,863	DOON3	251,173	DOON3	1,011	EM
4CX17	B2 SX40	0,000	483,221	DOON4	271,128	DOON1	1,018	EM
4CX17	B2 SX40	2050,000	134,374	DOON2	311,148	DOON2	0,539	EM
4CX17	B2 SX40	4500,000	442,212	DOON3	245,586	DOON2	0,963	EM
4CX18	B2 SX40	0,000	422,143	DOON4	235,103	DOON1	0,305	DOON10
4CX18	B2 SX40	2050,000	133,296	DOON2	311,148	DOON2	0,534	DOON10
4CX18	B2 SX40	4500,000	473,283	DOON3	170,010	DOON1	0,954	DOON10
4CX19	B2 SX40	0,000	371,336	DOON4	243,817	DOON4	1,062	EM
4CX19	B2 SX40	2050,000	228,023	DOON2	280,137	DOON2	0,803	EM
4CX19	B2 SX40	4500,000	338,767	DOON3	402,904	DOON3	1,221	EM
4CX20	B2 SX40	0,000	704,442	DOON4	340,308	DOON4	1,101	EM
4CX20	B2 SX40	2000,000	311,442	DOON3	311,148	DOON2	0,623	EM
4CX20	B2 SX40	5000,000	663,835	DOON3	321,791	DOON3	1,056	EM
5EK10	B30X50	150,000	474,147	DOON5	245,780	DOON5	1,375	DOON1
5EK10	B30X50	1305,000	122,238	DOON5	122,238	DOON5	1,036	DOON1
5EK10	B30X50	2500,000	474,147	DOON6	261,028	DOON5	1,313	DOON2
5EK11	B30X50	550,000	1130,354	DOON3	545,733	DOON1	2,525	DOON1
5EK11	B30X50	1500,000	474,147	DOON2	357,983	DOON1	2,162	DOON2
5EK11	B30X50	2750,000	0,000	DOON1	18,694	DOON2	1,878	DOON2
5EK12	B30X50	550,000	1498,887	DOON1	714,362	DOON1	3,180	DOON1
5EK12	B30X50	1500,000	569,140	DOON2	468,184	DOON2	2,817	DOON2
5EK12	B30X50	2750,000	0,000	DOON1	33,258	DOON2	2,533	DOON2
5EK13	B30X50	550,000	1174,297	DOON1	508,430	DOON1	2,077	DOON1
5EK13	B30X50	1500,000	474,147	DOON2	372,631	DOON1	2,302	DOON2
5EK13	B30X50	2750,000	0,000	DOON1	49,338	DOON2	3,018	DOON2
5EK14	B30X50	550,000	474,821	DOON5	420,173	DOON5	1,219	DOON1
5EK14	B30X50	1425,000	103,615	DOON5	103,615	DOON5	1,154	DOON1
5EK14	B30X50	2600,000	406,431	DOON3	201,443	DOON5	1,331	DOON2
5EK15	BT30X50	0,000	2,069	EM	294,701	DOON4	4,192	DOON1
5EK15	BT30X50	387,500	120,687	DOON5	111,410	DOON5	4,319	DOON1
5EK15	BT30X50	775,000	452,266	DOON5	223,960	DOON5	4,247	DOON1
5EK16	BT30X50	0,000	0,000	EM	293,893	DOON3	4,177	DOON1
5EK16	BT30X50	387,500	119,917	DOON5	111,098	DOON5	4,204	DOON1
5EK16	BT30X50	775,000	450,981	DOON5	223,273	DOON5	4,232	DOON1
5EK17	BT30X50	0,000	32,703	DOON4	210,584	DOON4	1,210	DOON1
5EK17	BT30X50	387,500	50,314	DOON5	52,314	DOON5	1,738	DOON1
5EK17	BT30X50	775,000	133,647	DOON3	66,831	DOON3	1,765	DOON1
5EK18	BT30X50	0,000	91,295	DOON5	213,334	DOON4	1,729	DOON1
5EK18	BT30X50	387,500	52,980	DOON5	52,980	DOON5	1,766	DOON1
5EK18	BT30X50	775,000	135,282	DOON4	67,444	DOON4	1,794	DOON1

6EK10	B130X50	0,000	10,355	D00M4	24,294	D00M3	1,399	D00M1	
6EK10	B130X50	327,300	68,563	D00M4	13,810	D00M4	1,036	D00M1	
6EK10	B130X50	775,000	173,011	D00M4	66,193	D00M4	1,069	D00M1	
6EK11	B130X50	0,000	105,181	D00M4	31,470	D00M4	0,537	D00M1	
6EK11	B130X50	500,000	54,290	D00M2	26,206	D00M4	0,451	D00M1	
6EK11	B130X50	1000,000	22,062	D00M2	11,026	D00M3	0,456	D00M1	
6EK12	B130X50	0,000	109,300	D00M2	54,057	D00M2	0,664	D00M1	
6EK12	B130X50	500,000	61,969	D00M2	26,962	D00M2	0,529	D00M1	
6EK12	B130X50	1000,000	26,971	D00M2	12,973	D00M2	0,450	D00M1	
6EK13	B30X50	750,000	264,306	D00M4	109,097	D00M5	0,444	D00M1	
6EK13	B30X50	1400,000	49,544	D00M3	110,897	D00M1	0,517	D00M1	
6EK13	B30X50	2600,000	135,405	D00M5	97,291	D00M5	0,384	D00M2	
6EK14	B30X50	140,000	169,080	D00M5	84,796	D00M5	0,361	D00M1	
6EK14	B30X50	1375,000	44,142	D00M5	142,643	D00M1	0,507	D00M1	
6EK14	B30X50	2600,000	90,109	D00M6	177,793	D00M5	0,721	D00M2	
6EK15	B30X50	150,000	661,130	D00M2	437,177	D00M5	1,509	D00M1	
6EK15	B30X50	1500,000	243,161	D00M2	214,090	D00M5	1,230	D00M1	
6EK15	B30X50	2750,000	0,000	D00M1	29,626	D00M1	1,004	D00M1	
6EK16	B30X50	150,000	1358,149	D00M2	650,584	D00M2	2,371	D00M5	
6EK16	B30X50	1500,000	500,038	D00M2	425,370	D00M2	2,608	D00M2	
6EK16	B30X50	2750,000	0,000	D00M1	45,520	D00M2	2,324	D00M2	
6EK17	B30X50	150,000	1182,345	D00M2	569,830	D00M2	2,404	D00M2	
6EK17	B30X50	1500,000	474,147	D00M2	373,609	D00M2	2,260	D00M2	
6EK17	B30X50	2750,000	0,000	D00M1	22,234	D00M2	1,876	D00M2	
6EK18	B30X50	150,000	390,297	D00M5	164,310	D00M5	0,997	D00M2	
6EK18	B30X50	1325,000	174,308	D00M2	100,790	D00M2	0,968	D00M2	
6EK18	B30X50	2600,000	437,363	D00M2	216,592	D00M2	1,288	D00M2	
6EK19	B30X50	150,000	90,296	D00M5	29,917	D00M5	0,297	BM	
6EK19	B30X50	1525,000	15,423	D00M2	28,413	D00M2	0,122	BM	
6EK19	B30X50	2600,000	61,821	D00M2	30,870	D00M2	0,240	BM	
6EK20	B30X50	0,000	26,202	D00M1	10,139	D00M1	0,047	BM	
6EK20	B30X50	1325,000	6,562	D00M1	20,376	D00M2	0,047	BM	
6EK20	B30X50	2750,000	35,731	D00M1	12,859	D00M1	0,047	BM	
6EK21	B30X50	150,000	57,891	D00M2	28,910	D00M2	0,297	BM	
6EK21	B30X50	1325,000	15,509	D00M2	28,247	D00M2	0,123	BM	
6EK21	B30X50	2600,000	62,158	D00M2	31,038	D00M2	0,240	BM	
6EK22	B30X50	150,000	340,528	D00M5	169,098	D00M5	0,484	D00M5	
6EK22	B30X50	1325,000	117,333	D00M2	77,630	D00M2	0,782	D00M2	
6EK22	B30X50	2600,000	313,697	D00M2	165,792	D00M2	1,115	D00M2	
6EK23	B30X50	250,000	1128,445	D00M2	644,843	D00M2	2,521	D00M2	
6EK23	B30X50	1500,000	474,147	D00M2	357,407	D00M2	2,158	D00M2	
6EK23	B30X50	2750,000	0,000	D00M1	18,780	D00M2	1,874	D00M2	
6EK24	B30X50	250,000	1486,000	D00M2	706,628	D00M1	3,164	D00M2	
6EK24	B30X50	1500,000	532,668	D00M2	462,508	D00M2	2,796	D00M2	
6EK24	B30X50	2750,000	0,000	D00M1	36,486	D00M2	2,512	D00M2	
6EK25	B30X50	250,000	1161,478	D00M2	660,169	D00M2	2,636	D00M2	
6EK25	B30X50	1500,000	474,147	D00M2	367,266	D00M2	2,273	D00M2	
6EK25	B30X50	2750,000	0,000	D00M1	60,510	D00M2	1,989	D00M2	
6EK26	B30X50	250,000	194,995	D00M4	214,652	D00M5	0,754	D00M2	
6EK26	B30X50	1425,000	60,181	D00M5	50,181	D00M5	0,706	D00M1	
6EK26	B30X50	2600,000	242,620	D00M5	120,674	D00M5	0,870	D00M2	
6CY10	B25X40	0,000	180,861	D00M5	89,896	D00M5	0,297	BM	
6CY10	B25X40	2387,500	109,396	D00M6	220,284	D00M5	0,297	BM	
6CY10	B25X40	4775,000	337,107	D00M6	221,412	D00M6	0,297	BM	
6CY11	B25X40	0,000	193,272	D00M5	91,082	D00M5	0,294	BM	
6CY11	B25X40	2387,500	110,288	D00M6	220,584	D00M5	0,279	BM	
6CY11	B25X40	4775,000	338,440	D00M6	222,209	D00M6	0,279	BM	
6CY12	B25X40	0,000	202,625	D00M6	214,440	D00M5	0,449	D00M1	
6CY12	B25X40	2375,000	81,801	D00M5	81,801	D00M5	0,373	D00M2	
6CY12	B25X40	4750,000	311,148	D00M5	164,493	D00M5	0,507	D00M1	
6CY13	B25X40	0,000	226,054	D00M4	214,201	D00M4	0,203	D00M1	
6CY13	B25X40	375,000	523,959	D00M4	232,372	D00M4	0,735	D00M1	
6CY13	B25X40	750,000	733,284	D00M4	354,180	D00M4	0,748	D00M1	
6CY14	B25X40	0,000	263,244	D00M3	229,890	D00M3	0,263	BM	
6CY14	B25X40	3500,000	118,994	D00M3	371,942	D00M1	0,269	BM	
6CY14	B25X40	7000,000	366,212	D00M4	240,130	D00M4	0,269	BM	
6CY15	B25X40	250,000	723,065	D00M3	354,079	D00M3	0,748	D00M1	
6CY15	B25X40	625,000	513,713	D00M3	232,306	D00M3	0,723	D00M1	

7CY10	B2SX40	1000,000	375,800	DOON3	314,037	DOON3	0,703	DOON1
7CY10	B2SX40	150,000	183,027	DOON6	133,028	DOON6	0,477	DOON1
7CY10	B2SX40	3075,000	74,160	DOON6	74,160	DOON6	0,480	DOON1
7CY10	B2SX40	4000,000	303,146	DOON6	149,050	DOON6	0,504	DOON1
7CY11	B2SX40	0,000	27,527	DOON5	13,777	DOON5	0,038	BH
7CY11	B2SX40	1125,000	3,478	DOON5	71,096	DOON6	0,038	BH
7CY11	B2SX40	4250,000	27,954	DOON5	16,948	DOON5	0,036	BH
7CY12	B2SX40	180,000	197,458	DOON5	133,178	DOON6	0,463	DOON1
7CY12	B2SX40	1075,000	74,107	DOON6	74,107	DOON6	0,474	DOON1
7CY12	B2SX40	4000,000	300,937	DOON6	153,134	DOON6	0,500	DOON1
7CY13	B2SX40	0,000	0,000	DOON1	400,916	DOON1	0,358	DOON10
7CY13	B2SX40	3375,000	138,778	DOON1	138,778	DOON2	0,457	DOON10
7CY13	B2SX40	4750,000	446,150	DOON6	260,155	DOON6	0,543	DOON10
7CY14	B2SX40	0,000	0,000	DOON1	396,130	DOON2	0,351	DOON10
7CY14	B2SX40	3375,000	129,841	DOON1	129,841	DOON2	0,443	DOON10
7CY14	B2SX40	4750,000	437,333	DOON6	261,468	DOON6	0,535	DOON10
7CY15	B2SX40	250,000	314,133	DOON4	206,827	DOON4	0,728	DOON1
7CY15	B2SX40	3375,000	102,558	DOON4	143,575	DOON3	0,505	DOON1
7CY15	B2SX40	4500,000	0,184	BH	253,736	DOON4	0,467	DOON1
7CY16	B2SX40	210,000	315,882	DOON3	207,617	DOON3	0,728	DOON1
7CY16	B2SX40	3375,000	103,097	DOON3	148,344	DOON4	0,507	DOON1
7CY16	B2SX40	4500,000	0,145	BH	253,840	DOON4	0,470	DOON1
7CY17	B2SX40	225,000	380,420	DOON4	124,171	DOON4	0,440	BH
7CY17	B2SX40	1363,500	100,910	DOON1	196,090	DOON3	0,440	BH
7CY17	B2SX40	2500,000	14,177	BH	311,148	DOON1	0,440	BH
7CY18	B2SX40	0,000	3,219	BH	321,378	DOON1	0,354	DOON10
7CY18	B2SX40	1125,000	143,038	DOON2	143,038	DOON2	0,938	DOON10
7CY18	B2SX40	3375,000	447,337	DOON1	289,948	DOON3	0,167	DOON10
7CY19	B2SX40	0,000	0,000	DOON1	170,118	DOON3	0,574	BH
7CY19	B2SX40	2137,500	183,717	DOON7	183,717	DOON2	0,599	BH
7CY19	B2SX40	4275,000	573,692	DOON3	311,148	DOON3	0,487	BH
7CY20	B2SX40	0,000	0,000	DOON1	170,280	DOON2	0,570	BH
7CY20	B2SX40	2137,500	179,647	DOON2	179,647	DOON2	0,586	BH
7CY20	B2SX40	4275,000	559,800	DOON3	311,148	DOON3	0,440	BH
7CY21	B2SX40	0,000	9,653	BH	319,469	DOON1	0,359	DOON10
7CY21	B2SX40	1137,500	143,847	DOON2	143,847	DOON2	1,003	DOON10
7CY21	B2SX40	3375,000	450,446	DOON1	290,000	DOON3	1,177	DOON10
7CY22	B2SX40	225,000	234,038	DOON3	116,113	DOON3	0,442	BH
7CY22	B2SX40	1363,500	99,991	DOON1	199,595	DOON4	0,442	BH
7CY22	B2SX40	2500,000	15,076	BH	311,148	DOON1	0,447	BH
7CY23	B2SX40	0,000	3,895	BH	311,148	DOON1	1,087	DOON1
7CY23	B2SX40	1125,000	97,876	DOON1	143,634	DOON5	1,307	DOON1
7CY23	B2SX40	2250,000	311,148	DOON6	177,408	DOON6	1,500	DOON3
7CY24	B2SX40	0,000	0,000	DOON1	311,148	DOON1	0,527	DOON6
7CY24	B2SX40	1250,000	96,701	DOON1	311,148	DOON1	0,710	DOON6
7CY24	B2SX40	2500,000	98,826	DOON6	49,303	DOON6	0,951	DOON6
7CY25	B2SX40	0,000	0,003	DOON1	344,627	DOON2	0,290	DOON2
7CY25	B2SX40	1125,000	285,982	DOON2	311,148	DOON2	1,586	DOON2
7CY25	B2SX40	2250,000	806,833	DOON6	282,363	DOON2	0,963	DOON2
7CY26	B2SX40	1360,000	132,717	DOON2	420,341	DOON3	0,346	DOON6
7CY26	B2SX40	2500,000	0,000	DOON1	409,062	DOON1	0,325	DOON6
7CY27	B2SX40	0,000	0,000	DOON1	311,148	DOON7	0,500	DOON6
7CY27	B2SX40	1250,000	134,521	DOON2	413,737	DOON2	0,334	DOON6
7CY27	B2SX40	2500,000	0,000	DOON1	414,991	DOON2	0,313	DOON6
7CY28	B2SX40	0,000	0,000	DOON1	751,946	DOON3	0,000	DOON7
7CY28	B2SX40	1125,000	237,967	DOON2	311,148	DOON2	2,493	DOON2
7CY29	B2SX40	0,000	0,000	DOON1	311,148	DOON1	0,540	DOON6
7CY29	B2SX40	1250,000	89,811	DOON1	303,351	DOON1	0,002	DOON6
7CY29	B2SX40	2500,000	100,598	DOON6	80,133	DOON6	0,943	DOON6
7CY30	B2SX40	0,000	3,461	BH	320,935	DOON1	1,110	DOON1
7CY30	B2SX40	1125,000	104,706	DOON1	167,499	DOON5	1,300	DOON1
7CY30	B2SX40	2250,000	311,148	DOON6	170,366	DOON6	1,533	DOON1
7CY31	B2SX40	0,000	25,127	BH	186,949	DOON1	0,460	BH
7CY31	B2SX40	1250,000	46,312	DOON1	213,306	DOON1	0,474	BH
7CY31	B2SX40	2500,000	98,015	DOON4	49,860	DOON4	0,703	BH
7CY32	B2SX40	0,000	375,801	DOON2	246,306	DOON2	1,272	DOON2
7CY32	B2SX40	1250,000	132,149	DOON2	122,149	DOON2	0,547	DOON2
7CY32	B2SX40	2500,000	32,838	BH	165,045	DOON1	0,701	DOON2

