MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

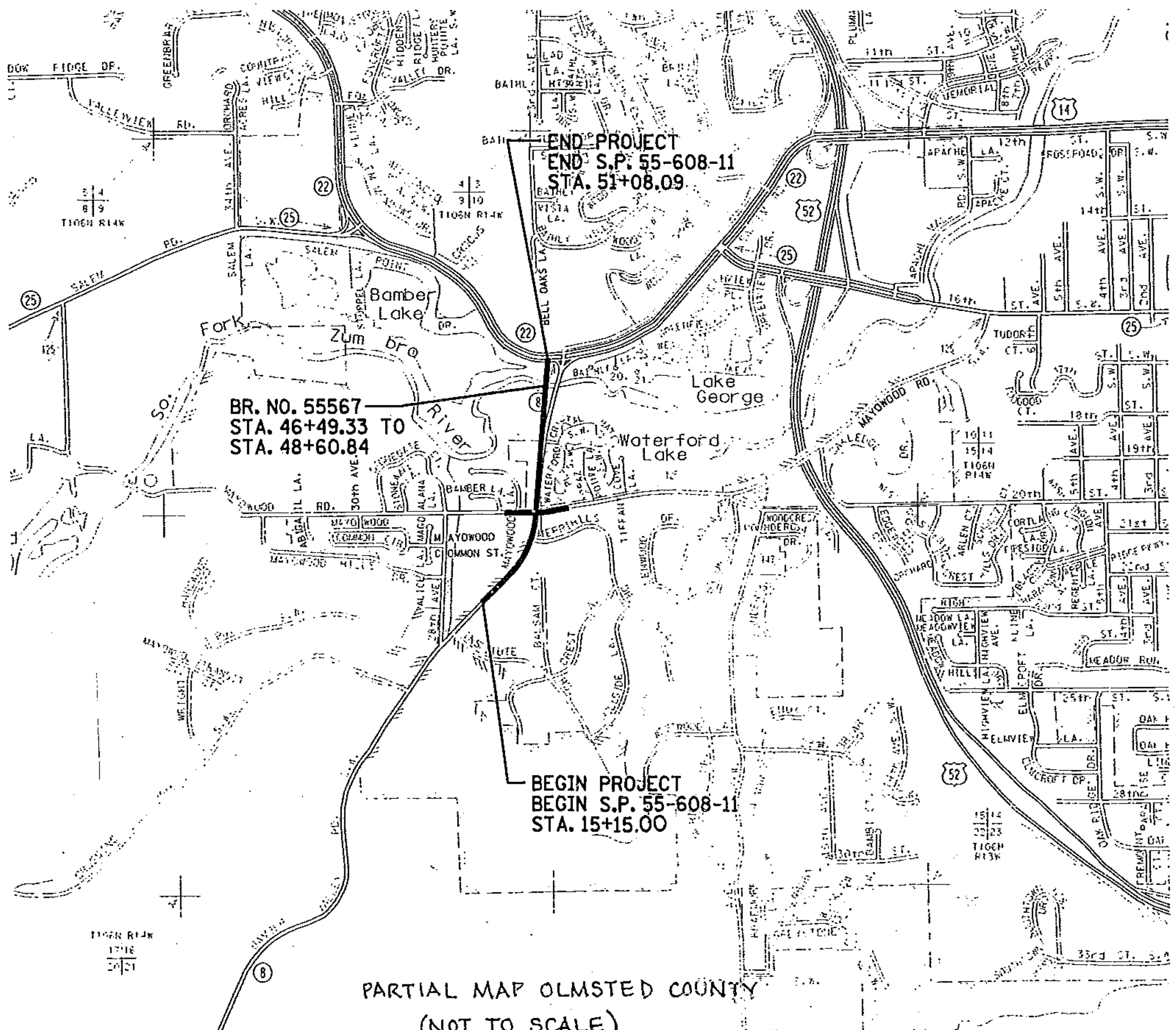
CONSTRUCTION PLAN FOR BRIDGE NO. 55567, GRADING, AGGREGATE BASE, CONCRETE SURFACE CONCRETE CURB & GUTTER, STORM SEWER AND BIT. AND CONC. TRAILS

LOCATED ON C.S.A.H. 8 BETWEEN 630' N. OF INSTITUTE RD. AND THE INTERSECTION OF C.S.A.H. 22 (GEOGRAPHIC DESCRIPTION)

FROM APPROX. 1215' S. AND 815' W. OF THE S. SEC. COR. OF 9 & 10 T106N-R14W TO APPROX. 545' S. AND 190' W. OF THE ¼ COR. OF SEC. 9 & 10 T106N-R14W (LEGAL DESCRIPTION)

S.P. NO. 55-608-11

GROSS LENGTH	3593.09	FEET	0.681	MILES
BRIDGE-LENGTH	211.51	FEET	0.040	MILES
EXCEPTIONS-LENGTH		FEET		MILES
NET LENGTH	3593.09	FEET	0.681	MILES



PARTIAL MAP OLMSTED COUNTY
(NOT TO SCALE)

PLAN SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER / ORCHARD / BRUSH / NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (HIGHWAY OVER)
UNDERPASS (HIGHWAY UNDER)
BRIDGE
BUILDING (ONE STORY FRAME) - FRAME, C - CONCRETE, S - STONE, T - TILE, B - BRICK, ST - STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY
SLOPE EASEMENT

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLE
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRICAL CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRICAL MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRICAL CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY OR SEWER)
SEWER MANHOLE

EROSION CONTROL SYMBOLS

TEMPORARY SILT FENCE
RIP RAP DITCH CHECKS

SCALES

PLAN 0 — 50'
PROFILE 0 — 50' HORIZ. 0 — 5' VERT.
CROSS SECTIONS 0 — 10'
INDEX MAP 0 — 1320'

MINN. PROJ. NO. BRSTP 5501 (206)

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE MAY 2, 1994, SUPPLEMENTAL SPECIFICATIONS SHALL GOVERN.

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SHEET NO. 71-100	CROSS SECTIONS
SHEET NO. 1-37	BRIDGE NO. 55567

THIS PLAN CONTAINS 138 SHEETS.

DESIGN DESIGNATION

C.S.A.H. 8

PRESENT ADT 200[illegible] 5,700
PROJ. ADT 202[illegible] [illegible]
DESIGN LOAD 10 ton
FUNCTIONAL CLASSIFICATION [illegible] ARTERIAL
NO. OF TRAFFIC LANES [illegible]
NO. OF PARKING LANES [illegible]
SHOULDER WIDTH 8'
DESIGN SPEED 45 mph
R VALUE 20
20 YEAR DESIGN LANE ESALS [illegible]
BASED ON STOPPING SIGHT DISTANCE
HEIGHT OF EYE: 3.5'
HEIGHT OF OBJECT: 0.5'
DESIGN SPEED NOT ACHIEVED AT:
STA.____ TO STA.____ mph ____
STA.____ TO STA.____ mph ____
STA.____ TO STA.____ mph ____

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 2/26/01 LIC. NO. 26990 ENGR. [signature] TKDA

APPROVED [signature] 3/1 2001 — OLMSTED COUNTY ENGINEER

APPROVED [signature] 3/2 2001 — CITY OF ROCHESTER ENGINEER

RECOMMENDED FOR APPROVAL [signature] 4/2/01 — ASST. DISTRICT STATE AID ENGINEER

REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

RECOMMENDED FOR APPROVAL [signature] 7/16 2001 — STATE BRIDGE ENGINEER

APPROVED FOR STATE AND FEDERAL FUNDING [signature] 8/29/01 — FOR STATE AID ENGINEER

40

ESTIMATED QUANTITIES

TAB. LETTER	ITEM NUMBER	ITEM	NOTE NO	UNIT	100% COUNTY C.S.A.H.	100% CITY LOCAL	STORM SEWER	TOTAL ESTIMATED QUANTITY	
	2021.501	MOBILIZATION		LUMP SUM	0.45	0.04	0.09	0.58	
	2031.501	FIELD OFFICE TYPE D		EACH	0.45	0.04	0.09	0.58	
A	2101.511	CLEARING AND GRUBBING	1	LUMP SUM	1			1	
B	2104.501	REMOVE PIPE CULVERTS		LIN. FT.	475			475	
C	2104.509	REMOVE CATCH BASIN		EACH	3			3	
C	2104.501	REMOVE SEWER PIPE (STORM)		LIN. FT.	39			39	
D	2104.501	REMOVE CURB AND GUTTER		LIN. FT.	1553			1553	
E	2104.501	REMOVE CHAIN LINK FENCE		LIN. FT.	38			38	
E	2104.501	REMOVE METAL PIPE RAILING		LIN. FT.	80			80	
D	2104.505	REMOVE CONCRETE MEDIAN		SQ. YD.	102			102	
D	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT		SQ. YD.	9			9	
D	2104.505	REMOVE CONCRETE PAVEMENT		SQ. YD.	754			754	
F	2104.505	REMOVE BITUMINOUS PAVEMENT	2	SQ. YD.	20366			20366	
D	2104.509	REMOVE CONCRETE STRUCTURE	3	EACH	1			1	
B,C	2104.509	REMOVE PIPE APRON		EACH	1			1	
G	2104.509	REMOVE MISCELLANEOUS STRUCTURES	4	EACH	1			1	
B	2104.501	REMOVE CONCRETE BOX CULVERT		LIN. FT.	33			33	
C	2104.509	REMOVE LIGHT BASE		EACH	5			5	
H	2104.511	SAWING CONCRETE PAVEMENT		LIN. FT.	83			83	
H	2104.513	SAWING BITUMINOUS PAVEMENT		LIN. FT.	644			644	
E	2104.521	SALVAGE CHAIN LINK FENCE		LIN. FT.	35			35	
C	2104.523	SALVAGE HYDRANT		EACH	2			2	
E	2104.523	SALVAGE VEHICULAR GATE		EACH	1			1	
G	2104.602	RELOCATE FLAGPOLE		EACH	1			1	
R	2105.515	UNCLASSIFIED EXCAVATION (EV)	5	CU. YD.	45162			45162	(P)
R	2105.522	SELECT GRANULAR BORROW (CV)		CU. YD.	12523			12523	(P)
R	2105.522	SELECT GRANULAR BORROW MOD 10% (CV)		CU. YD.	1385			1385	(P)
R	2105.523	COMMON BORROW (LV)		CU. YD.	3669			3669	
I	2118.501	AGGREGATE SURFACING CLASS 2		TON	58			58	(P)
I	2211.501	AGGREGATE BASE CLASS 5		TON	16173	1723		17896	(P)
I	2221.501	AGGREGATE SHOULDERING CLASS 2		TON	255			255	(P)
O	2301.502	CONCRETE PAVEMENT STANDARD WIDTH 8"		SQ. YD.	14923			14923	
O	2301.502	CONCRETE PAVEMENT STANDARD WIDTH 9"		SQ. YD.	997			997	
O	2301.503	CONCRETE PAVEMENT IRREGULAR WIDTH 8"		SQ. YD.	1596			1596	
O	2301.503	CONCRETE PAVEMENT IRREGULAR WIDTH 9"		SQ. YD.	346			346	
O	2301.511	STRUCTURAL CONCRETE		CU. YD.	4007			4007	
O	2301.529	REINFORCEMENT BARS (EPOXY COATED)		POUND	5434			5434	
O	2301.538	DOWEL BAR		EACH	17915			17915	
	2301.551	BRIDGE APPROACH PANELS	6	EACH	2			2	
O	2301.604	PERMANENT TERMINAL HEADERS		LIN. FT.	70			70	
O	2301.610	NO 4 REINF TIE BAR (EPOXY COATED)		EACH	7248			7248	
O	2301.610	DRILL & GROUT REINFORCEMENT BAR		EACH	680			680	
I	2350.609	TYPE MV 4 WEARING COURSE MIXTURE		TON	1071			1071	
I	2350.609	TYPE MV 4 NON WEARING COURSE MIXTURE		TON	2154			2154	
I	2350.609	TYPE LV 4 WEARING COURSE MIXTURE		TON	453	799		1252	
	2442.501	REMOVE OLD BRIDGE		LUMP SUM	1			1	
I	2451.507	GRANULAR BEDDING		CU. YD.	141			141	
J	2501.511	12" CS PIPE CULVERT		LIN. FT.	108			108	
J	2501.511	15" CS PIPE CULVERT		LIN. FT.	242			242	
J	2501.511	18" CS PIPE CULVERT		LIN. FT.	65			65	
J	2501.511	15" RC PIPE CULVERT		LIN. FT.	41			41	
J	2501.515	12" GS PIPE APRON		EACH	8			8	
J	2501.515	15" GS PIPE APRON		EACH	6			6	
J	2501.515	18" GS PIPE APRON		EACH	3			3	
J	2501.515	15" RC PIPE APRON		EACH	2			2	
K	2501.515	30" RC PIPE APRON		EACH			1	1	
K	2501.515	33" RC PIPE APRON		EACH			1	1	
K	2503.541	12" RC PIPE SEWER DESIGN 3006	13	LIN. FT.			894	894	
K	2503.541	15" RC PIPE SEWER DESIGN 3006	13	LIN. FT.			800	800	
K	2503.541	18" RC PIPE SEWER DESIGN 3006	13	LIN. FT.			424	424	
K	2503.541	21" RC PIPE SEWER DESIGN 3006	13	LIN. FT.			172	172	