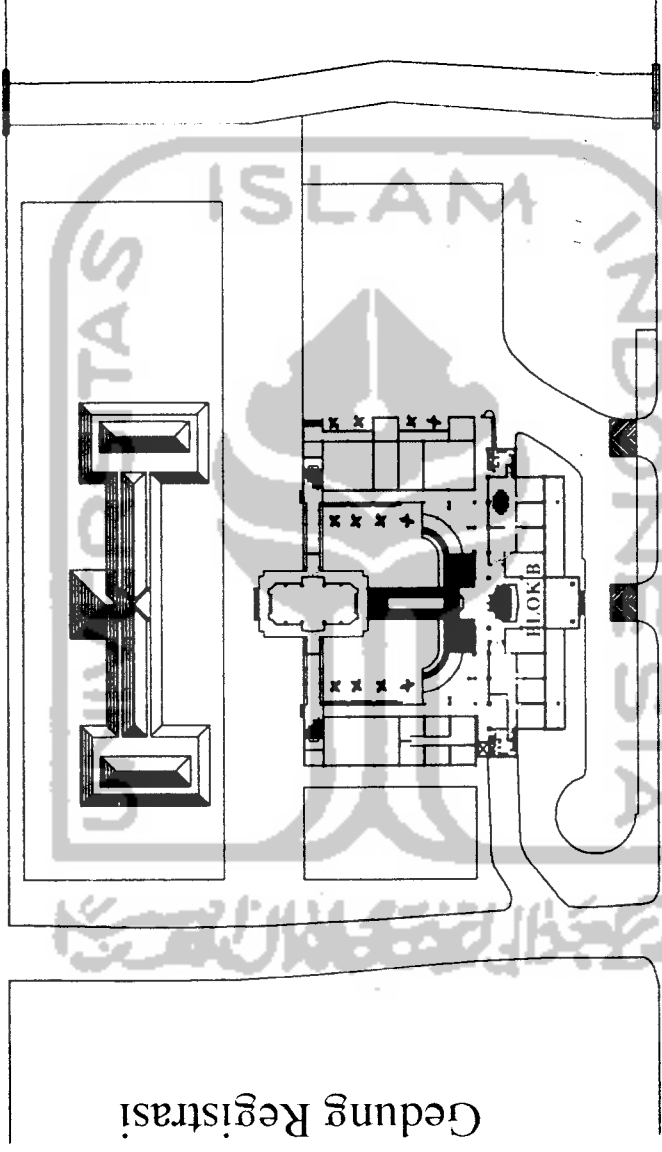
7CY33	B2 SX40	0,000	133,143	DOON2	46,289	DOON2	0,498	EH
7CY33	B2 SX40	2250,000	143,075	DOON1	311,148	DOON2	0,363	EH
7CY33	B2 SX40	4500,000	442,215	DOON2	298,921	DOON2	0,949	EH
7CY34	B2 SX40	0,000	133,148	DOON2	46,289	DOON2	0,500	EH
7CY34	B2 SX40	2250,000	146,400	DOON2	311,148	DOON2	0,370	EH
7CY34	B2 SX40	4500,000	452,926	DOON2	298,708	DOON2	0,558	EH
7CY35	B2 SX40	0,000	402,579	DOON2	268,523	DOON2	1,603	DOON1
7CY35	B2 SX40	2250,000	136,610	DOON2	190,610	DOON2	1,282	DOON1
7CY35	B2 SX40	2500,000	31,161	EH	383,779	DOON1	0,974	DOON2
7CY36	B2 SX40	0,000	24,491	EH	299,643	DOON1	6,201	DOON2
7CY36	B2 SX40	1050,000	73,802	DOON1	157,821	DOON1	0,704	DOON2
7CY36	B2 SX40	2500,000	113,437	DOON3	58,614	DOON3	0,979	DOON2
7CY37	B2 SX40	0,000	311,148	DOON5	178,294	DOON5	1,458	DOON1
7CY37	B2 SX40	1375,000	92,258	DOON1	137,428	DOON6	1,296	DOON1
7CY37	B2 SX40	2500,000	8,022	EH	311,148	DOON1	1,075	DOON1
7CY38	B2 SX40	0,000	204,638	DOON5	150,802	DOON5	1,074	DOON1
7CY38	B2 SX40	1325,000	105,280	DOON1	218,044	DOON1	1,232	DOON1
7CY38	B2 SX40	2500,000	3,028	EH	318,457	DOON1	0,943	DOON1
7CY39	B2 SX40	0,000	0,000	DOON1	470,837	DOON2	2,048	DOON2
7CY39	B2 SX40	1125,000	244,206	DOON2	244,206	DOON2	3,044	DOON2
7CY39	B2 SX40	2250,000	772,864	DOON2	372,639	DOON2	8,421	DOON2
7CY40	B2 SX40	0,000	1046,975	DOON2	497,356	DOON2	0,490	DOON2
7CY40	B2 SX40	1375,000	311,148	DOON2	311,148	DOON2	0,841	EH
7CY40	B2 SX40	2500,000	0,000	DOON1	334,245	DOON2	0,812	EH
7CY41	B2 SX40	0,000	1086,348	DOON2	514,938	DOON2	1,030	DOON2
7CY41	B2 SX40	1375,000	316,802	DOON5	311,148	DOON2	0,864	EH
7CY41	B2 SX40	2500,000	0,000	DOON1	316,751	DOON2	0,836	EH
7CY42	B2 SX40	0,000	0,000	DOON1	701,897	DOON2	3,076	DOON2
7CY42	B2 SX40	1125,000	287,863	DOON2	287,863	DOON2	3,372	DOON2
7CY42	B2 SX40	2250,000	321,138	DOON2	440,569	DOON2	3,749	DOON2
7CY43	B2 SX40	0,000	129,543	DOON5	64,340	DOON5	1,123	DOON2
7CY43	B2 SX40	1250,000	84,916	DOON1	296,265	DOON1	0,848	DOON2
7CY43	B2 SX40	2500,000	3,426	EH	311,148	DOON1	0,601	DOON2
7CY44	B2 SX40	0,000	311,627	DOON5	704,850	DOON5	1,643	DOON1
7CY44	B2 SX40	1375,000	101,787	DOON5	132,598	DOON6	1,380	DOON1
7CY44	B2 SX40	2500,000	8,223	EH	321,853	DOON1	1,159	DOON1
7CY45	B2 SX40	0,000	59,614	DOON3	93,373	DOON4	0,618	DOON1
7CY45	B2 SX40	1200,000	67,915	DOON4	91,613	DOON3	0,656	DOON2
7CY45	B2 SX40	2275,000	271,700	DOON4	154,626	DOON4	0,890	DOON1
7CY46	B2 SX40	0,000	245,056	DOON2	121,534	DOON3	0,793	DOON1
7CY46	B2 SX40	1300,000	50,824	DOON3	101,004	DOON4	0,549	DOON1
7CY46	B2 SX40	2375,000	92,867	DOON4	100,589	DOON3	0,671	DOON1
7CY47	B2 SX40	0,000	390,657	DOON3	261,831	DOON3	0,611	EH
7CY47	B2 SX40	2250,000	113,495	DOON4	160,558	DOON2	0,458	EH
7CY47	B2 SX40	4275,000	348,241	DOON4	228,539	DOON4	0,706	EH
7CY48	B2 SX40	0,000	311,148	DOON4	134,589	DOON3	0,495	DOON4
7CY48	B2 SX40	2250,000	108,284	DOON3	157,833	DOON2	0,429	DOON6
7CY48	B2 SX40	4275,000	316,468	DOON2	229,368	DOON3	0,775	DOON6
7CY49	B2 SX40	0,000	316,438	DOON4	298,345	DOON4	0,441	EH
7CY49	B2 SX40	1362,500	103,431	DOON4	189,171	DOON3	0,441	EH
7CY49	B2 SX40	2500,000	1,275	EH	324,983	DOON1	0,441	EH
7CY50	B2 SX40	0,000	1,099	EH	334,846	DOON1	0,769	DOON10
7CY50	B2 SX40	1137,500	124,333	DOON3	124,333	DOON3	0,513	DOON10
7CY50	B2 SX40	2275,000	414,394	DOON3	271,105	DOON3	1,082	DOON10
8CY10	B2 SX40	0,000	207,268	DOON2	161,913	DOON2	0,515	DOON4
8CY10	B2 SX40	3500,000	81,286	DOON2	51,286	DOON2	0,164	DOON6
8CY10	B2 SX40	6850,000	168,793	DOON2	83,927	DOON2	0,302	DOON5
8CY11	B2 SX40	0,000	140,221	DOON5	69,289	DOON5	0,094	EH
8CY11	B2 SX40	3500,000	34,814	DOON5	122,350	DOON1	0,094	EH
8CY11	B2 SX40	6850,000	112,903	DOON6	56,242	DOON6	0,094	EH
8CY12	B2 SX40	0,000	119,268	DOON5	59,420	DOON5	0,055	EH
8CY12	B2 SX40	3500,000	29,643	DOON3	127,890	DOON1	0,035	EH
8CY12	B2 SX40	6850,000	119,429	DOON6	59,480	DOON6	0,085	EH
8CY13	B2 SX40	0,000	137,851	DOON2	98,814	DOON2	0,301	EH
8CY13	B2 SX40	3500,000	48,599	DOON2	59,498	DOON5	0,167	EH
8CY13	B2 SX40	6850,000	148,378	DOON2	73,827	DOON2	0,290	EH
8CY14	B2 SX40	0,000	227,983	DOON2	113,130	DOON2	0,140	EH

8CY14	B2 SX40	5500,000	55,354	D00M1	55,430	D00M1	0,150	EH
8CY14	B2 SX40	6950,000	112,241	D00M0	58,941	D00M5	0,150	EH
8CY15	B2 SX40	0,000	0,000	D00M1	104,014	D00M1	0,054	D00M1
8CY15	B2 SX40	1100,000	40,200	D00M1	170,863	D00M2	0,154	D00M2
8CY15	B2 SX40	2400,000	0,000	D00M1	174,534	D00M2	0,110	D00M1
8CY16	B2 SX40	150,000	266,167	D00M1	141,714	D00M2	0,469	EH
8CY16	B2 SX40	1275,000	70,530	D00M2	70,530	D00M2	0,403	EH
8CY16	B2 SX40	3300,000	0,000	D00M1	140,501	D00M1	0,827	EH
8CY17	B2 SX40	150,000	211,145	D00M1	155,357	D00M2	0,479	EH
8CY17	B2 SX40	1135,000	75,241	D00M2	75,241	D00M2	0,413	EH
8CY17	B2 SX40	2300,000	0,000	D00M1	184,716	D00M1	0,407	EH
8CY18	B2 SX40	150,000	144,371	D00M2	75,247	D00M1	1,790	D00M1
8CY18	B2 SX40	500,000	37,837	D00M1	37,837	D00M1	1,751	D00M2
8CY18	B2 SX40	040,999	0,000	D00M1	111,846	D00M2	1,732	D00M2
8CY19	B2 SX40	150,000	565,821	D00M1	211,145	D00M2	0,472	EH
8CY19	B2 SX40	1450,000	101,481	D00M2	101,481	D00M2	0,473	EH
8CY19	B2 SX40	3145,333	0,000	D00M1	410,666	D00M0	0,473	EH
8CY20	B2 SX40	0,000	0,000	D00M1	410,666	D00M1	0,371	D00M1
8CY20	B2 SX40	1440,000	106,545	D00M2	345,545	D00M2	0,250	D00M1
8CY20	B2 SX40	2700,000	0,000	D00M1	410,666	D00M2	0,349	D00M1
8CY21	B2 SX40	0,000	0,000	D00M1	411,359	D00M2	0,472	EH
8CY21	B2 SX40	1500,000	174,907	D00M2	174,907	D00M2	0,470	EH
8CY21	B2 SX40	2998,999	550,714	D00M2	617,146	D00M2	0,190	EH
8CY22	B2 SX40	150,000	0,000	D00M1	73,757	D00M1	1,181	D00M2
8CY22	B2 SX40	500,000	30,244	D00M2	30,244	D00M2	1,309	D00M2
8CY22	B2 SX40	040,999	122,735	D00M2	61,616	D00M2	1,327	D00M2