NOTES:

1. LIMITS OF CLEARING AND GRUBBING SHALL BE STAKED IN THE FIELD, TREES FOR REMOVAL SHALL BE DESIGNATED BY THE ENGINEER.
2. INCLUDES C.S.A.H. 8, DRIVEWAYS, MAYOWOOD ROAD, AND C.S.A.H. 22 BITUMINOUS REMOVAL. TRAIL REMOVAL PAID FOR AS UNCLASSIFIED EXCAVATION.
3. REMOVAL OF CONCRETE WALL APPROXIMATELY 25' LONG AND 4' HIGH.
4. REMOVAL OF FOUNTAIN.
5. INCLUDES SUBGRADE TREATMENT, TRAIL REMOVAL, POND EXCAVATION, AND TOPSOIL STRIPPING (SEE SHEET 29 FOR TOPSOIL STRIPPING). CONTRACTOR SHALL SALVAGE TOPSOIL AND USE AS SHOWN ON SHEET 29.
6. INCLUDES CURB AND GUTTER AND CONCRETE WALK WITHIN THE APPROACH PANEL. SEE DETAIL ON SHEET 30.
13. ALL RC PIPE SEWER IS CL II UNLESS OTHERWISE NOTED.

(P) DENOTES PLAN QUANTITY

AS-BUILT

FEB 1 8 2005

ENGINEERING

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08/27/01
11:12:58 AM

CERTIFIED BY Brant O. Paulson LIC. NO. 26880 8/27 2001
LICENSED PROFESSIONAL ENGINEER

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | ESTIMATED QUANTITIES | SHEET 2 OF 100 SHEETS

ESTIMATED QUANTITIES

TAB. LETTER	ITEM NUMBER	ITEM	NOTE NO	UNIT	100% COUNTY C S.A.H	100% CITY LOCAL	STORM SEWER	TOTAL ESTIMATED QUANTITY	
K	2503.541	21" RC PIPE SEWER DESIGN 3006 CL III		LIN. FT.			86	86	
K	2503.541	30" RC PIPE SEWER DESIGN 3006	13	LIN. FT.			621	621	
K	2503.541	30" RC PIPE SEWER DESIGN 3006 CL III		LIN. FT.			300	300	
K	2503.541	33" RC PIPE SEWER DESIGN 3006	13	LIN. FT.			385	385	
K	2503.541	33" RC PIPE SEWER DESIGN 3006 CL III		LIN. FT.			525	525	
C	2504.602	INSTALL HYDRANT & VALVE		EACH	1			1	
C	2504.602	ADJUST VALVE BOX		EACH	8			8	
C	2504.602	ADJUST HYDRANT AND VALVE BOX		EACH	2			2	
S	2504.602	8" PIPE PLUG		EACH		1		1	
S	2504.602	6" PIPE PLUG		EACH		1		1	
S	2504.602	0.75" CORPORATION STOP		EACH		1		1	
	2504.602	VALVE OPERATOR EXTENSION	7	EACH		8		8	
S	2504.602	8"X8" WET TAP		EACH		1		1	
S	2504.603	6" WATER MAIN-DUCT IRON CL 52		LIN. FT.		10		10	
S	2504.603	8" WATER MAIN-DUCT IRON CL 52		LIN. FT.		120		120	
K	2506.502	CONST DRAINAGE STRUCTURE DESIGN A OR F		EACH			10	10	
K	2506.502	CONST DRAINAGE STRUCTURE DESIGN C OR G		EACH			41	41	
K	2506.502	CONST DRAINAGE STRUCTURE DES 54-4020		EACH			9	9	
K	2506.502	CONST DRAINAGE STRUCTURE DES 60-4020		EACH			3	3	
K	2506.502	CONST DRAINAGE STRUCTURE DES 72-4020		EACH			2	2	
K	2506.516	CASTING ASSEMBLY		EACH			65	65	
C	2506.602	RECONSTRUCT MANHOLES		EACH	8			8	
N	2511.501	RANDOM RIPRAP CLASS III	8	CU. YD.	23			23	
N	2511.501	RANDOM RIPRAP CLASS IV	8	CU. YD.	181			181	
I	2521.501	3" CONCRETE WALK		SQ. FT.	21832			21832	
I	2521.501	4" CONCRETE WALK	9	SQ. FT.	153	1323		1476	
I	2521.501	6" CONCRETE WALK	10	SQ. FT.	469			469	
I	2531.501	CONCRETE CURB & GUTTER DESIGN B424		LIN. FT.	1425	10838		12263	
I	2531.507	6" CONCRETE DRIVEWAY PAVEMENT		SQ. YD.	16			16	
	2533.603	RELOCATE CONCRETE MEDIAN BARRIER		LIN. FT.	160			160	
P	2533.603	CONCRETE MEDIAN BARRIER DESIGN 8337		LIN. FT.	915			915	
P	2554.604	IMPACT ATTENUATOR		ASSEMBLY	2			2	
	2554.604	RELOCATE IMPACT ATTENUATOR		ASSEMBLY	1			1	
E	2557.602	INSTALL VEHICULAR GATE		EACH	1			1	
E	2557.603	INSTALL CHAIN LINK FENCE		LF	35			35	
Q	2563.601	TRAFFIC CONTROL		LUMP SUM	0.45	0.04	0.09	0.58	
P	2563.603	TUBE DELINEATOR		EACH	73			73	
P	2563.603	ONE-WAY RAISED PAVT MARKER,TEMP		EACH	207			207	
P	2563.603	TWO-WAY RAISED PAVT MARKER,TEMP		EACH	496			496	
L	2564.602	PAVEMENT MESSAGE (LEFT ARROW) EPOXY		EACH	10			10	
L	2564.602	PAVEMENT MESSAGE (RIGHT ARROW) EPOXY		EACH	8			8	
L	2564.602	PAVEMENT MESSAGE (RIGHT-THRU ARROW) EPOXY		EACH	3			3	
P	2564.603	4" SOLID LINE WHITE-PAINT	11	LIN. FT.	3722			3722	
P	2564.603	4" DOUBLE SOLID LINE YELLOW-PAINT	11	LIN. FT.	1838			1838	
L	2564.603	4" SOLID LINE WHITE-EPOXY		LIN. FT.	11705			11705	
L	2564.603	24" SOLID LINE WHITE-EPOXY		LIN. FT.	224			224	
L	2564.603	4" BROKEN LINE WHITE-EPOXY		LIN. FT.	1070			1070	
L	2564.603	4" SOLID LINE YELLOW-EPOXY		LIN. FT.	4849			4849	
L	2564.603	4" DOUBLE SOLID LINE YELLOW-EPOXY		LIN. FT.	2444			2444	
L	2564.603	24" SOLID LINE YELLOW-EPOXY		LIN. FT.	184			184	
L	2564.604	ZEBRA CROSSWALK WHITE-EPOXY		SQ. FT.	1386			1386	
M	2573.603	SILT FENCE, TYPE MACHINE SLICED	12	LIN. FT.	8456			8456	
M	2573.504	SANDBAG BARRIER	12	SQ. FT.	1850			1850	
M	2575.501	SEEDING		ACRE	3.57			3.57	(P)
M	2575.502	SEED MIXTURE 500		POUND	181			181	
M	2575.502	SEED MIXTURE 1100		POUND	221			221	
M	2575.505	SODDING TYPE LAWN		SQ. YD.	16714			16714	
M	2575.511	MULCH MATERIAL TYPE 1		TON	7.14			7.14	
M	2575.519	DISK ANCHORING		ACRE	3.57			3.57	(P)
M	2575.532	COMMERCIAL FERT ANALYSIS 12-12-12		POUND	708			708	
M	2575.608	SEED MIXTURE 15A (MOD)		POUND	20			20	
M	2575.608	SEED MIXTURE 25A (MOD)		POUND	5			5	

NOTES:

7 INSTALLATION OF VALVE OPERATOR EXTENSIONS AS DIRECTED BY THE ENGINEER.

8. GRANULAR FILTER OR GEOTEXTILE FILTER SHALL BE INCIDENTAL.

9. PEDESTRIAN CURB RAMPS PAID FOR AS 4" CONCRETE WALK.

10. MEDIAN NOSES PAID FOR AS 6" CONCRETE WALK.

11 TO BE USED AS TEMPORARY STRIPING, SEE SHEETS 15 TO 20.

12. SEE DETAILS ON SHEETS 64 TO 67, ADDITIONAL INSTALLATIONS AS DIRECTED BY THE ENGINEER.

13. ALL RC PIPE SEWER IS CL II UNLESS OTHERWISE NOTED.

(P) DENOTES PLAN QUANTITY

AS-BUILT

FEB 18 2005

ENGINEERING

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08/27/01
11:21:29 AM

CERTIFIED BY Brent O. Peterson LICENSED PROFESSIONAL ENGINEER LIC. NO. 26880 8/27 2001

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | ESTIMATED QUANTITIES | SHEET 3 OF 100 SHEETS

EARTHWORK R

	EXCAVATION				EMBANKMENT				BORROW		
	UNCLASSIFIED		TOPSOIL (2)		COMMON	SELECT GRAN.	SELECT GRAN	TOPSOIL	COMMON	SELECT GRAN.	SELECT GRAN.
	EXCAV. VOL. (EV)	COMP. VOL. (CV) (1)	EXCAV. VOL. (EV)	COMP. VOL. (CV) (1) (3)	COMP. VOL. (CV)	COMP. VOL. (CV)	MOD. 10% COMP. VOL. (CV)	COMP. VOL. (CV)	LOOSE VOL. (LV) (1)	COMP. VOL. (CV)	MOD. 10% COMP. VOL. (CV)
	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY
C.S.A.H. 8	25549	19653	6190	4762	35985	10228		1400			
BRIDGE NO. 55567 (4)	1155	888			4470	923	1385	425			
MAYOWOOD ROAD	3161	2432	948	729	950	1215		131			
C.S.A.H. 22	396	305	10	8	103	157		62			
TRAILS	3526	2712	1611	1239	2141			255			
PONDS	11375	8750	2426	1866	36			208			
TOTALS	45162	34740	11185	8604	43685	12523	1385	2481	3669	12523	1385

NOTES
(1) 130% SHRINKAGE FACTOR IS APPLIED.
(2) TOPSOIL EXCAVATION IS INCLUDED IN UNCLASSIFIED EXCAVATION.
(3) EXCESS TOPSOIL SHOULD BE USED IN FILL AREAS OUTSIDE A 1:1 SLOPE DRAWN FROM THE GRADING P.I. SEE SHEET 29 FOR EARTHWORK DETAILS.
(4) INCLUDES EARTHWORK QUANTITIES FROM 46+00 TO SOUTH BRIDGE ABUTMENT AND FROM THE NORTH BRIDGE ABUTMENT TO 49+00. DOES NOT INCLUDE STRUCTURE EXCAVATION.

THE FOLLOWING STANDARD PLATES APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT

STANDARD PLATES

PLATE NO.	DESCRIPTION
1070L	REINFORCED PANEL OVER CULVERTS
1103J	TYPICAL DOWEL BAR ASSEMBLY
1141D	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
1150 Q	CONSTRUCTION OF HEADER JOINTS
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3007C	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3040F	CORRUGATED METAL PIPE CULVERT
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123J	METAL APRON FOR CS PIPE
3124B	METAL APRON CONNECTION
3131B	PRECAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS
3133C	RIPRAP AT RCP OUTLETS
3145E	CONCRETE PIPE TIES
3221C	CORRUGATED STEEL PIPE COUPLING BAND
4000J	MANHOLE OR CATCH BASIN (MASONRY, FIELD CONSTRUCTED)
4002F	MANHOLE OR CATCH BASIN (MASONRY, FIELD CONSTRUCTED)
4005L	MANHOLE OR CATCH BASIN
4006L	MANHOLE OR CATCH BASIN
4010H	CONCRETE SHORT CONE AND ADJUSTING RING
4011E	PRECAST CONCRETE BASE
4020H	MANHOLE OR CATCH BASIN COVER
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4110F	COVER CASTING FOR MANHOLE
4125D	CATCH BASIN FRAME CASTING (FOR SQUARE GRATE)
4134A	CURB BOX CASTING FOR CATCH BASIN (FOR DESIGN B CURBS)
4140D	SPECIAL GRATE CASTINGS FOR CATCH BASIN
4154B	CATCH BASIN GRATE CASTING
4180J	MANHOLE OR CATCH BASIN STEP
7036D	PEDESTRIAN CURB RAMP
7100G	CONCRETE CURB AND GUTTER
7111J	INSTALLATION OF CATCH BASIN CASTINGS
7113A	CONCRETE APPROACH NOSE DETAIL
8000I	STANDARD BARRICADES
8337A	TEMPORARY PORTABLE PRECAST CONCRETE BARRIER
9102D	TURF ESTABLISHMENT AREAS

BASIS OF PLANNED QUANTITIES

AGGREGATE SHOULDERING CLASS 2	140 LBS / CUBIC FOOT
AGGREGATE SURFACING CLASS 2	140 LBS / CUBIC FOOT
AGGREGATE BASE (CV) CLASS 5	140 LBS / CUBIC FOOT
BITUMINOUS MIXTURE	110 LBS / SQUARE YARD / 1 INCH DEPTH
SEED MIXTURE 500	50 LBS / ACRE
SEED MIXTURE 1100	80 LBS / ACRE
SEED MIXTURE NATIVE GRASS 25A MOD.	30 LBS / ACRE
SEED MIXTURE NATIVE GRASS 15A MOD.	30 LBS / ACRE
MULCH MATERIAL TYPE 1	2 TONS / ACRE
COMMERCIAL FERTILIZER	200 LBS / ACRE

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B	5	CULVERT REMOVAL
C	6	INPLACE UTILITIES
D	5	CONCRETE REMOVALS
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TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | QUANTITY TABULATIONS | SHEET 4 OF 100 SHEETS

CLEARING AND GRUBBING A

STATION	OFFSET	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
C.S.A.H. 8					
16+41 TO 17+53	40' LT TO 50' LT		0.05		0.05
18+40 TO 20+47	43' LT TO 67' LT		0.05		0.05
20+70	62' LT	1		1	
20+95	61' LT	1		1	
21+25 TO 24+00	52' LT OT 79' LT		0.05		0.05
22+58	46' RT	1		1	
22+66	48' RT	1		1	
23+35	58' RT	1		1	
23+57	55' RT	1		1	
23+81	53' RT	1		1	
24+00 TO 24+33	53' LT TO 79' LT		0.05		0.05
24+03	51' RT	1		1	
24+26	49' RT	1		1	
24+49	48' RT	1		1	
24+73	47' RT	1		1	
24+99	61' LT	1		1	
25+24	45' RT	1		1	
25+34	46' RT	1		1	
25+43	62' LT	1		1	
25+66	70' LT	1		1	
25+95	69' LT	1		1	
26+23 TO 29+37	34' RT TO 82' RT		0.30		0.30
30+53	42' RT	1		1	
30+84	47' RT	1		1	
31+00	39' RT	1		1	
31+13	40' RT	1		1	
31+36	39' RT	1		1	
31+53	43' RT	1		1	
31+71	44' RT	1		1	
32+03	49' RT	1		1	
32+50	50' RT	1		1	
32+72	48' RT	1		1	
42+53	50' LT	1		1	
42+83	45' LT	1		1	

NOTE:
CLEARING AND GRUBBING IS A LUMP SUM ITEM,
QUANTITIES SHOWN ARE APPROXIMATE AND FOR INFORMATION ONLY.

CLEARING AND GRUBBING A

STATION	OFFSET	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
42+84 TO 43+33	0' TO 33' LT		0.05		0.05
42+88	107' LT	1		1	
43+41	59' LT	1		1	
43+60	153' LT	1		1	
43+64	119' LT	1		1	
43+82	63' LT	1		1	
43+89	20' LT	1		1	
43+93	44' LT	1		1	
43+61 TO 45+38	125' LT TO 338' LT		0.35		0.35
44+12 TO 46+28	50' LT TO 45' RT		0.35		0.35
44+29 TO 45+43	85' LT TO 113' LT		0.05		0.05
45+03 TO 47+18	94' LT TO 320' LT		0.75		0.75
45+71	65' LT	1		1	
46+25	54' LT	1		1	
46+44 TO 46+90	59' LT TO 37' RT		0.10		0.10
48+05	10' RT	1		1	
48+30	18' LT	1		1	
48+44	27' LT	1		1	
48+68	12' RT	1		1	
48+48 TO 50+50	102' LT TO 154' LT		0.10		0.10
48+54 TO 49+04	37' LT TO 59' LT		0.05		0.05
49+08	43' LT	1		1	
49+22	39' LT	1		1	
49+22	110'LT	1		1	
49+47	60' LT	1		1	
MAYOWOOD ROAD					
7+77	47' RT	1		1	
C.S.A.H. 22					
155+57	52' LT	1		1	
156+03	51' LT	1		1	
156+81	52' LT	1		1	
157+18	52' LT	1		1	
157+56	53' LT	1		1	
TOTALS		52	2.30	52	2.30

CULVERT REMOVAL B

STATION	OFFSET	REMARKS	REMOVE PIPE CULVERT (1)	REMOVE BOX CULVERT
			LF	LF
C.S.A.H. 8				
24+49	LT	15" CMP	11	
25+11	RT	15" CMP	26	
25+91	RT	18" CMP	46	
29+26	C/L	24" CMP	60	
30+43	LT	24" CMP	16 ~~23~~	
44+39	LT	96"x42" BOX CULV.		33
~~44+62~~	~~RT~~	~~15"CMP~~	~~90~~	
50+97	RT	15" CMP	52	
MAYOWOOD ROAD				
6+78	C/L	15" CMP	40	
7+25	RT	15" CMP	42	
9+46	C/L	24" CMP	50	
12+46	RT	15" CMP	35	
TOTALS			~~475~~	33

C.A. 125 12+45 Lt. 15" CMP 32

NOTE:
(1) INCLUDES REMOVAL OF APRONS, IF ANY

SAWCUTS H

STATION	OFFSET	BITUMINOUS	CONCRETE
		LF	LF
C.S.A.H. 8			
15+15	0	36	
16+22	25' RT	20	
22+42	64' RT	13	
24+57	76' LT	7	
24+97	62' RT	13	
31+15	65' LT	7	
39+46.4	90.4' RT	11	
39+80.1	93.2' RT	11	
42+81	97' RT	7	
46+63	253' RT	19	
46+78	175' RT	14	
46+83	167' RT	10	
48+45	204' LT	7	
MERRIHILLS DRIVE			
10+73.5	0	19	
MAYOWOOD ROAD			
5+81	0	29	
7+24	45' RT	30	
7+40.4	50' LT	28	
8+16	64' RT	47	
9+16	43' LT	7	
11+24	34' LT	8	
13+50	38.5' LT	9	
14+55	0	24	
15+00	36' LT	9	
C.S.A.H. 22			
150+52	45' LT	160	
152+52	45' LT	80	
152+72	5' RT		12
154+00	16' LT		20
155+52	61' LT	7	
155+71	5' RT		12
157+95	30' LT		20
158+32	67' LT		19
158+32	41' LT	12	
TOTALS		644	83

CONCRETE REMOVAL D

STATION	OFFSET	REMOVE CURB AND GUTTER	REMOVE CONC. MEDIAN	REMOVE CONC PVMT	REMOVE CONC. DRIVE	REMOVE CONC. STRUCT.
		LF	SY	SY	SY	EACH
C.S.A.H. 8						
39+39 TO 39+88	RT	180				
46+10	LT					1
MAYOWOOD ROAD						
7+25	LT	6				
7+55	LT	3				
C.S.A.H. 22						
148+36 TO 152+19	RT	389				
148+36 TO 152+87	RT			455		
152+05 TO 152+81	LT			126		
152+05	LT		4			
152+54 TO 152+87	RT	41				
152+82 TO 155+65	RT & LT	574				
152+81	C/L		4			
152+91 TO 153+03	RT & LT		18			
153+62 TO 155+70	RT			161		
154+01	LT			6		
154+46 TO 155+63	LT & RT		76			
155+01 TO 158+31	LT	360				
157+95	LT			6		
158+20 TO 158+28	LT				9	
TOTALS		1553	102	754	9	1