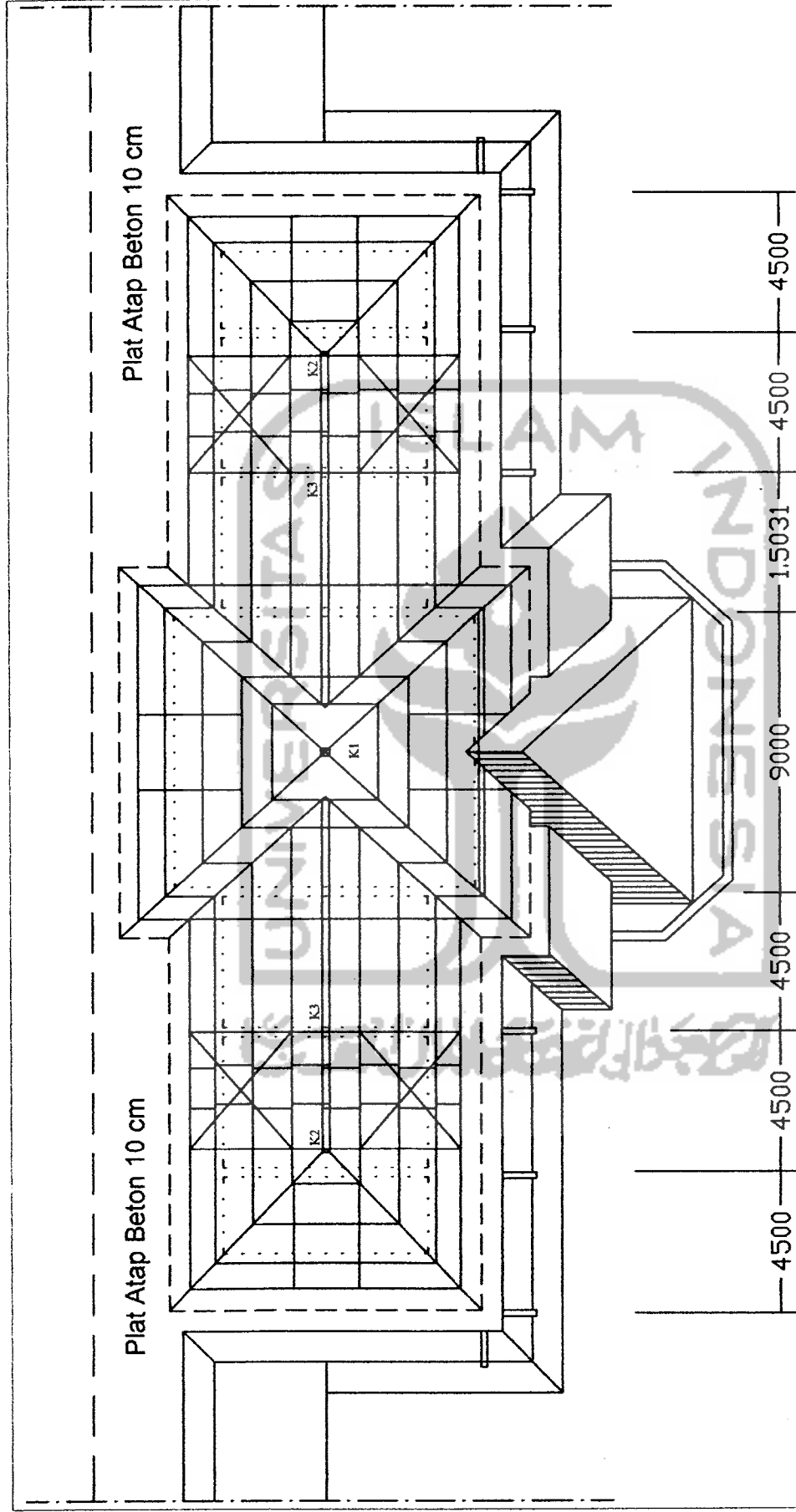
Fakultas Psikologi

Gedung Registrasi



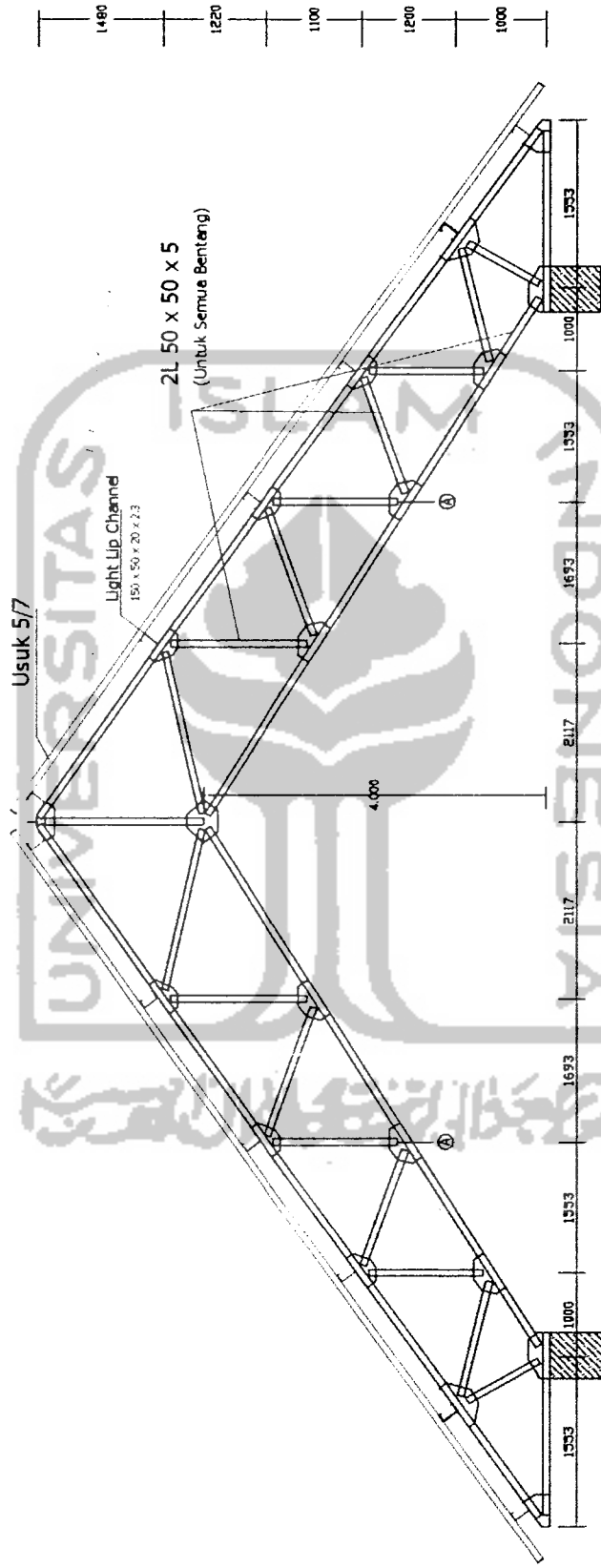
Lapangan Sepak Bola

PETA SITUASI PROYEK D3 EKONOMI UII

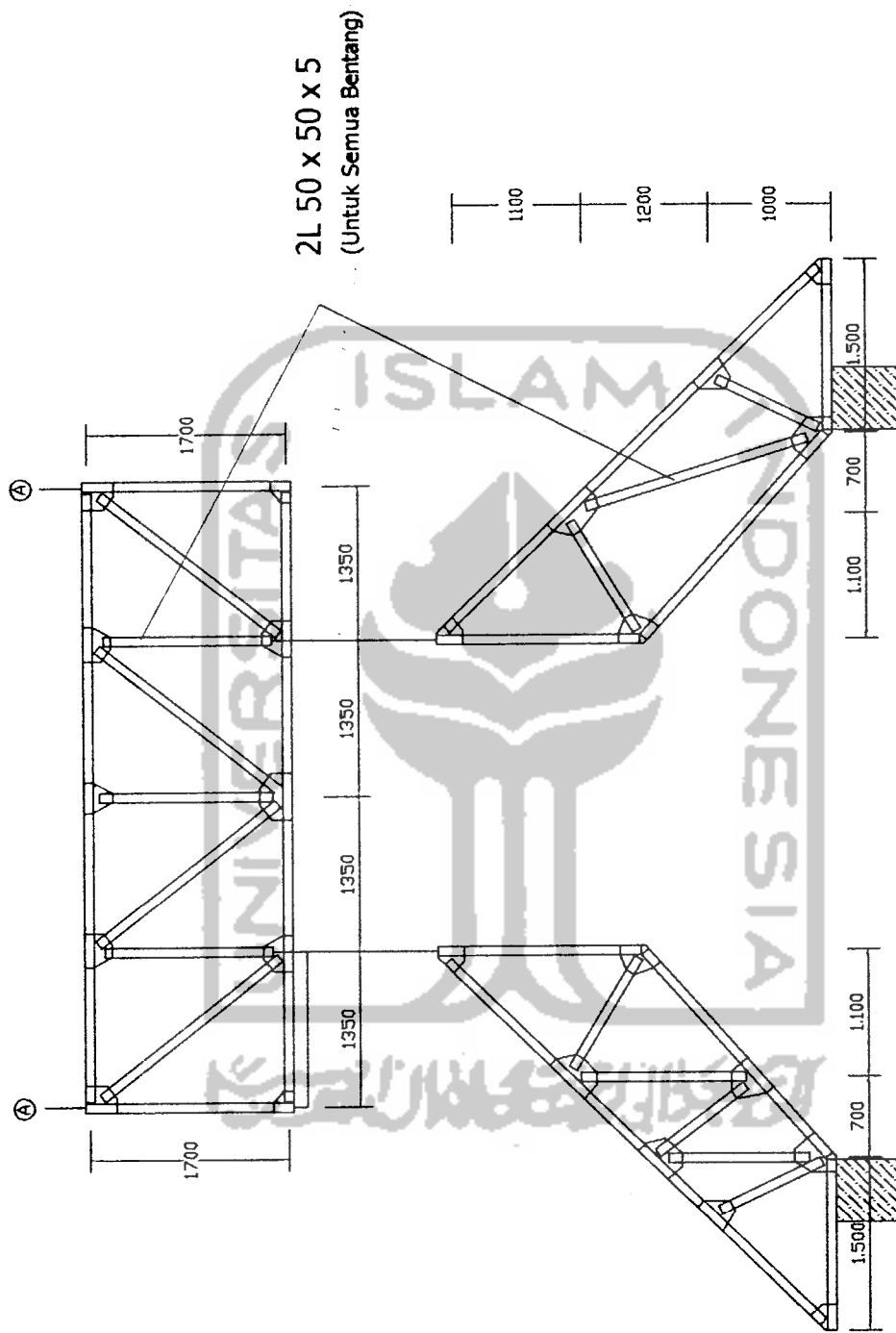