BITUMINOUS REMOVAL F

STATION	OFFSET	REMOVE BIT PVMT
		SY
C.S.A.H. 8		
15+15 TO 24+00	RT & LT	3675
24+00 TO 38+00	RT & LT	7101
38+00 TO 46+64	RT & LT	4821
48+42 TO 50+50	RT	1168
50+50 TO 51+70	RT	784
MAYOWOOD ROAD		
5+81 TO 9+25	RT & LT	1340
9+14 TO 9+25	LT	8
10+50 TO 14+55	RT & LT	1103
10+50 TO 11+24	LT	67
13+50 TO 15+00	LT	144
C.S.A.H. 22		
155+70 TO 158+32	LT	155
TOTALS		20366

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TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | QUANTITY TABULATIONS | SHEET 5 OF 100 SHEETS

INPLACE UTILITIES C

STATION	OFFSET	INPLACE ITEM	INPLACE TOP OF CASTING	PROPOSED TOP OF CASTING	RECONST. MANHOLE	REMOVE CATCH BASIN	REMOVE SEWER PIPE	REMOVE APRON	REMOVE LIGHT BASE	SALVAGE HYDRANT (1)	INSTALL HYDRANT & VALVE (2)	ADJUST HYDRANT AND VALVE	ADJUST VALVE BOX	REMARKS
					EACH	EACH	LF	EACH	EACH	EACH	EACH	EACH	EACH	
C.S.A.H. 8														
22+52	56' LT.	HYDRANT										1		
22+52	56' LT.	VALVE											1	
25+57	63' LT.	HYDRANT										1		
25+57	63' LT.	VALVE											1	
29+70	69' LT.	SANITARY MH	1026.25	1029.06	1									
39+85	46' LT.	VALVE											1	
39+96	53' RT.	LIGHT POLE							1					
41+58	29' LT	HYDRANT								1				
46+02	91' LT	WATERMAIN MH	1011.40	1016.5	1									
48+67	181' RT.	LIGHT POLE							1					
50+41	109' RT.	SANITARY MH	1019.08	1015.75	1									
50+51	7' RT.	STORM PIPE					15	1						
50+35	159' RT.	LIGHT POLE							1					
50+57	236' RT.	LIGHT POLE							1					
51+50	314' RT.	LIGHT POLE							1					
MAYOWOOD ROAD														
7+22	18' RT.	VALVE											1	
7+24	24' RT.	SANITARY MH	1027.73	1026.9	1									
9+04	30' RT.	HYDRANT								1	1			
9+04	30' RT.	VALVE											1	
9+17	24' RT.	VALVE											1	
9+23	28' RT.	VALVE											1	
10+51	36' RT.	SANITARY MH	1029.40	1032.05	1									
13+47	29' RT.	SANITARY MH	1027.51	1028.9	1									
C.S.A.H. 22														
149+00	44' RT.	CB				1	9							
152+21	49' RT.	CB				1	15							
154+00	10' LT.	CB			1									REMOVE CONE AND CASTING; INSTALL CONC. COVER
154+01	6' RT.	CB			1									REMOVE CONE AND CASTING; INSTALL CONC. COVER
154+88	75' LT.	VALVE											1	
157+95	36' LT.	CB				1								
TOTALS					8	3	39	1	5	2	1	2	8	

NOTES:

(1) SALVAGING VALVE AND BOX ARE INCIDENTAL TO SALVAGING HYDRANT

(2) PROPOSED HYDRANT LOCATION: 9+04, 38' RT. INSTALLATION OF NEW GASKETS AND RESTRAINTS ARE INCIDENTAL TO THE INSTALLATION OF THE HYDRANT

FENCING E

STATION	OFFSET	REMOVE CHAIN LINK FENCE	REMOVE METAL PIPE RAILING	SALVAGE AND INSTALL CHAIN LINK FENCE	SALVAGE AND INSTALL VEHICULAR GATE
		LF	LF	LF	EA.
C.S.A.H. 8					
24+57 TO 24+68	58' LT. TO 92' LT.	38			
42+64	16' RT.				
46+92	104' RT.		80		1
MAYOWOOD ROAD					
7+05	34' RT.			35	
TOTALS		38	80	35	1

MISCELANEOUS REMOVALS G

STATION	OFFSET	REMOVE MISC STRUCTURE	RELOCATE FLAGPOLE	REMARKS
		EACH	EACH	
C.S.A.H. 8				
39+65	74' RT.	1		
46+92	104' RT			
MAYOWOOD ROAD				
7+82	79' RT.		1	PROPOSED LOCATION AS DIRECTED BY THE ENGINEER
TOTALS		1	1	

WATERMAIN S

STATION	OFFSET	6" DIP CL 52 WM	8" DIP CL 52 WM	8"x8" WET TAP (1)	6" PIPE PLUG	8" PIPE PLUG (2)	0.75" CORP STOP
		LF	LF	EACH	EACH	EACH	EACH
C.S.A.H. 8							
25+97	49' LT. TO 68' RT.		120				
25+97	49' LT.			1			
41+51	68' LT.				1		
MERRIHILLS DRIVE							
10+70	11' LT.					1	1
MAYOWOOD ROAD							
9+04	38' RT.	10					
TOTALS		10	120	1	1	1	1

NOTES:

(1) INSTALLATION OF TAPPING VALVE IS INCIDENTAL TO THE INSTALLATION OF 8"X8" WET TAP

(2) INSTALLATION OF 0.75" TAP IS INCIDENTAL TO THE INSTALLATION OF 8" PLUG.

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OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

QUANTITY TABULATIONS

CONCRETE, BITUMINOUS, AND AGGREGATE CONSTRUCTION I

STATION	LOCATION	BITUMINOUS AREAS						CONCRETE ITEMS							BITUMINOUS ITEMS				AGG. ITEMS				
		FULL DEPTH BIT. PVMT.	BIT. SHLDR	TEMP. CONST	DWY.	PATH		3" CONC. WALK	4" CONC. WALK		6" CONC WALK	6" CONC DWY. PVMT.	B424 CURB AND GUTTER		MV 4 WEAR	MV 4 NON WEAR	LV 4 WEAR		AGG. SHLDR. CL. 2	AGG. SURF CL. 2	AGG BASE CL. 5		GRANULAR BEDDING
						COUNTY	CITY		COUNTY	CITY			COUNTY	CITY			COUNTY	CITY			COUNTY	CITY	
		SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	SY	LF	LF	TON	TON	TON	TON	TON	TON	TON	TON	CY
C.S.A.H. 8																							
15+15 TO 24+00	LT & RT	36639													448	952					2565		
15+15 TO 24+00	LT		6720				419							38			133	8	162		804	18	
15+15 TO 24+00	RT		3864			4075							411				158		93		743		
24+00 TO 38+00	LT & RT	10000		3150				10251			159			2147	161	303					4482		66
24+00 TO 38+00	LT						6407			102				1378				127			386	271	
24+00 TO 38+00	RT	2472				5221	150		153	51			631	792	30	64	104	3			794	7	
38+00 TO 49+00	LT & RT			6636				8033		813	137			1501	81	91					2344	19	51
38+00 TO 49+00	LT						14223							848				282			237	597	
38+00 TO 49+00	RT						9575			102				906				190			254	405	
49+00 TO 50+96	LT & RT							790			33			332							535		5
49+00 TO 50+96	LT						4836			51				206				96			58	204	
49+00 TO 50+96	RT						1325	687		153	38			399				26			112	59	5
MAYOWOOD ROAD																							
5+81 TO 9+25	LT & RT	12832													157	333					898		
5+81 TO 9+25	LT						82							350				2			98	3	
5+81 TO 9+25	RT						1710			51				332				34			93	73	
10+75 TO 14+55	LT & RT	12446													152	323					871		
10+75 TO 14+55	LT						1586							377				31			106	67	
10+75 TO 14+55	RT												383								107		
C.S.A.H. 22																							
148+00 TO 159+00	LT & RT							2071			102			396							111		14
148+00 TO 159+00	LT													386							108		
148+00 TO 159+00	RT													450							126		
DRIVEWAYS																							
16+20	RT				339												7				12		
25+00	RT				398												8				14		
37+80	LT				268												5				9		
39+75	RT	2091													26	54					146		
43+50	LT				266												5			21	9		
44+50	RT	1306													16	34				37	91		
7+40 (MAYOWOOD ROAD)	RT				1282												25				45		
7+75 (SCHOOL PARKING LOT)	RT				416												8				15		
158+30 (C.S.A.H. 22)	LT											16											
TOTALS	FOR INFORMATION ONLY							21832	153	1323	469	16	1425	10838	1071	2154	453	799	255	58	16173	1723	141

NOTE: (1) FOR INFORMATION ONLY

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CULVERTS J

DESCRIPTION	INLET LOCATION (1)			OUTLET LOCATION (1)			FURNISH AND INSTALL (2)											REMARKS
	STA.	OFFSET	ELEV	STA.	OFFSET	ELEV	SLOPE OF PIPE %	12" CSP	15" CSP	18" CSP	15" RCP	CLASS OR GAGE	12" GS PIPE APRON	15" GS PIPE APRON	18" GS PIPE APRON	15" RC PIPE APRON		
								LIN FT	LIN FT	LIN FT	LIN FT		EACH	EACH	EACH	EACH		
C.S.A.H. 8																		
DRIVEWAY CULVERT	40+33.0	79.4' RT	1013.50	40+61.1	81.5' RT	1013.40	0.38			26		16			1			(4)
CULVERT	43+29.6	85.0' LT	1013.20	44+30.3	142.6' LT	1004.00	7.91		~~112~~ 114			16		2				
TRAIL CULVERT	44+35.0	71.6' RT	1020.42	44+30.7	93.9' RT	1019.50	4.09	19				16	2					
DRIVEWAY CULVERT	44+13.5	136.0' RT	1012.85	44+97.5	155.5' RT	1012.75	0.10		~~82~~			16		~~2~~				
TRAIL CULVERT	46+63.5	112.0' RT	1008.50	46+63.0	135.0' RT	1008.10	1.70	20				16	2					
TRAIL CULVERT	46+69.5	152.5' RT	1007.70	46+96.0	153.5' RT	1007.20	1.89	23				16	2					
POND A CULVERT	46+51.0	184.2' LT	1004.00	46+99.8	166.5' LT	1003.20	1.50		48			16		2				
POND B CULVERT	48+71.0	177.2 RT	1010.00	48+42.6	210.8' RT	1009.70	0.68			~~39~~ 40		16			2			
TRAIL CULVERT	48+92.5	118.0' LT	1012.40	46+68.5	76.0' LT	1011.00	2.83	46				16	2					
MAYOWOOD ROAD																		
C/L CULVERT	6+00.0	25.8' RT	1024.92	6+00.0	27.2' LT	1024.55	0.70				~~44~~ 43	III				2		(3)
TOTALS								108	~~240~~ 162	~~65~~ 66	~~44~~ 42		8	~~6~~ 4	3	2		

NOTES: (1) STATION AND OFFSET LOCATIONS ARE TO END OF APRON.
(2) LENGTHS LISTED ARE BARREL LENGTHS (DOES NOT INCLUDE APRON LENGTH).
(3) PIPE TIES SHALL BE REQUIRED FOR ALL RCP JOINTS. SEE MNDOT STANDARD PLATE 3145E.
(4) VERIFY EXISTING INLET INFORMATION IN THE FIELD.