Rencana Atap Blok B

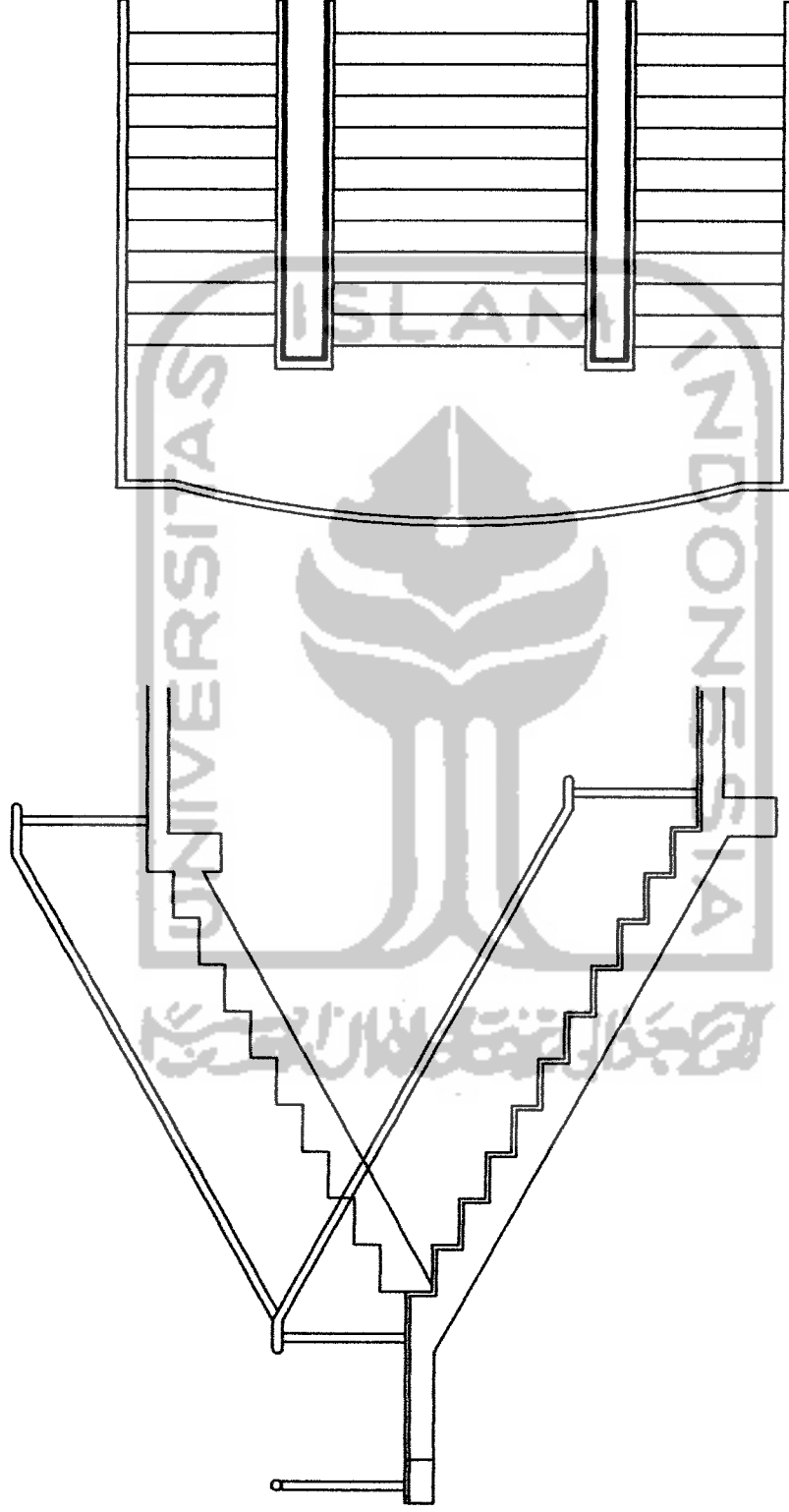
Skala 1 : 200



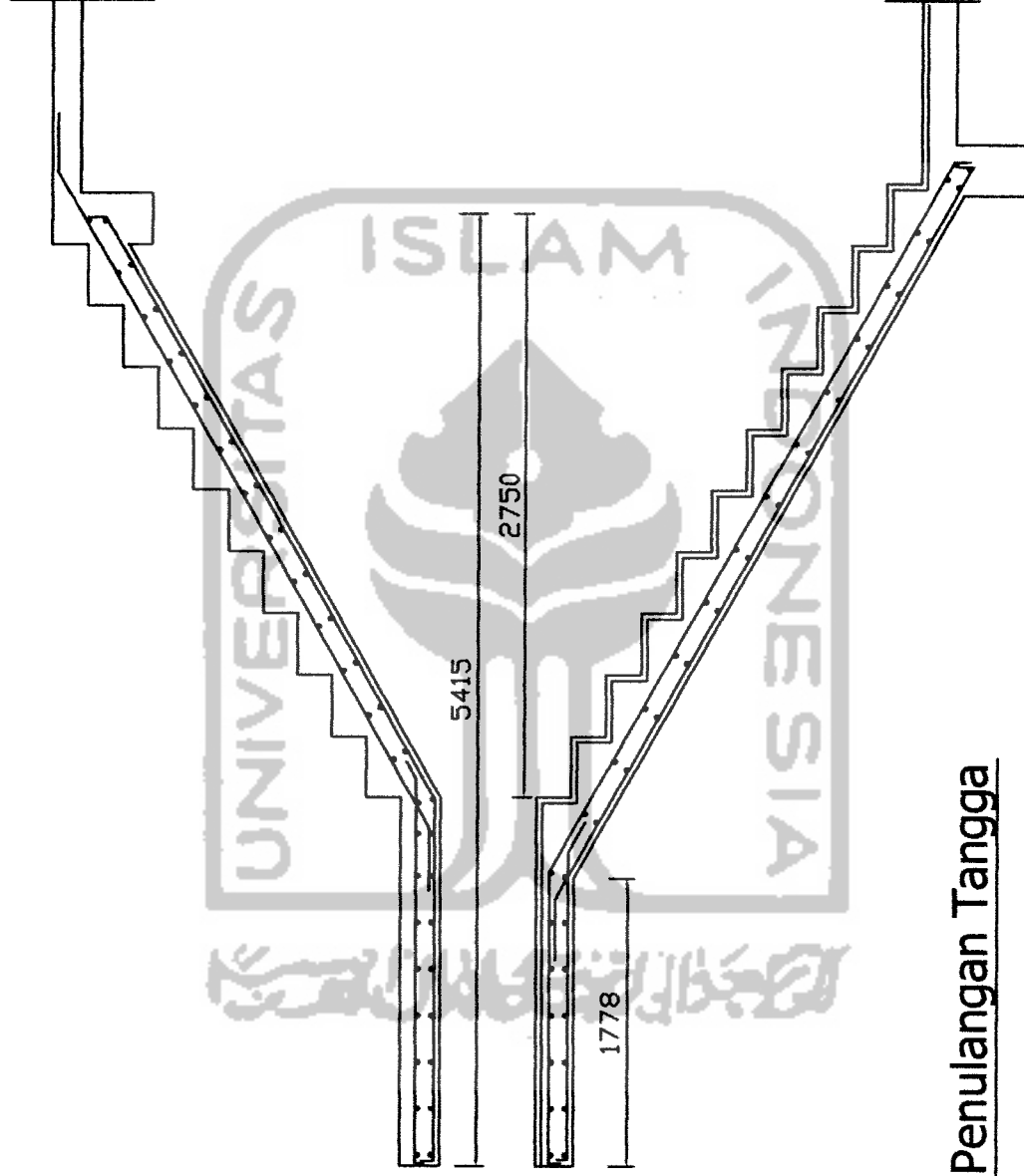
Kuda-kuda I (KI)



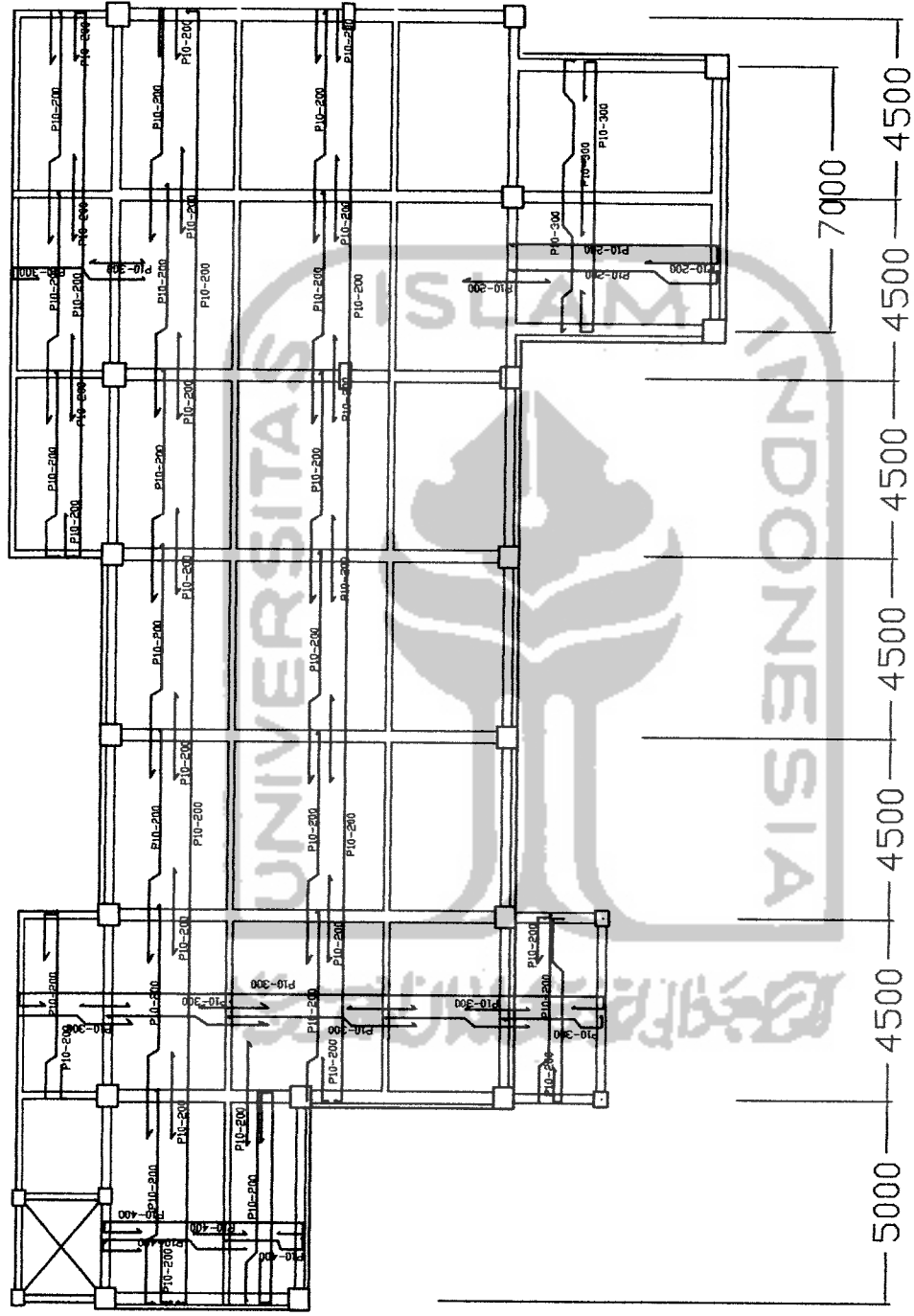
Kuda-kuda I (KI)