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STRIPING L

LOCATION	LEFT ARROW	RIGHT ARROW	RIGHT-THRU ARROW	4" SOLID WHITE	4" BROKEN WHITE	24" SOLID WHITE	4" SOLID YELLOW	4" DOUBLE SOLID YELLOW	24" SOLID YELLOW	ZEBRA CROSS WALK
	EACH	EACH	EACH	LF	LF	LF	LF	LF	LF	SF
C.S.A.H. 8										
15+15 TO 24+00				1770	140			1207	69	
24+00 TO 38+00	4	5	1	3857	510	159	2148	382	79	864
38+00 TO 50+95	4	3		4651	420	65	2701			522
MAYOWOOD ROAD										
5+81 TO 9+00	1		1	593				325		
11+00 TO 14+55	1		1	834				530	36	
TOTALS	10	8	3	11705	1070	224	4849	2444	184	1386

RIRPRAP N

STATION	OFFSET	RIPRAP CL. III (1) CU YD	RIPRAP CL IV (2) CU YD	REMARKS
C.S.A.H. 8				
44+92.0	136.5' LT	7		
46+40.0	117.0' LT		76	PLACED AT POND B
46+99.8	166.5' LT	4		
48+28.0	154.0' RT		105	PLACED AT POND A OVERFLOW
48+42.6	210.8' RT	6		
50+00.0	111.0' RT	6		
TOTALS		23	181	

NOTES:
(1) 9 INCHES OF GRANULAR FILTER OR GEOTEXTILE FILTER SHALL BE INCIDENTAL.
(2) 12 INCHES OF GRANULAR FILTER OR GEOTEXTILE FILTER SHALL BE INCIDENTAL.

TURF ESTABLISHMENT AND EROSION CONTROL M

STATION	OFFSET	SILT FENCE	SAND BAG BARRIER	500/1100 SEEDING	NATIVE GRASS SEEDING	SEED MIXTURE 500	SEED MIXTURE 1100	NATIVE GRASS MIXTURE 25A MOD. (1)	NATIVE GRASS MIXTURE 15A MOD. (1)	SODDING TYPE LAWN	MULCH MATERIAL TYPE 1	DISK ANCHORING	COMM. FERT. ANALYSIS 12-12-12
		LF	SF	ACRE	ACRE	LB	LB	LB	LB	SY	TON	ACRE	POUND
C.S.A.H. 8													
15+15 TO 24+00	LT	873		0.50		25	40			150	1.00	0.50	100
	RT	701								1430			
24+00 TO 38+00	LT	1308								3872			
	RT	790								2420			
38+00 TO 50+50	LT	1894		0.65	0.80	73	52	5	20	2415	2.90	1.45	290
	RT	1523		1.15		58	92			3880	2.30	1.15	230
50+50 TO CSAH 22	LT		600	0.03		2	2			15	0.06	0.03	
	RT	212	600	0.35		18	28				0.70	0.35	70
MAYOWOOD ROAD													
5+81 TO 9+00	LT	308								398			
	RT	130								621			
11+00 TO 15+00	LT	402								616			
	RT			0.09		5	7				0.18	0.09	18
C.S.A.H. 22													
148+00 TO 158+50	LT	235								355			
	RT									542			
AT CB'S AND MH'S	VAR.	80	650										
TOTALS		8456	1850	2.77	0.80	181	221	5	20	16714	7.14	3.57	708

(1) SEE GRADING PLANS FOR LOCATIONS.

CONCRETE PAVEMENT, REINFORCEMENT, AND JOINT SUMMARY O

STATION	CONCRETE PAVEMENT							TIE BAR	REINF BAR	DOWEL BAR	INCIDENTAL ITEMS				PERM TERM. HEADER	DRILL & GROUT REINF BAR
	STANDARD WIDTH			IRREGULAR WIDTH			TOTAL (1)	EPOXY COATED NO. 4 (2)	EPOXY COATED NO 4 (3)	1 1/4"	CONTRACTION JOINTS	LONGITUDINAL JOINTS				
	8 INCH	9 INCH	STRUCT CONC.	8 INCH	9 INCH	STRUCT CONC.	STRUCT CONC.				C2B-D MOD.	L1H	L1TH	L2KTH		
	SY	SY	CY	SY	SY	CY	CY	EACH	LB	EACH	LF	LF	LF	LF	LF	EACH
C.S.A.H. 8																
15+15 TO 24+00																
24+00 TO 38+00	8886		1970	881		196	2166	3488	3040	7725	7725	1285	1220	7500	70	
38+00 TO 49+00	5257		1168	112		25	1193	2036	1178	5075	5075	580	1140	3950		
49+00 TO 50+86	800		178	603		134	312	668	1140	2595	2595		700	970		
MAYOWOOD ROAD																
9+21																
10+79																
C.S.A.H. 22																
148+00 TO 159+00		997	249		346	87	336	1056	76	2520	2520		1700	760		680
TOTALS	14923	997		1596	346		4007	7248	5434	17915	17915	1845	4760	13180	70	680

NOTES
(1) INCLUDES STANDARD AND IRREGULAR WIDTH.
(2) NO. 4 TIE BAR EQUIVELANT TO NO. 13 TIE BAR SHOWN IN PLANS.
(3) NO. 4 REINFORCEMENT BARS EQUIVELANT TO SUPPLEMENTAL NO. 13 BARS FOR REINFORCEMENT OVER STORM SEWER. QUANTITY USED FOR ESTIMATION IS 57 L.F. OF NO. 13 BARS PER 12 FT. x 15 FT PANEL. NO. 13 BARS ARE .668 LBS./FT ESTIMATE QUANTITY IS THEREFORE 38 LBS. OF STEEL PER PANEL. SEE STANDARD PLATE 1070L.

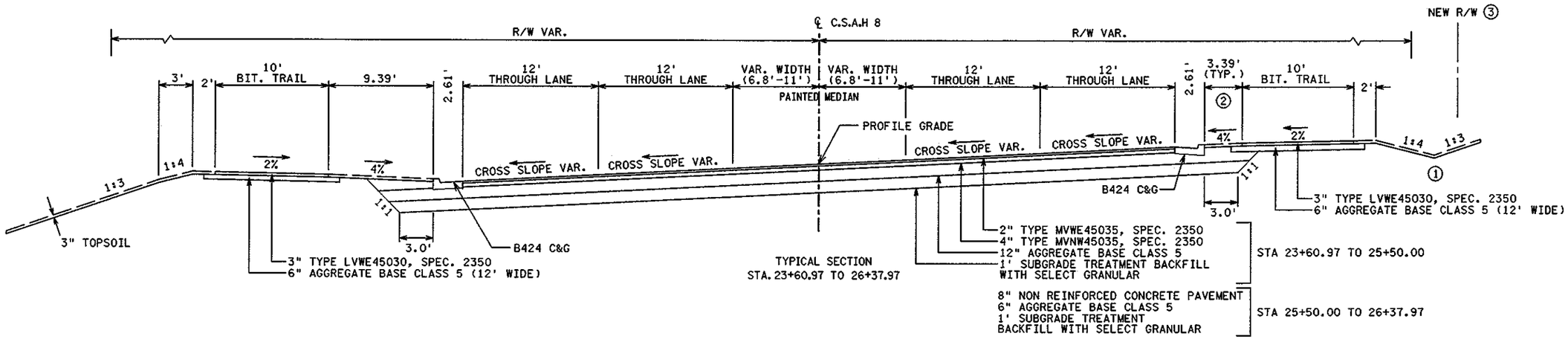
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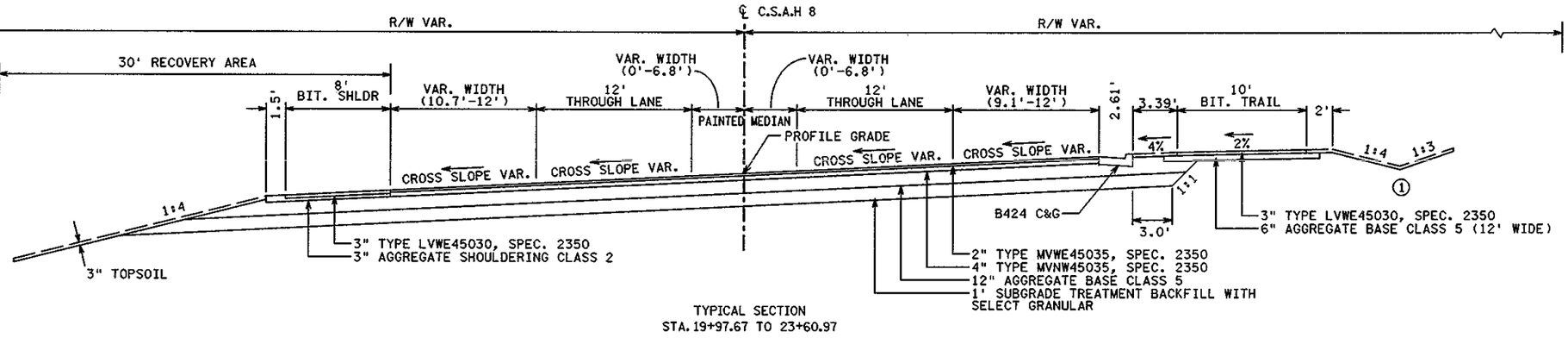
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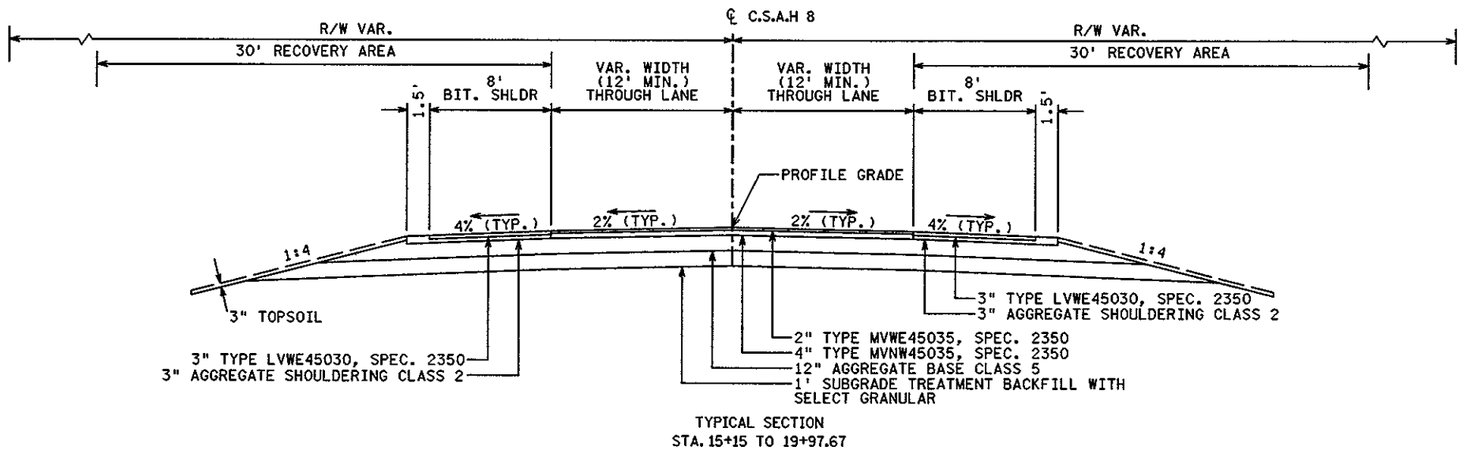
CERTIFIED BY Brent O. Pawlson LICENSED PROFESSIONAL ENGINEER LIC. NO. 26582 8/27 2001

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OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | QUANTITY TABULATIONS | SHEET 8 OF 100 SHEETS







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NOTES:

SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION

SEE CROSS SECTIONS FOR ADDITIONAL SIDE SLOPE INFORMATION

① SEE CROSS SECTIONS FOR SPECIAL DITCH LOCATIONS.