Rencana Tangga

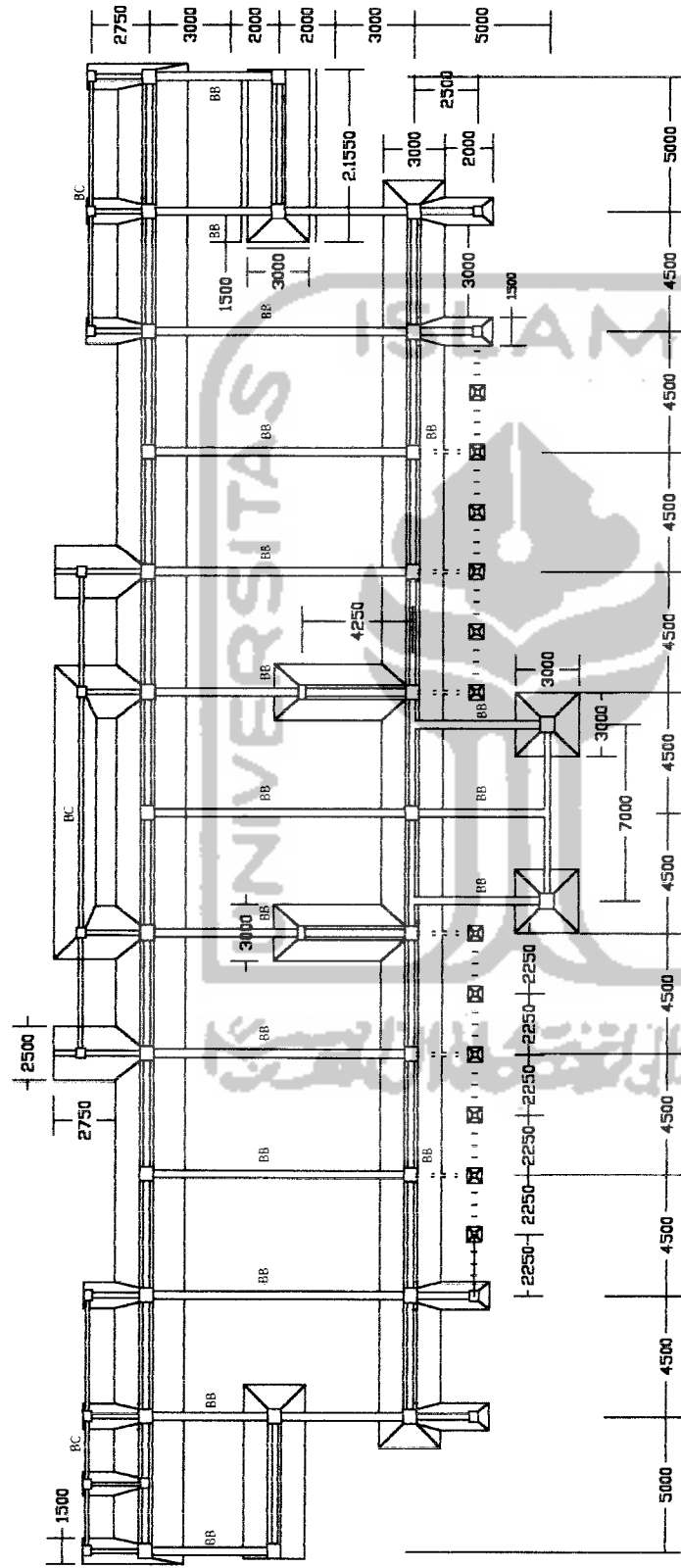


Rencana Penulangan Tangga



Rencana Tulangan Plat Lantai

Skala 1 : 150



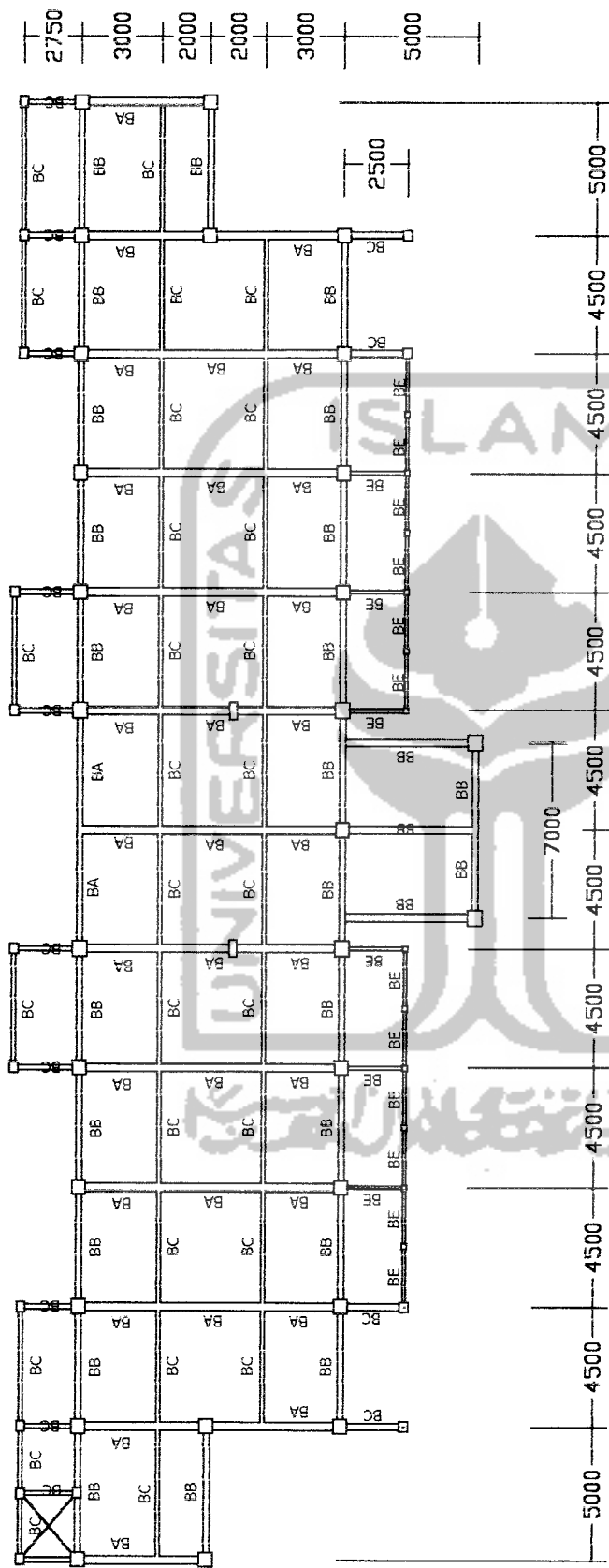
Rencana Pondasi

Skala 1 : 250

Keterangan

BB = 30X50

BC = 25X40

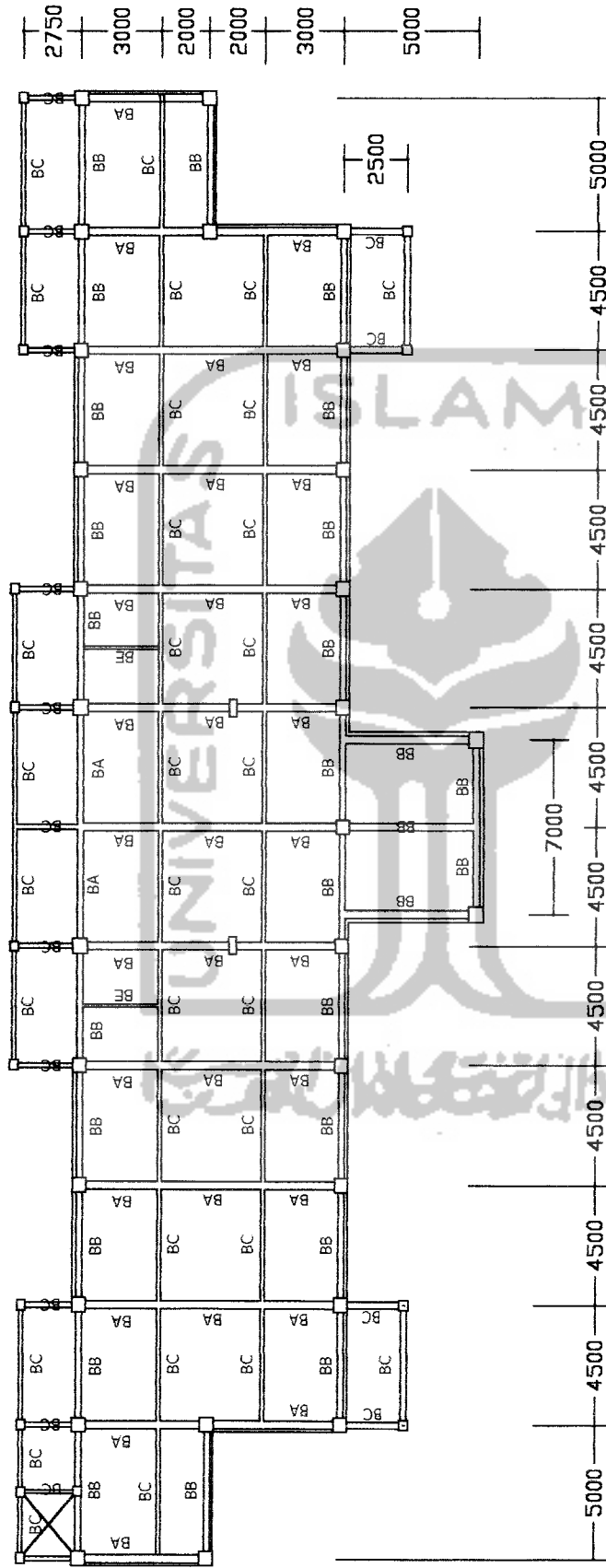


Rencana Balok Lantai Basement

Skala 1 : 250

Keterangan

BA = 45X70
BB = 30X50
BC = 25X40
BE = 15X20



Keterangan

BA = 45X70

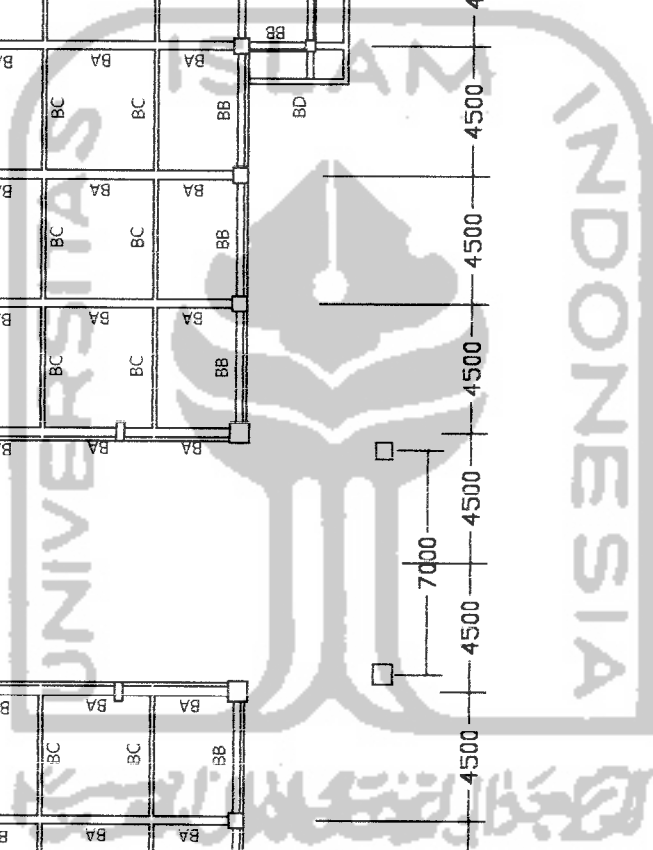
BB = 30X50

BC = 25X40

BE = 15X20

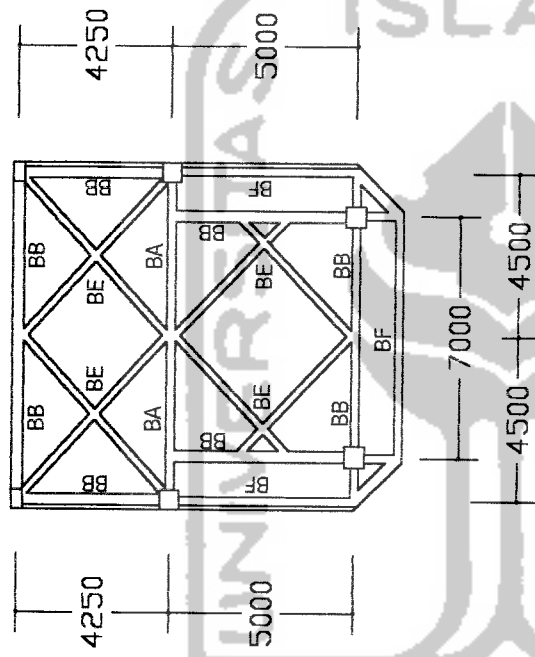
Rencana Balok Lantai 1

Skala 1 : 250



Skala 1 : 250

BA = 45X70
BB = 30X50
BC = 25X40
BK = 30X50
BD = 20X50



Keterangan

BA = 40X70

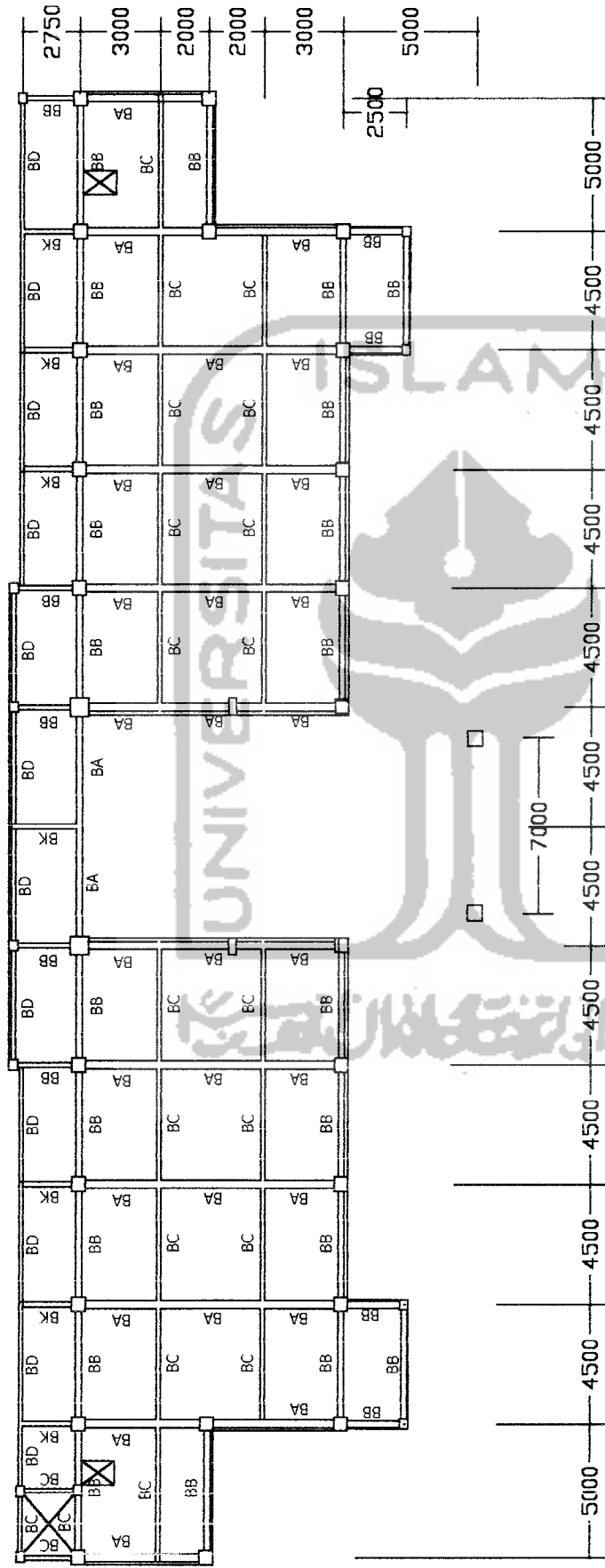
BB = 30X50

BE = 20X30

BF = 20X50

Rencana Balok Lantai 2.5

Skala 1 : 250

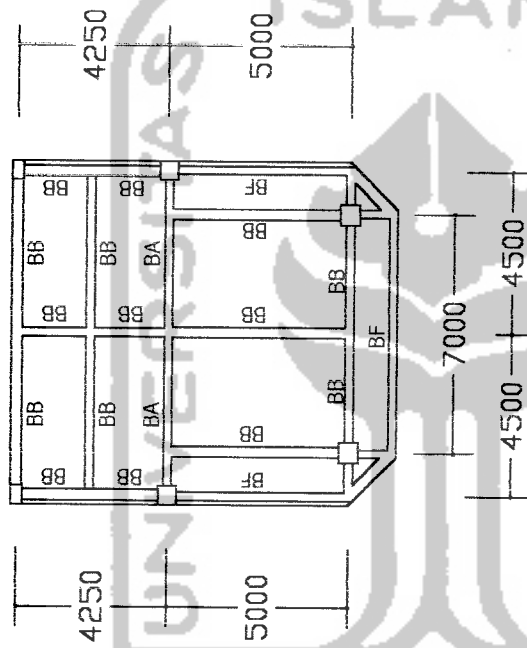