② SEE CONSTRUCTION PLANS AND CROSS SECTIONS FOR ADDITIONAL BERM WIDTH INFORMATION

③ SEE CONSTRUCTION PLANS FOR NEW R/W LOCATIONS AND DIMENSIONS.

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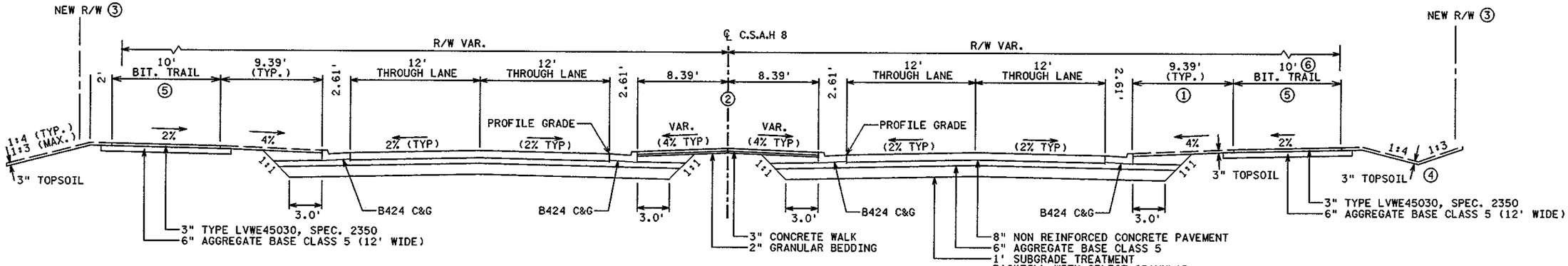
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OLMSTED COUNTY

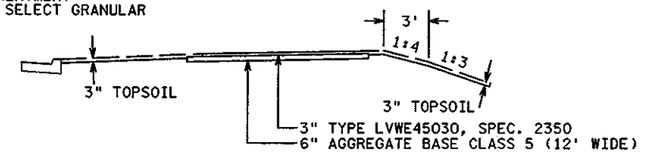
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S.P. 55-608-11

TYPICAL SECTIONS

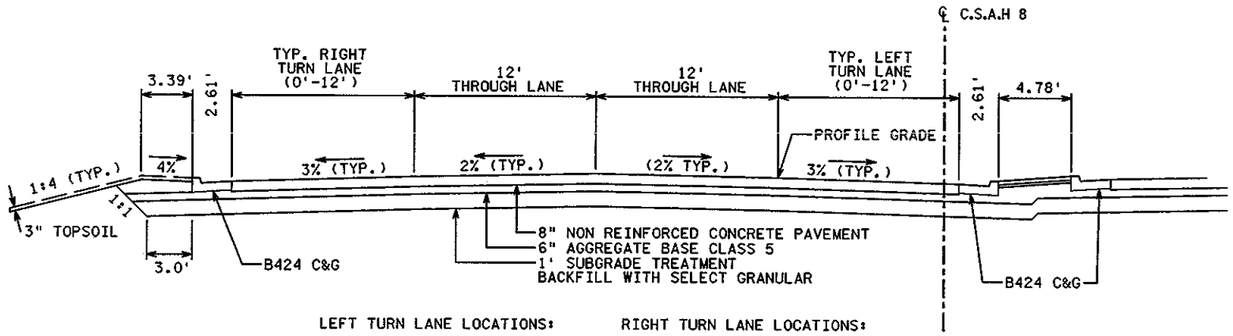
SHEET 9 OF 100 SHEETS



TYPICAL SECTION
STA. 26+37.97 TO SOUTH APPROACH PANEL
NORTH APPROACH PANEL TO STA. 50+68.88



TYPICAL TRAIL SECTION
STA. 26+37.97 TO 29+40 LT.
STA. 40+00 TO 41+75 RT.

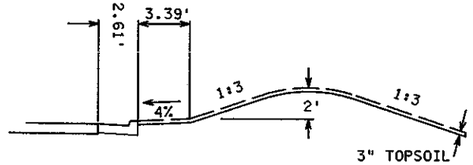


LEFT TURN LANE LOCATIONS:

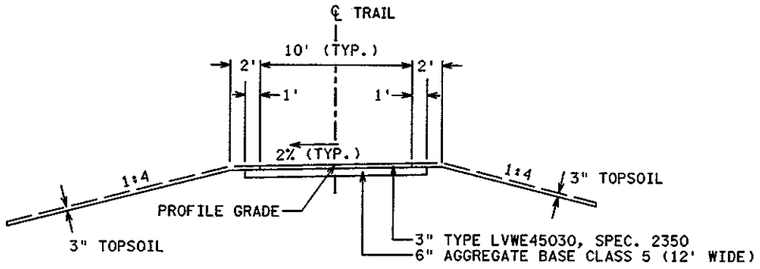
STA. 26+66.24 TO 29+62.43
STA. 30+37.11 TO 35+17.10
STA. 40+07.16 TO 43+44.34

RIGHT TURN LANE LOCATIONS:

STA. 26+37.21 TO 29+53.57
STA. 30+48.20 TO 35+17.10
STA. 34+29.24 TO 39+15.00



TYPICAL BERM SECTION
STA. 30+60 TO 32+75 RT



TYPICAL TRAIL SECTION

SEE TRAIL CONSTRUCTION PLANS AND CROSS SECTIONS FOR TRAIL LOCATIONS AND ADDITIONAL INFORMATION

NOTE:
PTRL1 STA. 12+99.96 TO 13+83.26
4" CONCRETE WITH 8' JOINT SPACING (SAWED 1" DEPTH)
4" SELECT GRANULAR (INCIDENTAL TO CONCRETE TRAIL)

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ENGINEERING

NOTES:

SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION

SEE CROSS SECTIONS FOR ADDITIONAL SIDE SLOPE INFORMATION

① SEE CONSTRUCTION PLANS AND CROSS SECTIONS FOR ADDITIONAL BERM WIDTH INFORMATION

② STA. 26+37.97 TO 43+44.34
THIS AREA VARIES. SECTIONS INCLUDE (LT. TO RT.):
4.78' MEDIAN, 12' LT. TURN LANE; AND
12' LT. TURN LANE, 4.78' MEDIAN.

STA. 43+44.34 TO 46+14.34
16.78' - 4.78' MEDIAN:

STA. 46+14.34 TO SOUTH APPROACH PANEL
NORTH APPROACH PANEL TO STA. 50+68.88
4.78' MEDIAN

③ SEE CONSTRUCTION PLANS FOR NEW R/W LOCATIONS AND DIMENSIONS.

④ SEE CROSS SECTIONS FOR SPECIAL DITCH LOCATIONS.

⑤ TRAIL LOCATION:
STA. 26+37.97 TO 29+81 RT.
STA. 26+37.97 TO 31+16 LT.
STA. 39+95 TO 44+46 RT.
STA. 44+63 TO SOUTH APPROACH PANEL RT.
STA. 44+49 TO SOUTH APPROACH PANEL LT.
NORTH APPROACH TO 50+68 RT.
NORTH APPROACH TO 50+73 LT.

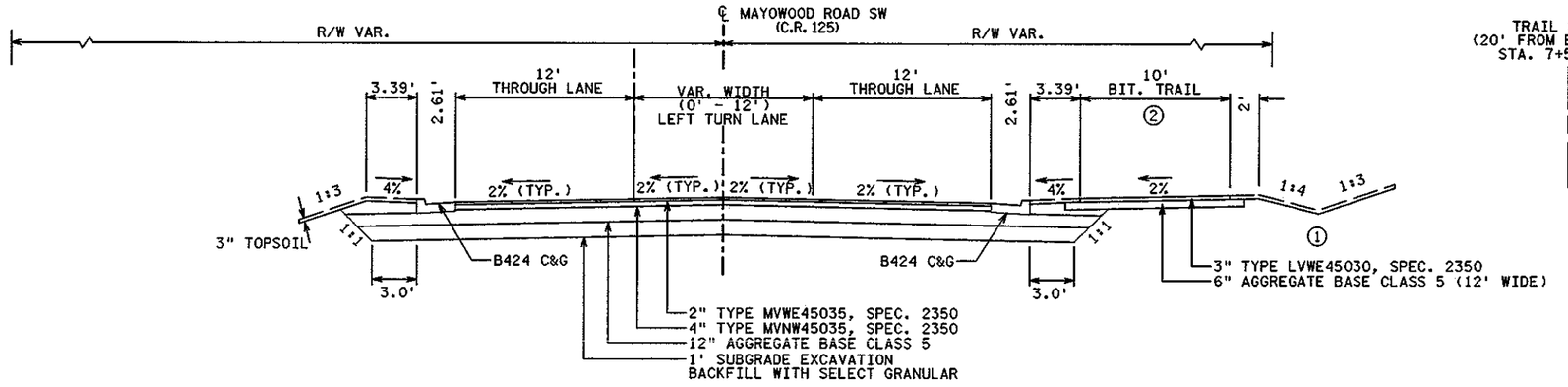
⑥ 8' BIT. TRAIL FROM STA. 44+63 TO SOUTH APPROACH PANEL AND NORTH APPROACH PANEL TO STA. 50+68.

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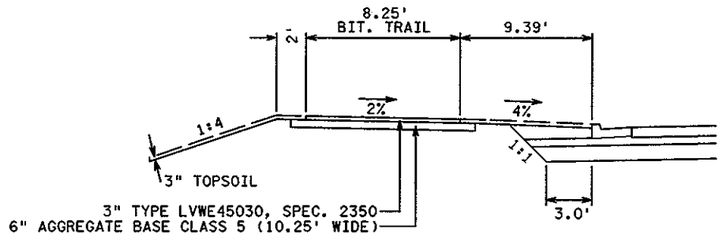
OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | TYPICAL SECTIONS | SHEET 10 OF 100 SHEETS

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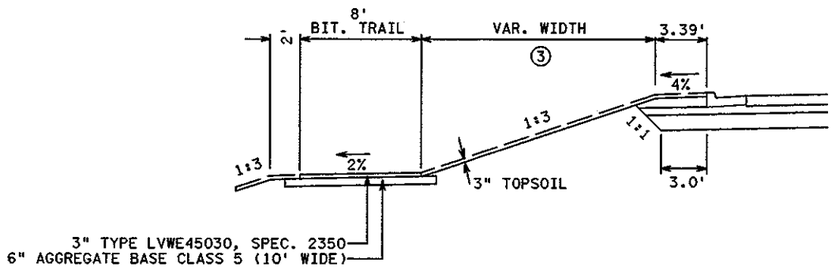


TYPICAL SECTION
STA. 5+81.00 TO 14+55.00

TRAIL EASEMENT
(20' FROM EXISTING R/W)
STA. 7+50 TO 9+35



TYPICAL SECTION
WITH TRAIL
STA. 10+47.00 TO 11+23.00



TYPICAL SECTION
WITH TRAIL
STA. 13+50.00 TO 15+00.00

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NOTES:

SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION

SEE CROSS SECTIONS FOR ADDITIONAL SIDE SLOPE INFORMATION

① SEE CROSS SECTIONS FOR SPECIAL DITCH LOCATIONS

② TRAIL LOCATION:
STA. 7+50.00 TO 9+40.00

③ SEE ALIGNMENT PLAN FOR TRAIL LOCATION.