Keterangan

BA = 45X70
 BB = 30X50
 BC = 25X40
 BK = 30X50
 BD = 20X50

Rencana Balok Lantai 3

Skala 1 : 250



Keterangan

BA = 45X70

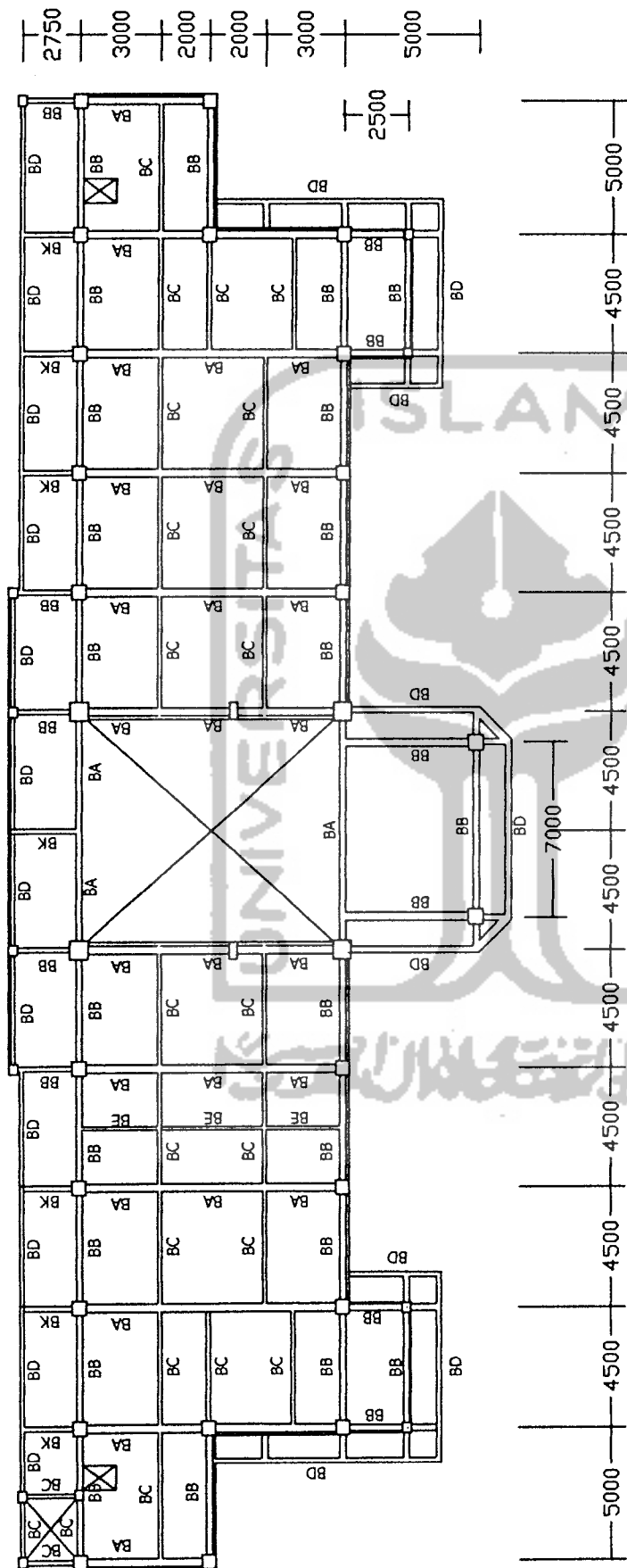
BB = 30X50

BC = 25X40

BF = 20X30

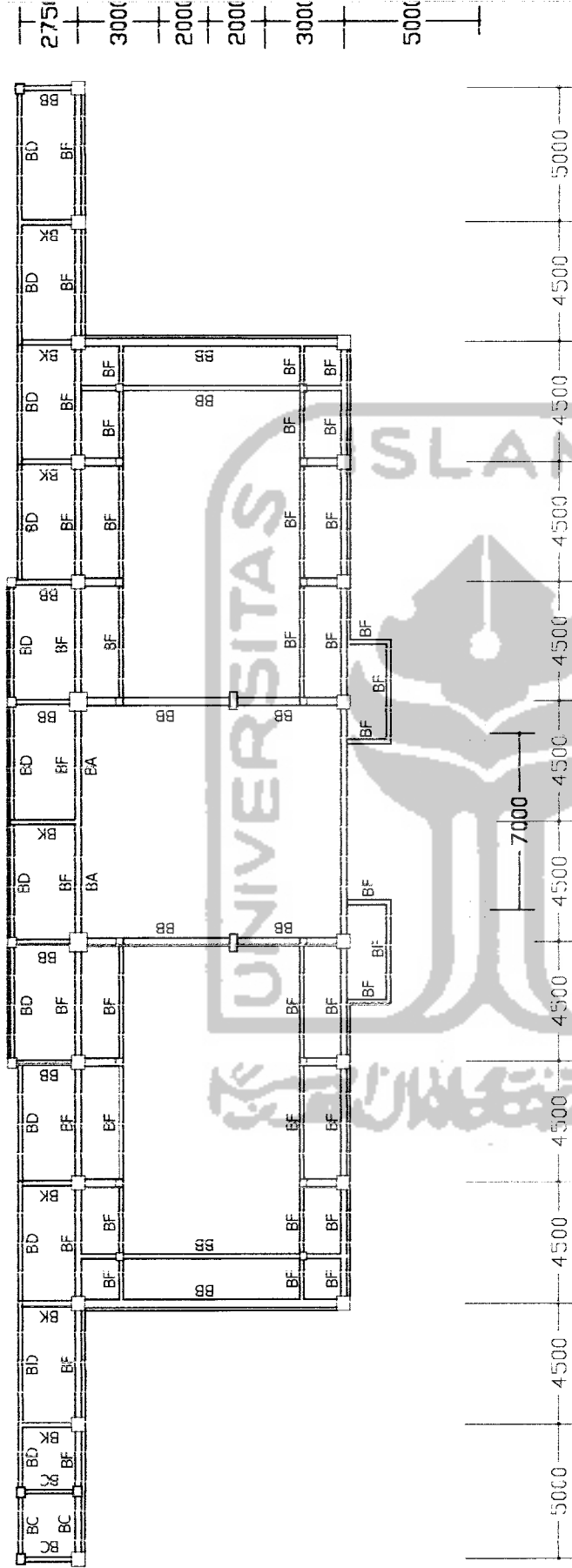
Rencana Balok Lantai 3.5

Skala 1 : 250



Rencana Balok Lantai 4

Skala 1 : 250

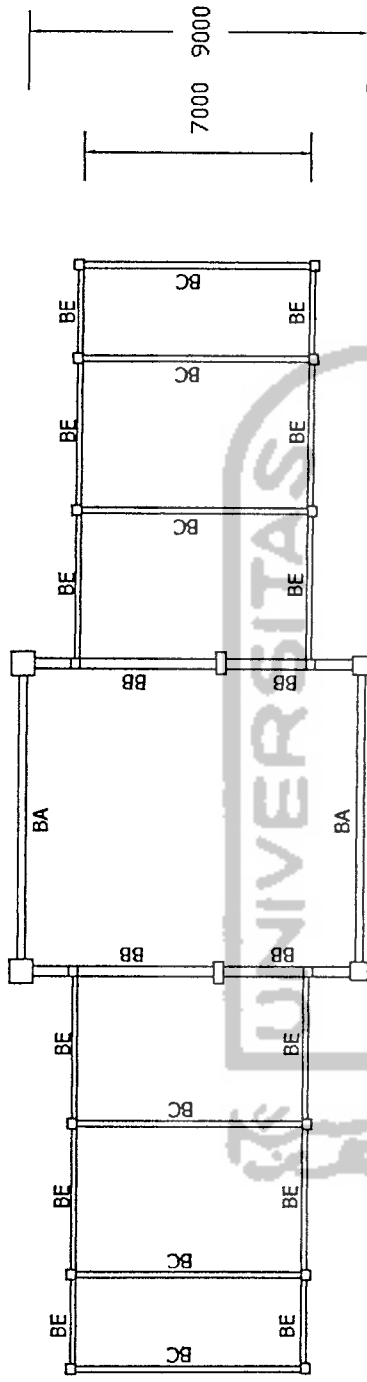


Keterangan

BA = 45X70
 BB = 30X50
 BC = 25X40
 BK = 30X50
 BD = 20X50
 BF = 20X30

Rencana Balok Lantai Atap

Skala 1 : 250



Keterangan

BA = 45X70

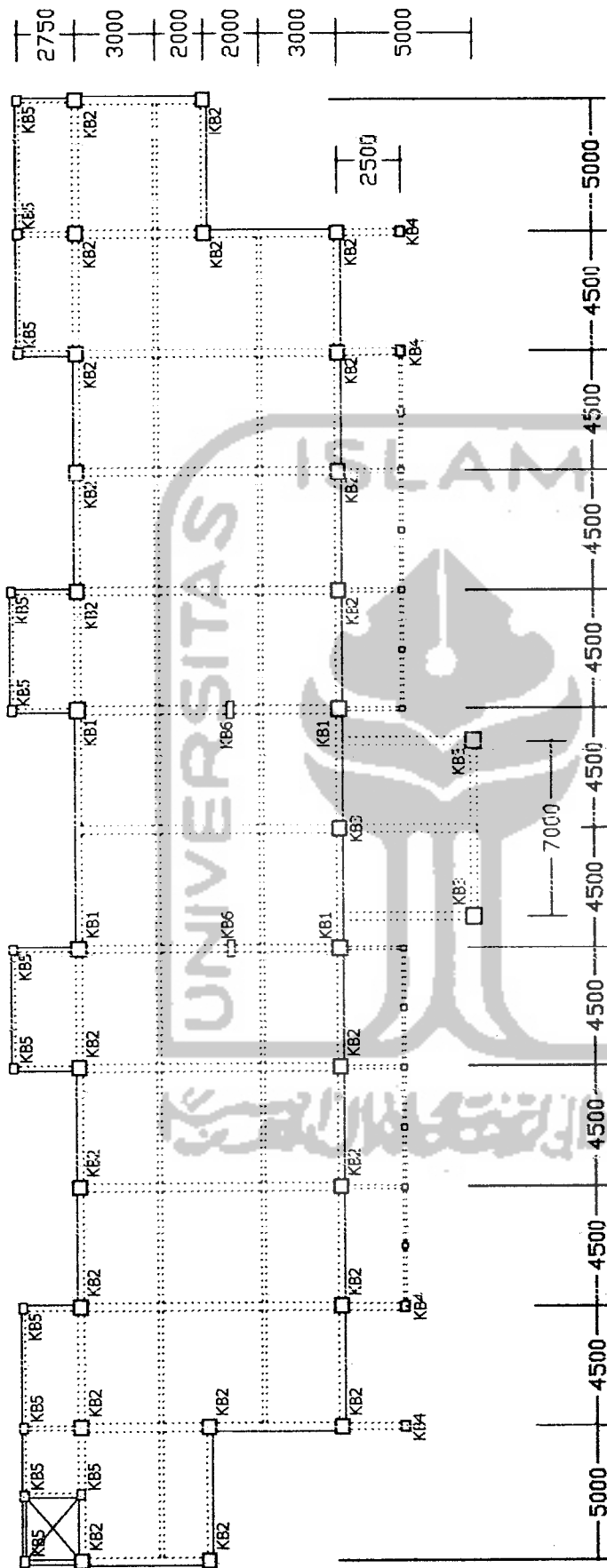
BB = 30X50

BC = 25X40

BE = 20X30

Rencana Balok Atap

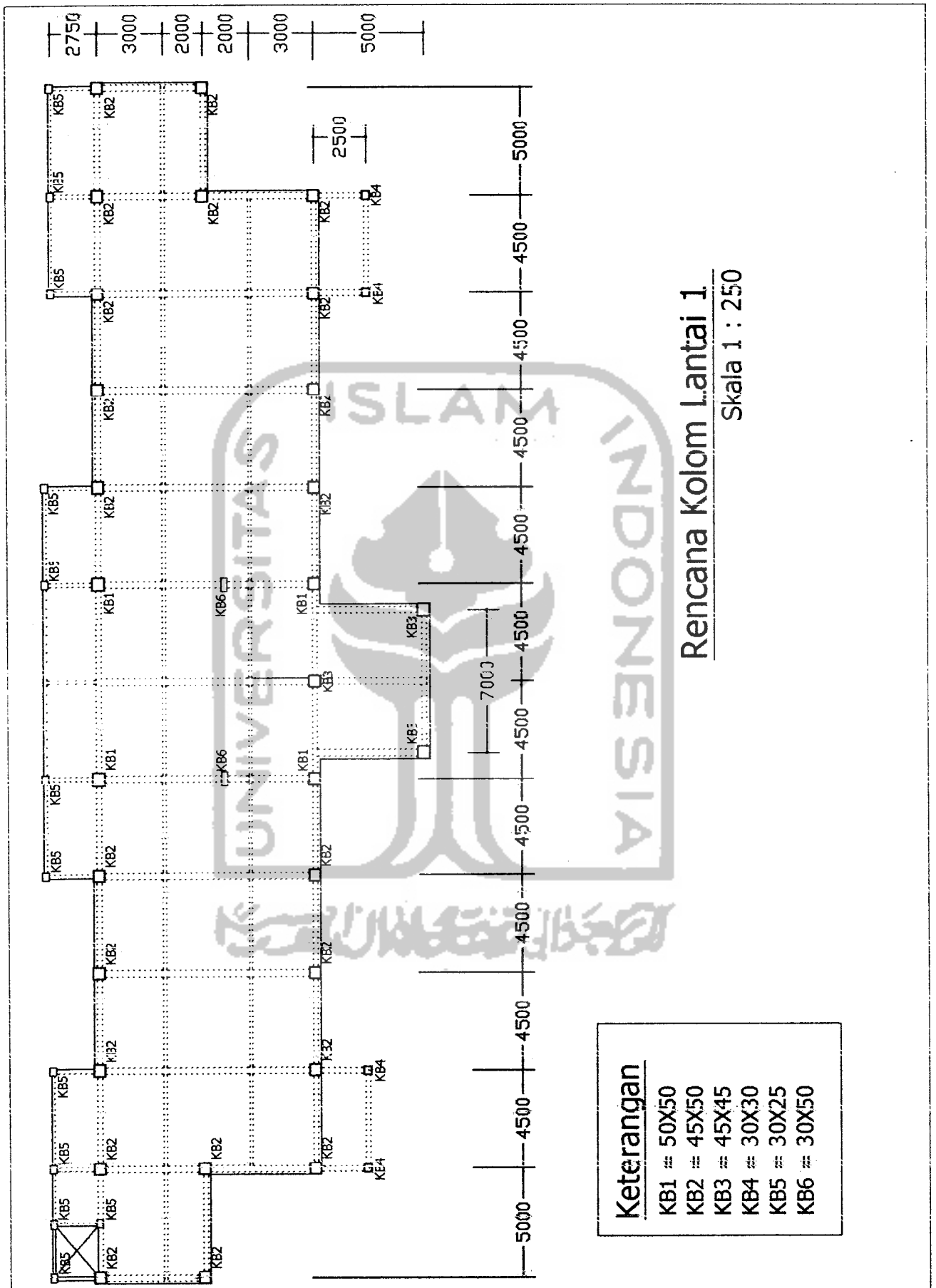
Skala 1 : 250

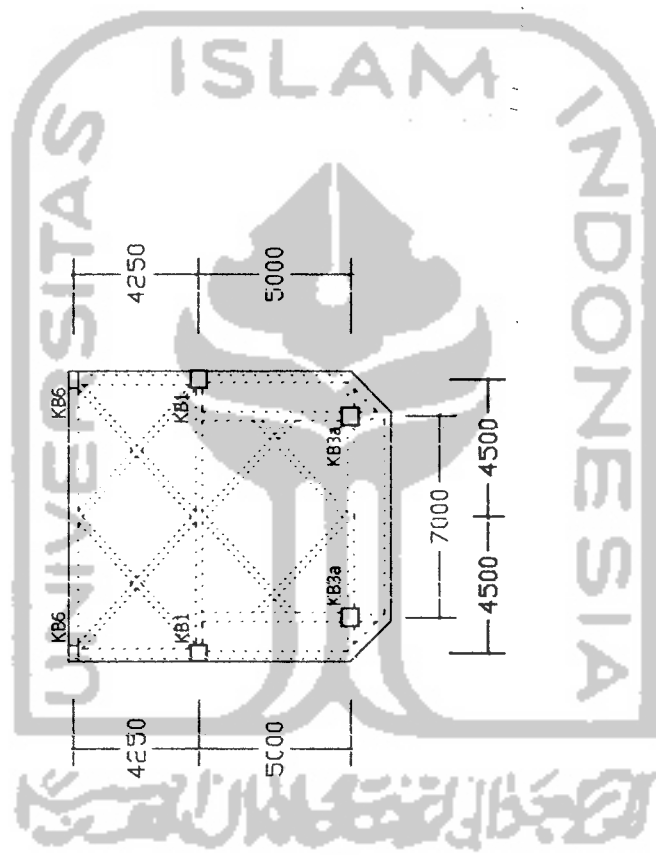


Keterangan	
KB1	= 50X50
KB2	= 45X50
KB3	= 45X45
KB4	= 30X30
KB5	= 30X25
KB6	= 30X50