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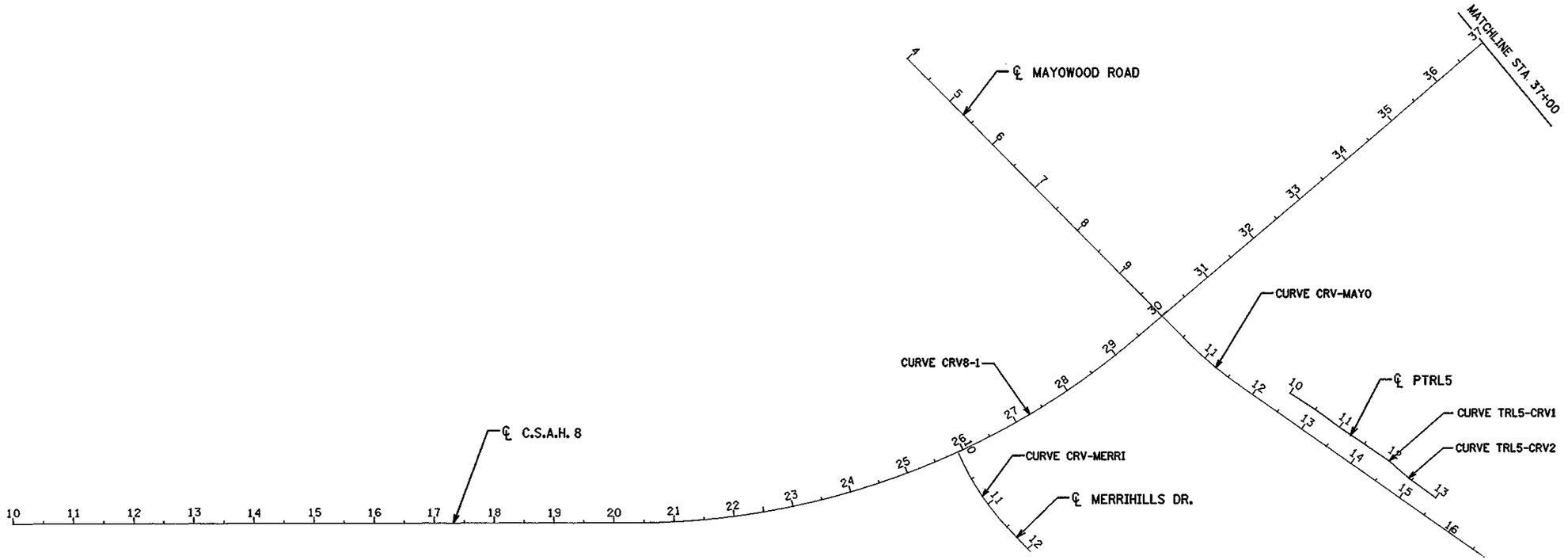
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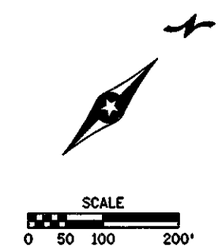
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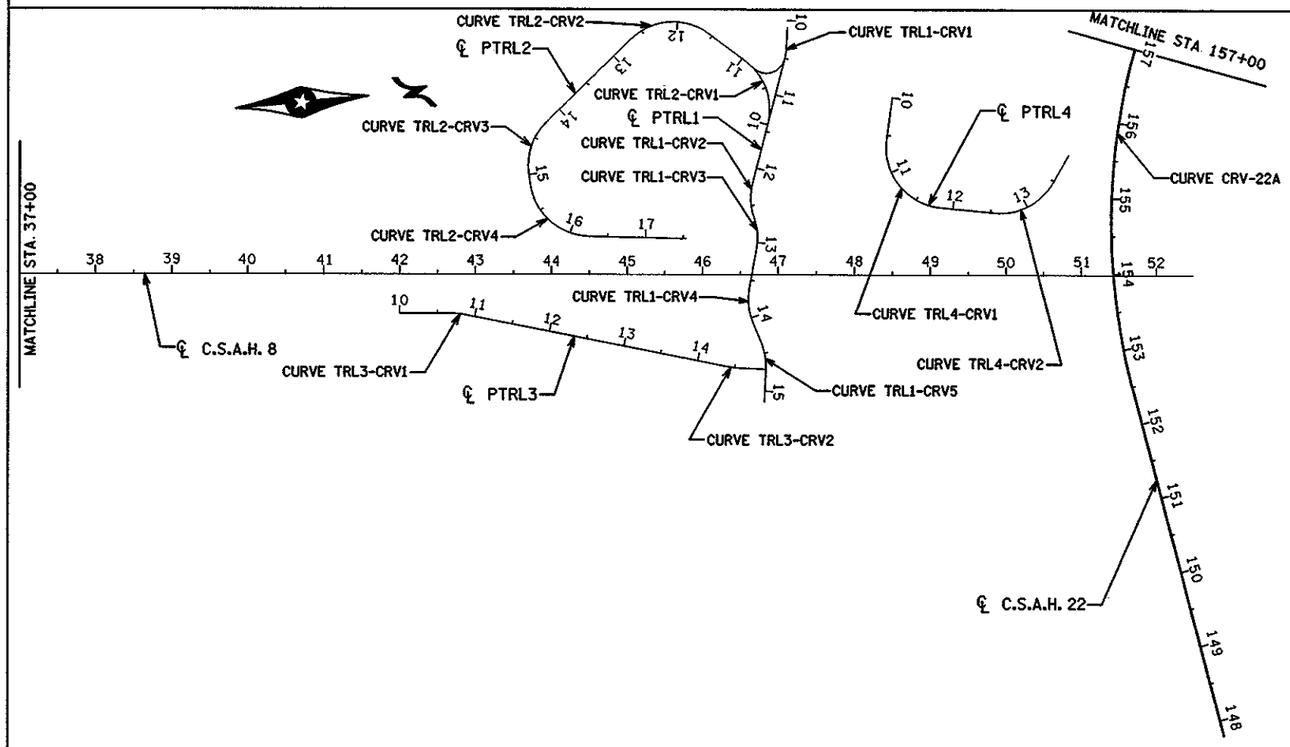
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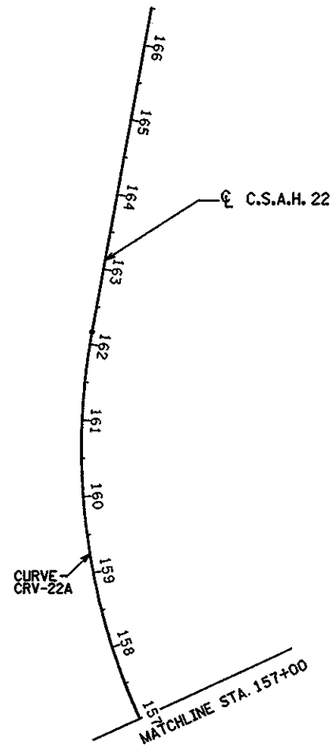
TYPICAL SECTIONS – C.R. 125

SHEET 11 OF 100 SHEETS











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OLMSTED COUNTY

C.S.A.H. 8
S.P. 55–608–11

ALIGNMENT PLAN

SHEET 26 OF 100 SHEETS

ALIGNMENT TABULATION

CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		BEARING
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
℄ C.S.A.H 8										
	POT	10+00.00						394,238.488	63,980.896	
	PC	20+35.02						394,966.604	64,716.501	N 44° 42′ 24.66″ E
CRV8-1	PI	25+05.73	39° 48′ 33.73″ LT	4° 24′ 26.52″	1,300.000′	470.714′	903.246′	395,297.741	65,051.044	PI
	CC							394,042.674	65,631.024	
	PT	29+38.27						395,337.927	65,520.039	N 4° 53′ 50.93″ E
	POT	52+48.40						395,535.151	67,821.743	
℄ MAYOWOOD ROAD										
	POT	4+00.00						394,743.269	65,578.462	
	PC	10+56.03						395,399.286	65,582.592	N 89° 38′ 21.47″ E
CRV-MAYO	PI	11+13.85	9° 51′ 53.22″ LT	8° 33′ 05.79″	670.000′	57.821′	115.356′	395,457.106	65,582.956	PI
	CC							395,395.068	66,252.579	
	PT	11+71.39						395,514.008	65,593.221	N 79° 46′ 28.24″ E
	POT	16+72.99						396,007.648	65,682.267	
℄ MERRIHILLS DR.										
	POT	10+00.00						395,262.732	65,182.185	
	PC	10+09.05						395,271.210	65,179.029	S 69° 35′ 01.24″ E
CRV-MERRI	PI	10+81.83	19° 12′ 51.94″ LT	13° 19′ 28.56″	430.000′	72.785′	144.203′	395,339.423	65,153.639	PI
	CC							395,421.211	65,582.018	
	PT	11+53.25						395,412.192	65,152.112	S 88° 47′ 53.18″ E
	POT	12+05.85						395,464.780	65,151.009	
℄ EXISTING C.S.A.H 22										
	POT	147+72.08						396,144.510	67,814.925	
	PC	152+47.10						395,677.060	67,730.461	S 79° 45′ 27.84″ W
CRV-22A	PI	157+92.29	65° 25′ 25.84″ RT	6° 44′ 59.90″	848.830′	545.189′	969.246′	395,140.559	67,633.521	PI
	CC							395,526.129	68,565.765	
	PT	162+16.35						394,829.269	68,081.102	N 34° 49′ 06.33″ W
	POT	168+54.01						394,465.179	68,604.599	

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OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | ALIGNMENT TABULATION | SHEET 27 OF 100 SHEETS