Rencana Kolom Lantai Basement

Skala 1 : 250





Keterangan

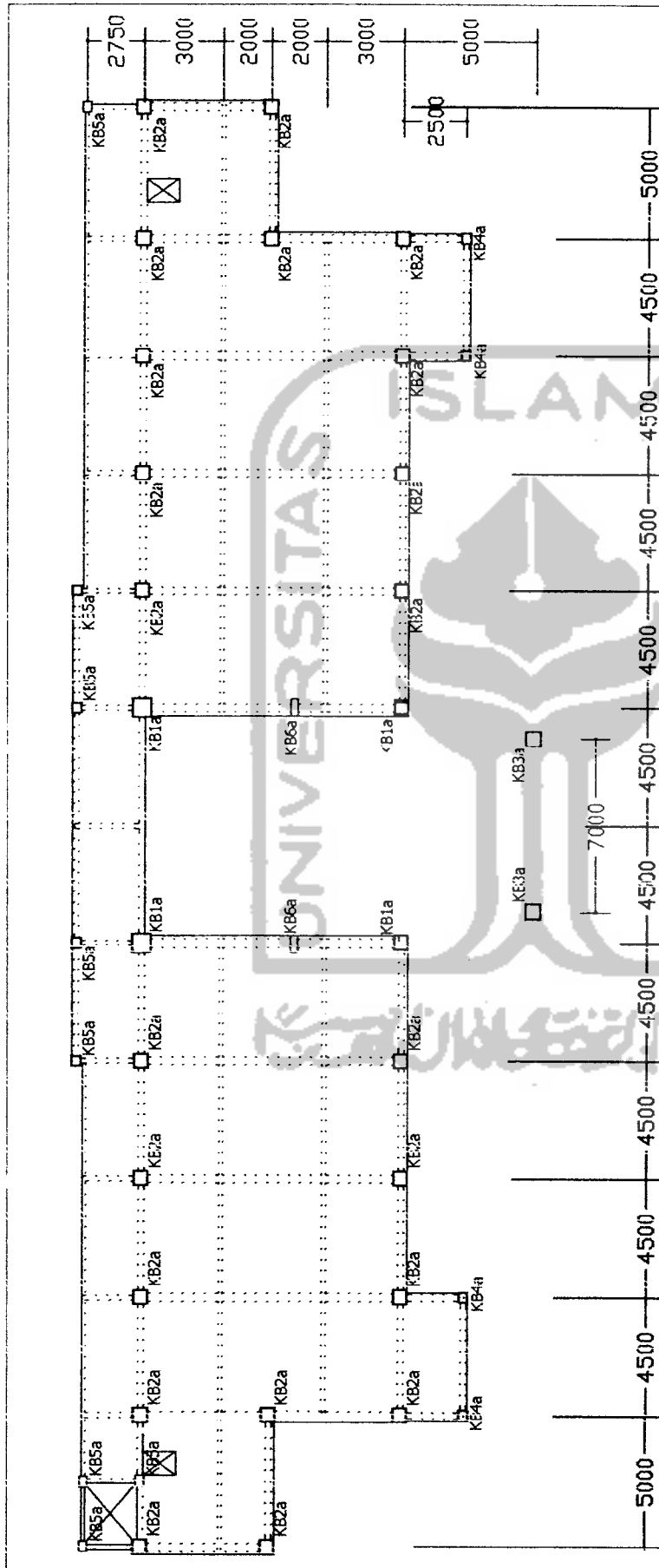
KB1 = 50X50

KB3a = 45X45

KB6 = 30X50

Rencana Kolom Lantai 2.5

Skala 1 : 250

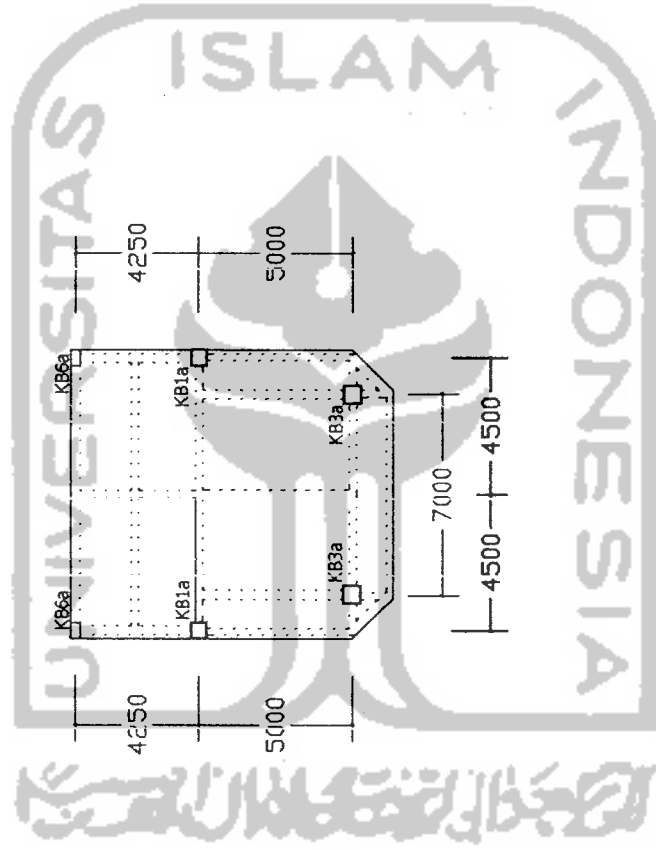


Keterangan

KB1a = 50X50
 KB2a = 45X50
 KB3a = 45X45
 KB4a = 30X30
 KB5a = 30X25
 KB6a = 30X50

Rencana Kolom Lantai 3

Skala 1 : 250



Keterangan

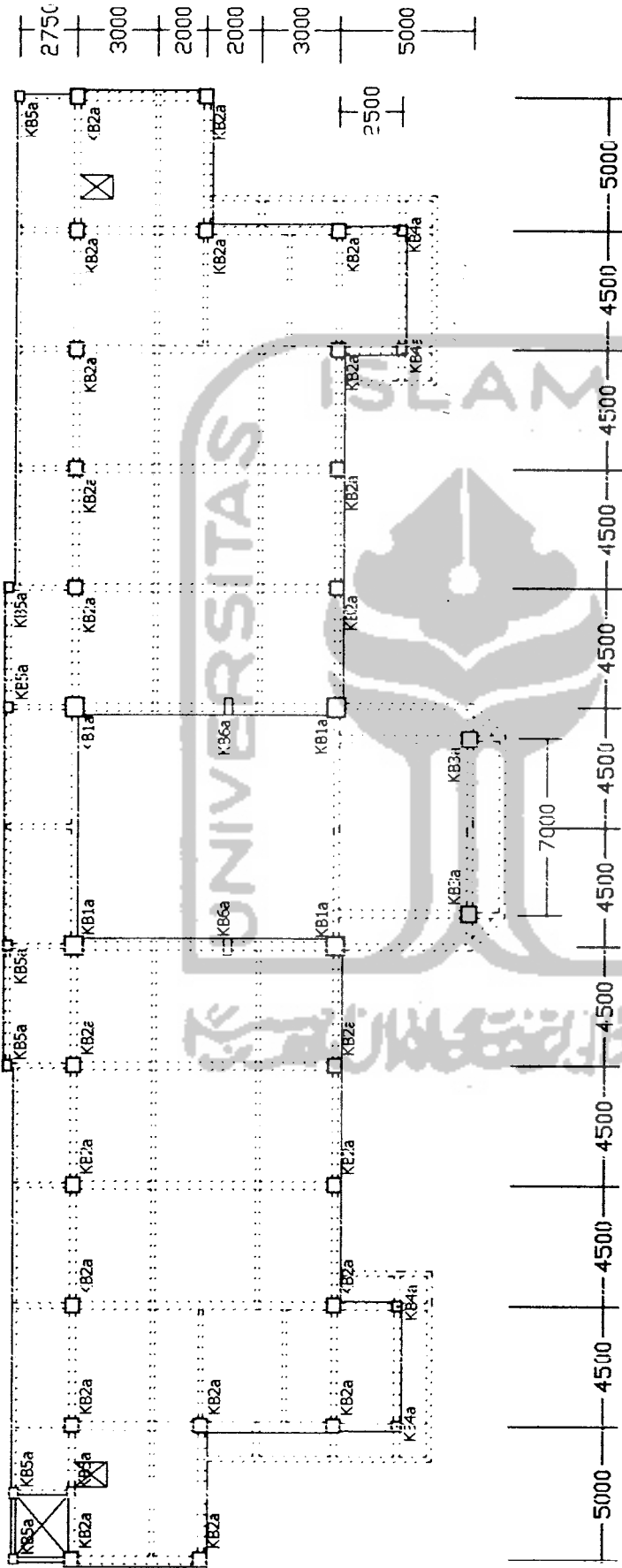
KB1a = 50X50

KB3a = 45X45

KB6a = 30X50

Rencana Kolom Lantai 3.5

Skala 1 : 250

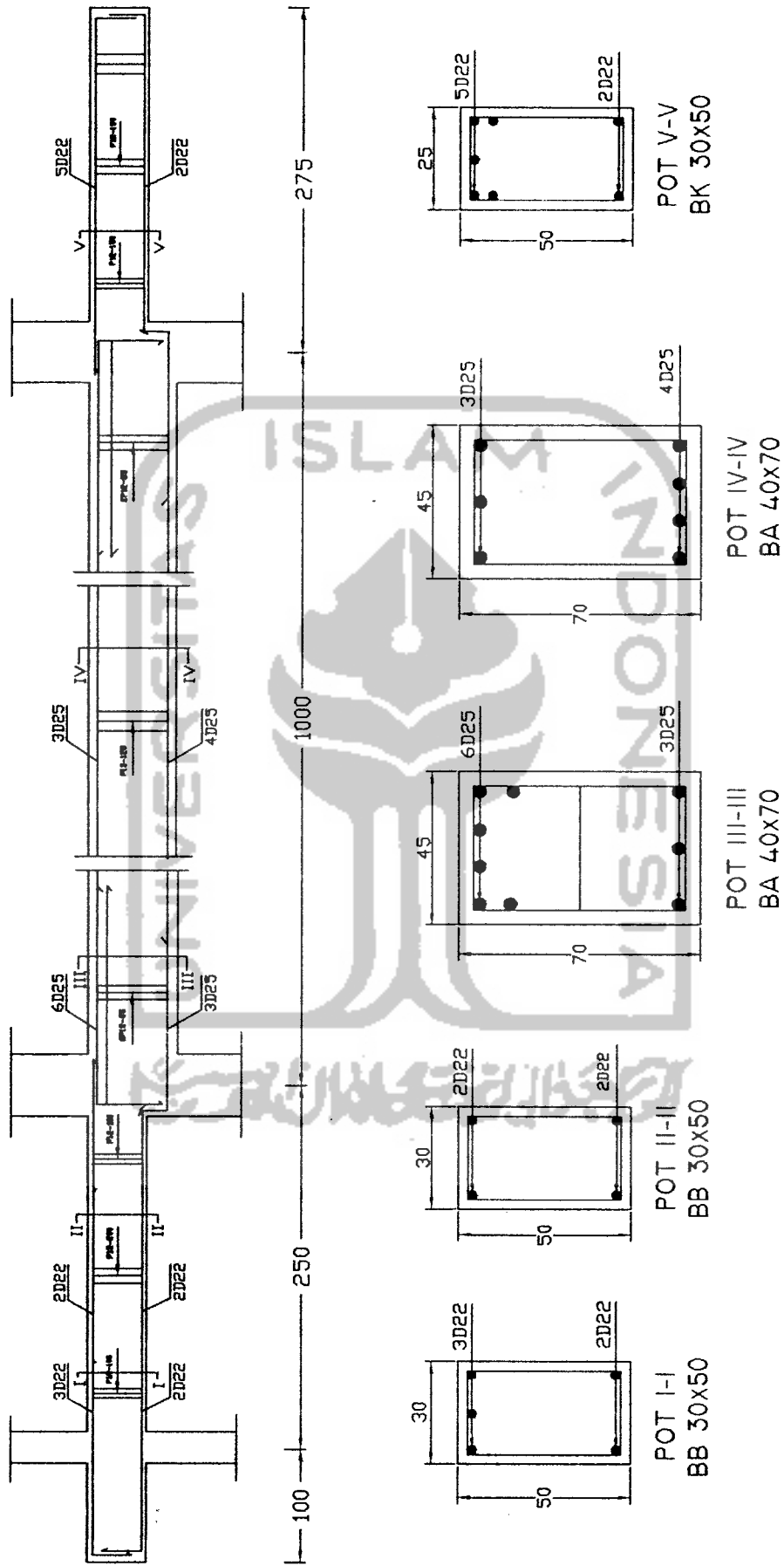


Keterangan

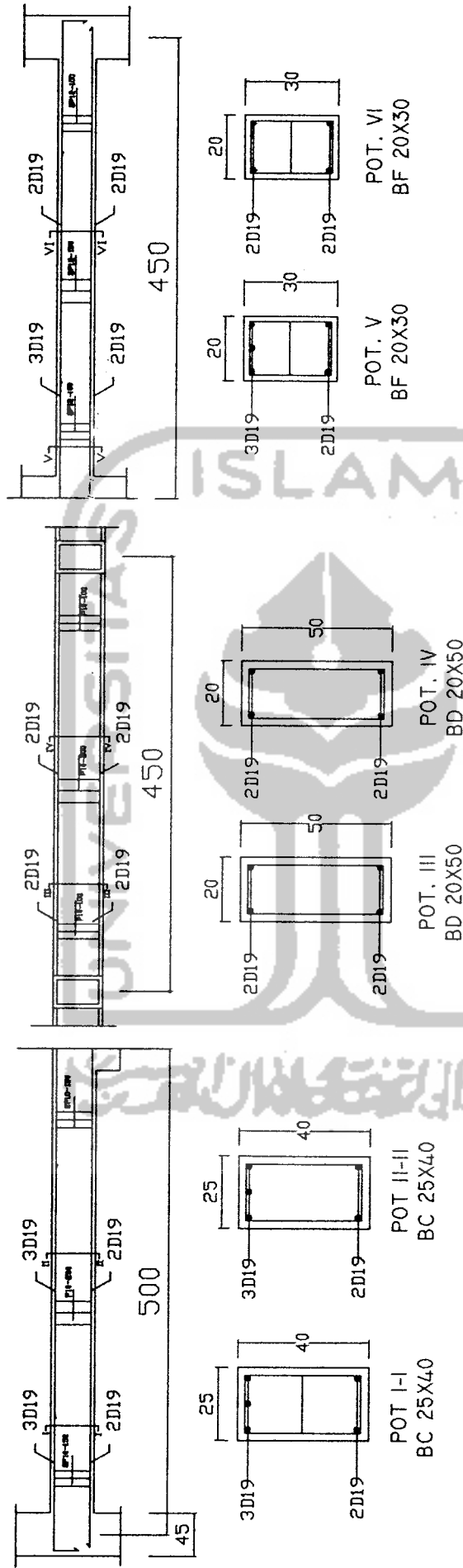
KB1a = 50X50
 KB2a = 45X50
 KB3a = 45X45
 KB4a = 30X30
 KB5a = 30X25
 KB6a = 30X50

Rencana Kolom Lantai 4

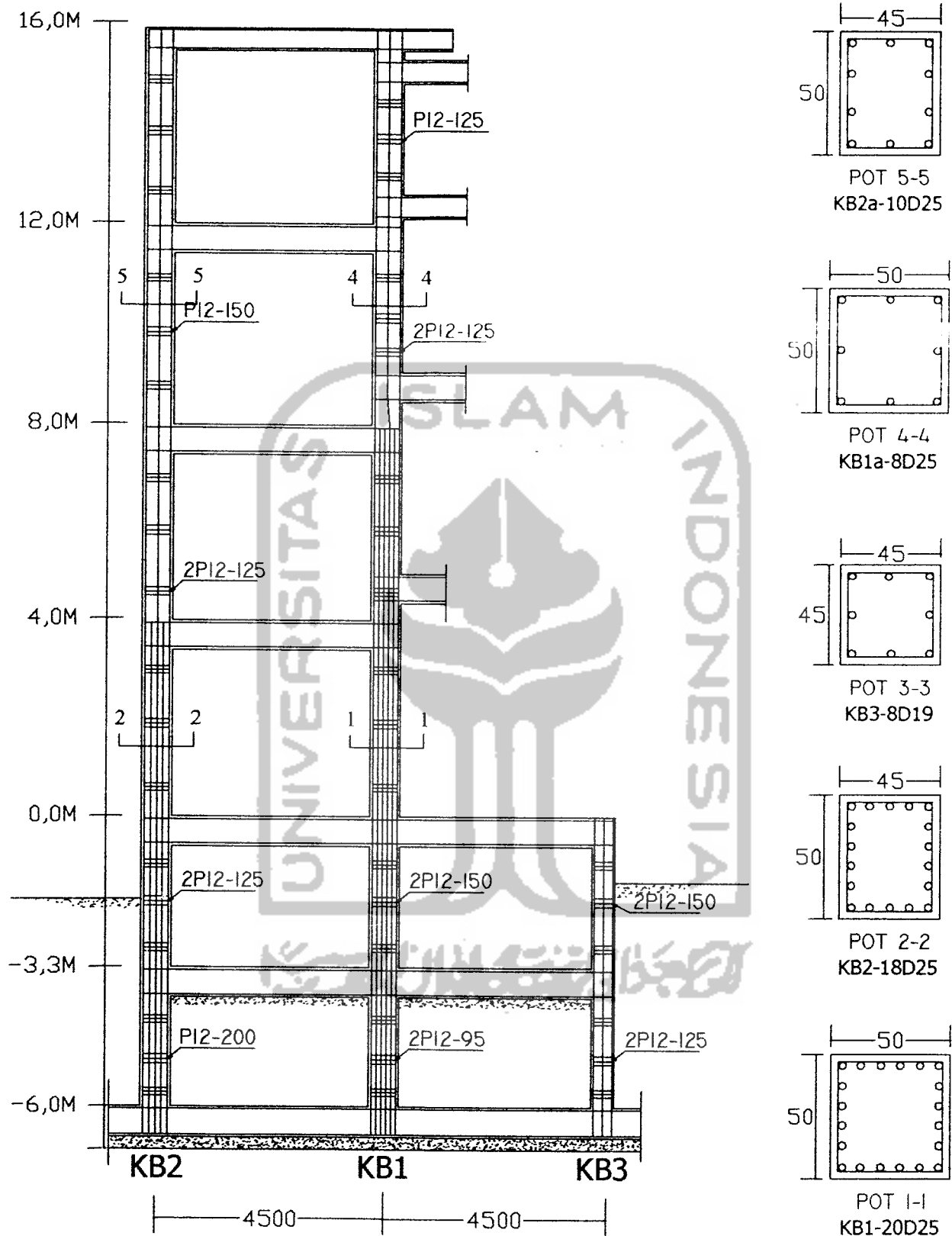
Skala 1 : 250



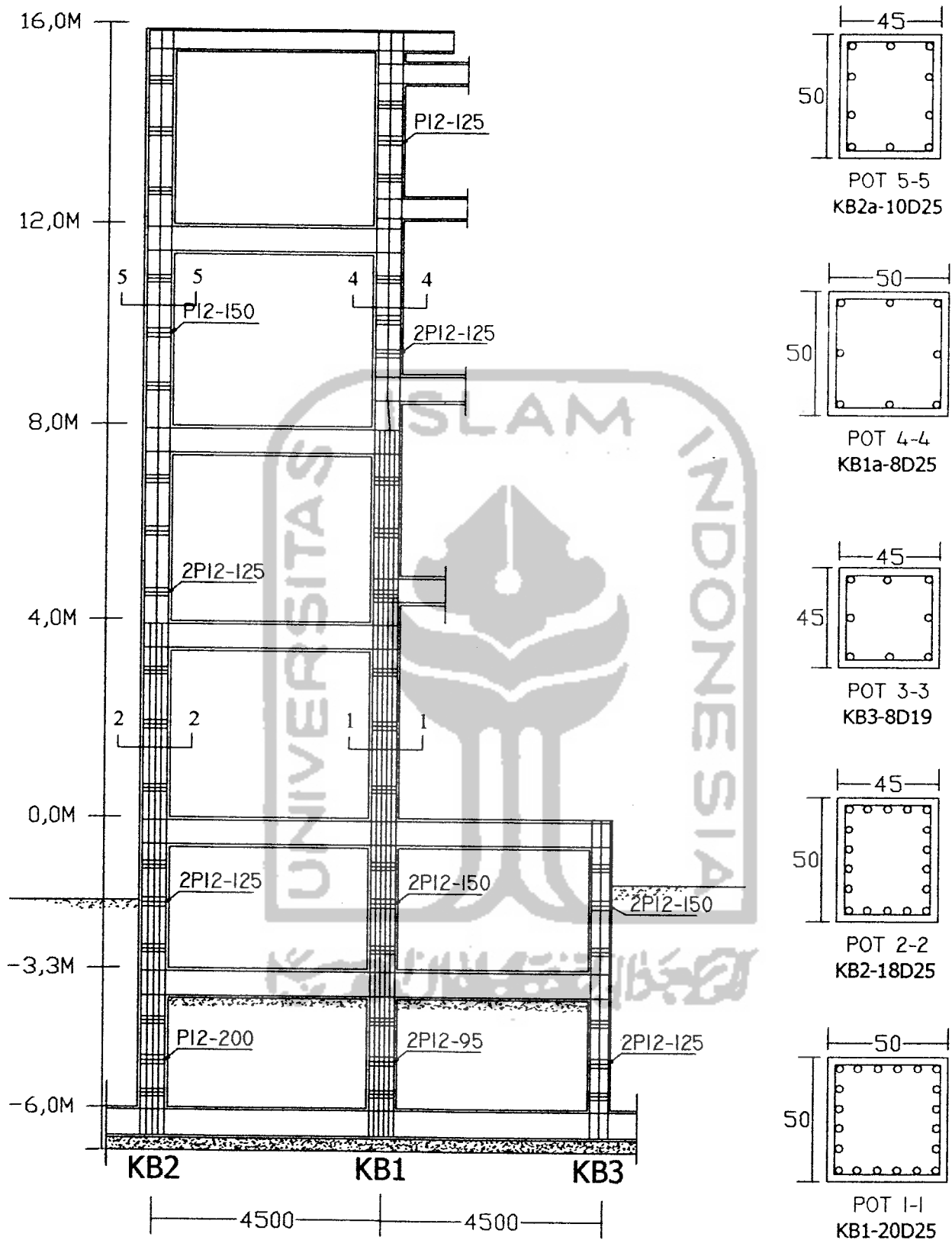
Detail Balok BA, BB dan BK



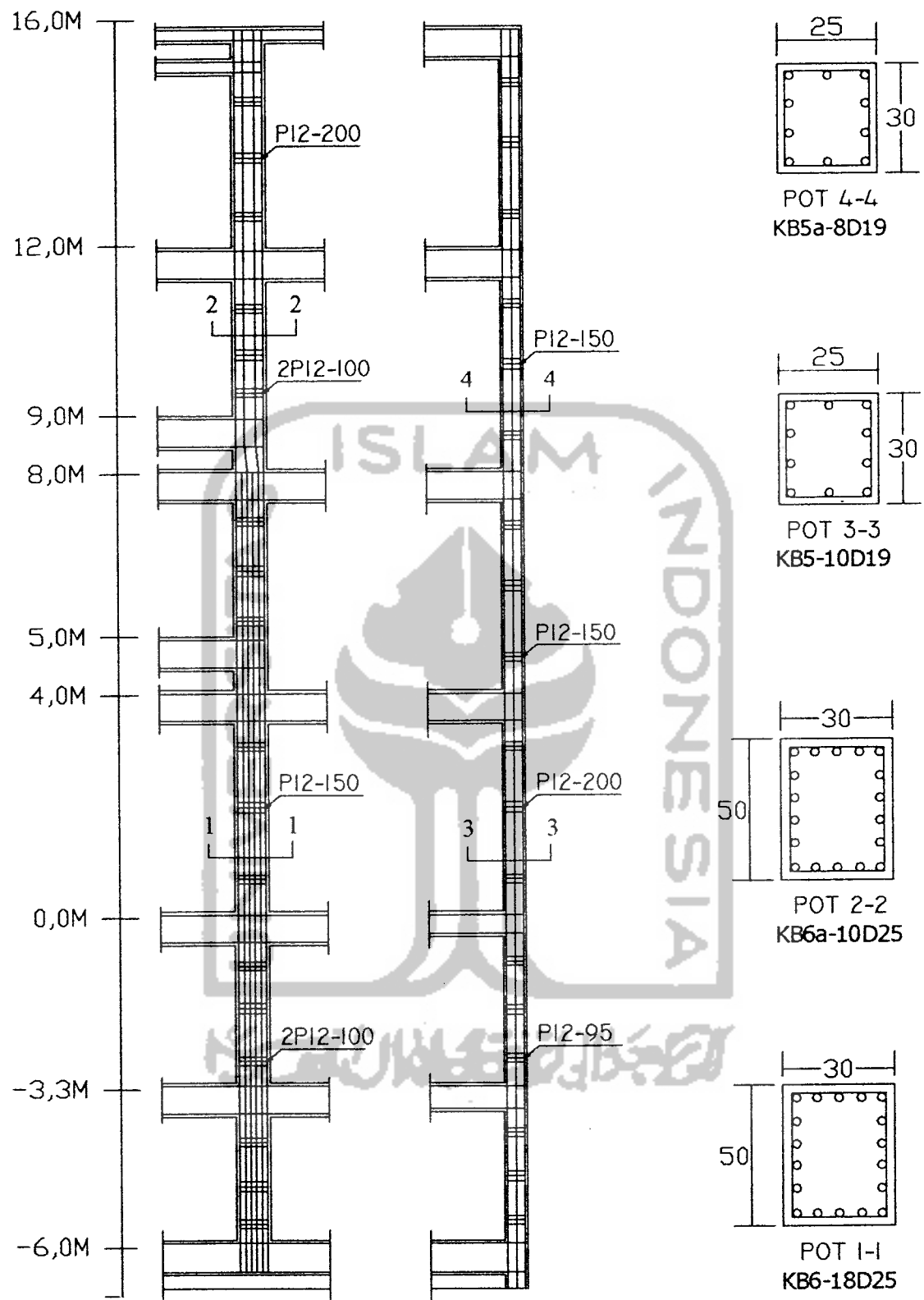
Detail Balok BA, BB dan BK



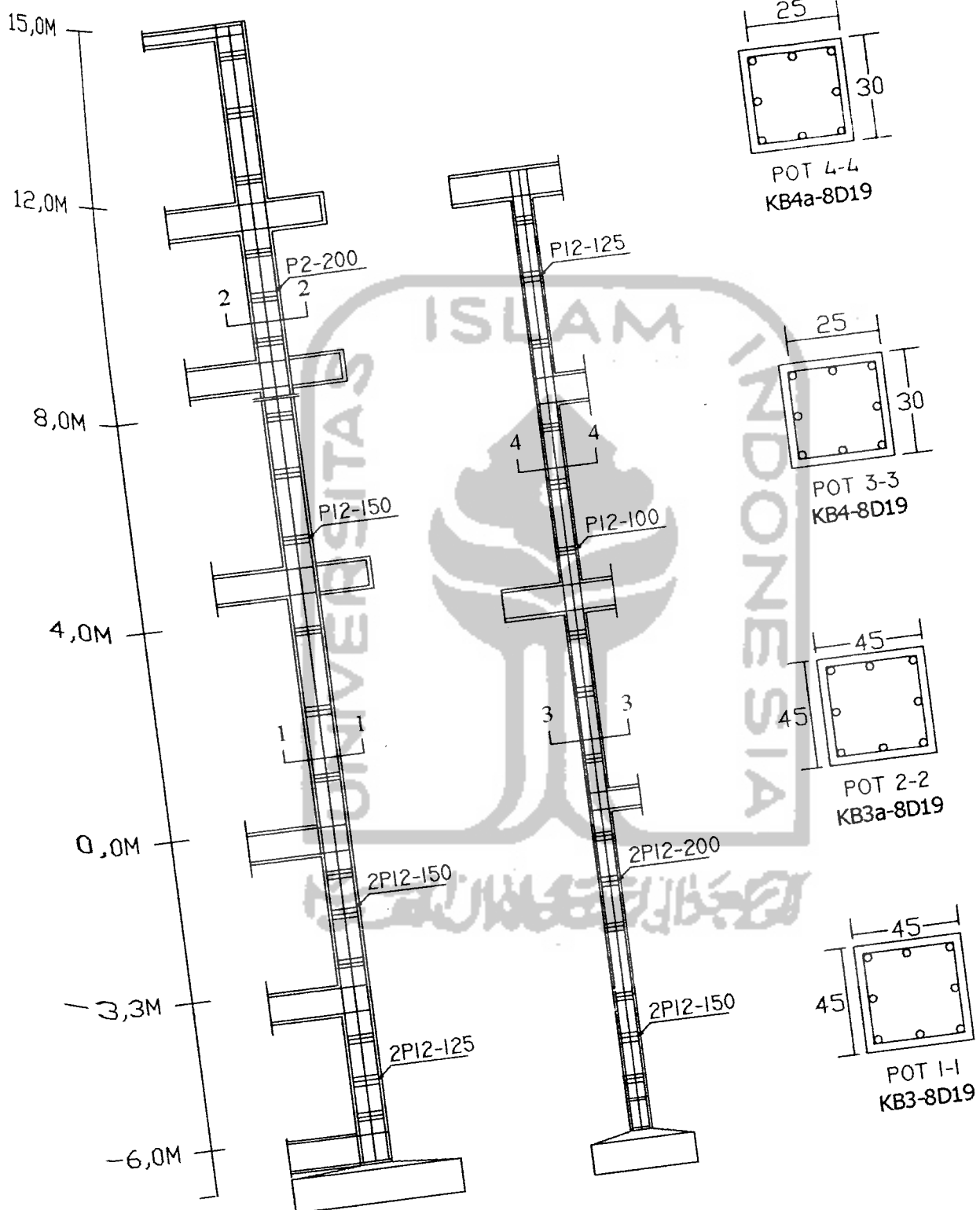
Detail Kolom KB1,KB2,KB3 dan KB1a,KB2a



Detail Kolom KB1,KB2,KB3 dan KB1a,KB2a



Detail Kolom KB5,KB5a, dan KB6,KB6a



Detail Kolom KB3,KB3a dan KB4,KB4a