ALIGNMENT TABULATION

CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		BEARING
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
℄ PTRL1										
	POT	10+00.00						395,155.173	67,315.725	
	PC	10+35.01						395,189.892	67,311.184	S 82° 32′ 54.20" E
TRL1-CRV1	PI	10+43.28	11° 47′ 52.52" RT	71° 37′ 11.01"	80.000′	8.266′	16.473′	395,198.088	67,310.112	PI
	CC							395,179.517	67,231.860	
	PT	10+51.49						395,205.892	67,307.387	S 70° 45′ 01.68" E
	PC	12+19.80						395,364.789	67,251.899	S 70° 45′ 01.68" E
TRL1-CRV2	PI	12+43.66	33° 12′ 59.78" LT	71° 37′ 11.01"	80.000′	23.862′	46.379′	395,387.317	67,244.032	PI
	CC							395,391.164	67,327.426	
	PT	12+66.17						395,410.473	67,249.791	N 76° 01′ 58.54" E
	PC	12+67.73						395,411.982	67,250.167	N 76° 01′ 58.54" E
TRL1-CRV3	PI	12+88.32	28° 51′ 52.78" RT	71° 37′ 11.01"	80.000′	20.589′	40.303′	395,431.962	67,255.136	PI
	CC							395,431.291	67,172.532	
	PT	13+08.03						395,451.859	67,249.843	S 75° 06′ 08.68" E
	PC	13+61.64						395,503.667	67,236.060	S 75° 06′ 08.68" E
TRL1-CRV4	PI	13+85.31	32° 57′ 46.84" LT	71° 37′ 11.01"	80.000′	23.669′	46.025′	395,526.540	67,229.975	PI
	CC							395,524.234	67,313.371	
	PT	14+07.67						395,549.042	67,237.315	N 71° 56′ 04.48" E
	PC	14+35.32						395,575.327	67,245.889	N 71° 56′ 04.48" E
TRL1-CRV5	PI	14+53.13	25° 06′ 44.43" RT	71° 37′ 11.01"	80.000′	17.818′	35.063′	395,592.267	67,251.414	PI
	CC							395,600.136	67,169.832	
	PT	14+70.38						395,609.950	67,249.228	S 82° 57′ 11.09" E
	POT	15+13.62						395,652.866	67,243.923	
℄ PTRL2										
	PC	10+00.00						395,290.067	67,277.992	N 70° 45′ 01.94" W
TRL2-CRV1	PI	10+53.83	67° 52′ 31.12" LT	71° 37′ 11.01"	80.000′	53.834′	94.772′	395,239.243	67,295.740	PI
	CC							395,263.693	67,202.465	
	PT	10+94.77						395,203.660	67,255.342	S 41° 22′ 26.94" W
	PC	11+54.82						395,163.973	67,210.285	S 41° 22′ 26.94" W
TRL2-CRV2	PI	12+23.40	81° 12′ 57.81" LT	71° 37′ 11.01"	80.000′	68.588′	113.399′	395,118.638	67,158.816	PI
	CC							395,224.005	67,157.407	
	PT	12+68.22						395,162.580	67,106.153	S 39° 50′ 30.87" E
	PC	14+24.37						395,262.624	66,986.256	S 39° 50′ 30.47" E
TRL2-CRV3	PI	14+65.11	53° 58′ 20.76" LT	71° 37′ 11.01"	80.000′	40.738′	75.360′	395,288.723	66,954.977	PI
	CC							395,324.049	67,037.510	
	PT	14+99.73						395,329.371	66,957.687	N 86° 11′ 08.77" E
	PC	15+13.26						395,342.876	66,958.587	N 86° 11′ 08.77" E
TRL2-CRV4	PI	15+80.41	80° 00′ 55.06" LT	71° 37′ 11.01"	80.000′	67.146′	111.722′	395,409.873	66,963.054	PI
	CC							395,337.554	67,038.410	
	PT	16+24.99						395,417.090	67,029.811	N 6° 10′ 13.71" E
	POT	17+53.12						395,430.863	67,157.202	

ALIGNMENT TABULATION

CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		BEARING
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
℄ PTRL3										
	POT	10+00.00						395,497.456	66,772.727	
	PC	10+70.79						395,503.499	66,843.254	N 4° 53′ 50.30" E
TRL3-CRV1	PI	10+78.46	10° 57′ 24.73" RT	71° 37′ 11.01"	80.000′	7.673′	15.299′	395,504.154	66,850.899	PI
	CC							395,583.207	66,836.425	
	PT	10+86.08						395,506.250	66,858.280	N 15° 51′ 15.03" E
	PC	14+43.84						395,603.986	67,202.429	N 15° 51′ 15.03" E
TRL3-CRV2	PI	14+50.00	8° 48′ 25.78" LT	71° 37′ 11.01"	80.000′	6.161′	12.297′	395,605.669	67,208.355	PI
	CC							395,527.029	67,224.284	
	PT	14+56.14						395,606.425	67,214.469	N 7° 02′ 49.25" E
	POT	14+91.07						395,610.710	67,249.134	
℄ PTRL4										
	POT	10+00.00						395,268.364	67,444.144	
	PC	10+55.15						395,322.180	67,432.075	S 77° 21′ 34.54" E
TRL4-CRV1	PI	11+38.49	92° 20′ 39.98" LT	71° 37′ 11.01"	80.000′	83.342′	128.937′	395,403.502	67,413.837	PI
	CC							395,339.686	67,510.136	
	PT	11+84.09						395,418.398	67,495.837	N 10° 17′ 45.48" E
	PC	12+55.67						395,431.192	67,566.264	N 10° 17′ 45.48" E
TRL4-CRV2	PI	13+07.38	65° 45′ 21.32" LT	71° 37′ 11.01"	80.000′	51.711′	91.813′	395,440.434	67,617.142	PI
	CC							395,352.480	67,580.563	
	PT	13+47.48						395,397.838	67,646.461	N 55° 27′ 35.84" W
	POT	13+89.29						395,363.399	67,670.166	
℄ PTRL5										
	POT	10+00.00						395,584.575	65,643.991	N 77° 37′ 12.95" E
	PI	10+50.15						395,633.559	65,654.743	N 80° 48′ 41.99" E
	PI	11+00.00						395,682.769	65,662.703	N 78° 46′ 04.78" E
	PC	11+95.50						395,776.439	65,681.305	
TRL5-CRV1	PI	12+00.21	6° 44′ 47.68" RT	71° 37′ 11.01"	80.000′	4.715′	9.420′	395,781.064	65,682.223	PI
	CC							395,792.021	65,602.837	
	PT	12+04.92						395,785.765	65,682.592	N 85° 30′ 52.46" E
	PC	12+40.50						395,821.234	65,685.374	N 85° 30′ 52.46" E
TRL5-CRV2	PI	12+43.78	4° 42′ 07.46" LT	71° 37′ 11.01"	80.000′	3.285′	6.565′	395,824.508	65,685.631	PI
	CC							395,814.977	65,765.129	
	PT	12+47.06						395,827.750	65,686.155	N 80° 48′ 44.99" E
	POT	13+00.50						395,880.505	65,694.688	

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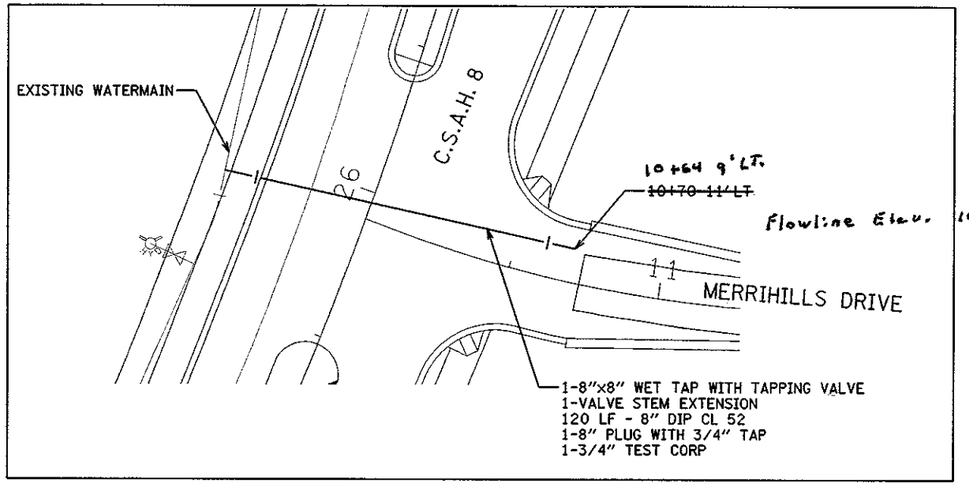
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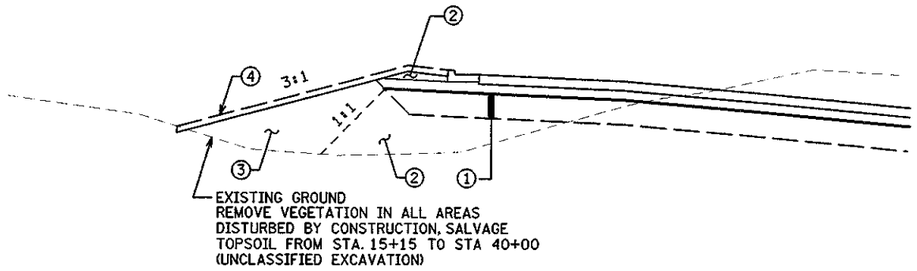
CERTIFIED BY Brent D. Rud LIC. NO. 26880 3/28 2001
LICENSED PROFESSIONAL ENGINEER

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | ALIGNMENT TABULATION – TRAILS | SHEET 28 OF 100 SHEETS



WATERMAIN DETAIL



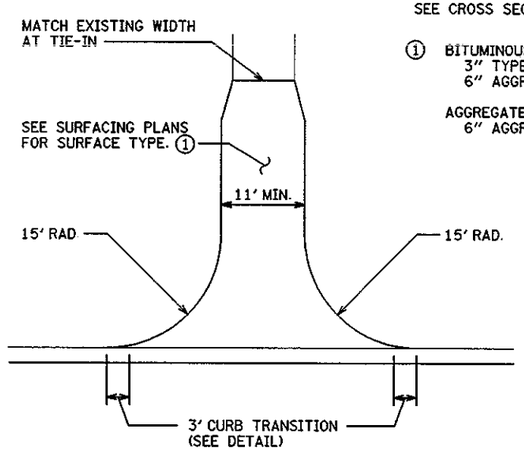
EARTHWORK DETAIL

① 1' SUBGRADE TREATMENT, BACKFILL WITH SELECT GRANULAR.

② BACKFILL WITH SUITABLE EXCAVATED MATERIAL TOPSOIL SHALL NOT BE USED IN THIS AREA.

③ BACKFILL MAY INCLUDE TOPSOIL IN THIS AREA

④ 3" OF TOPSOIL (MIN.) SHALL BE PLACED ON ALL AREAS DISTURBED BY CONSTRUCTION.



DRIVEWAY DETAIL

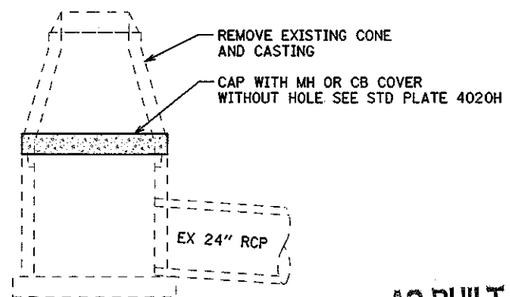
STA. 16+20 RT. (NO CURB AND GUTTER)
STA. 25+00 RT
STA. 37+80 LT
STA. 43+50 LT

NOTES:

SEE CROSS SECTIONS FOR PROFILES.

① BITUMINOUS SURFACE:
3" TYPE LVWE45030, SPEC. 2350
6" AGGREGATE BASE CLASS 5

AGGREGATE SURFACE:
6" AGGREGATE CLASS 2



CAPPING STRUCTURE

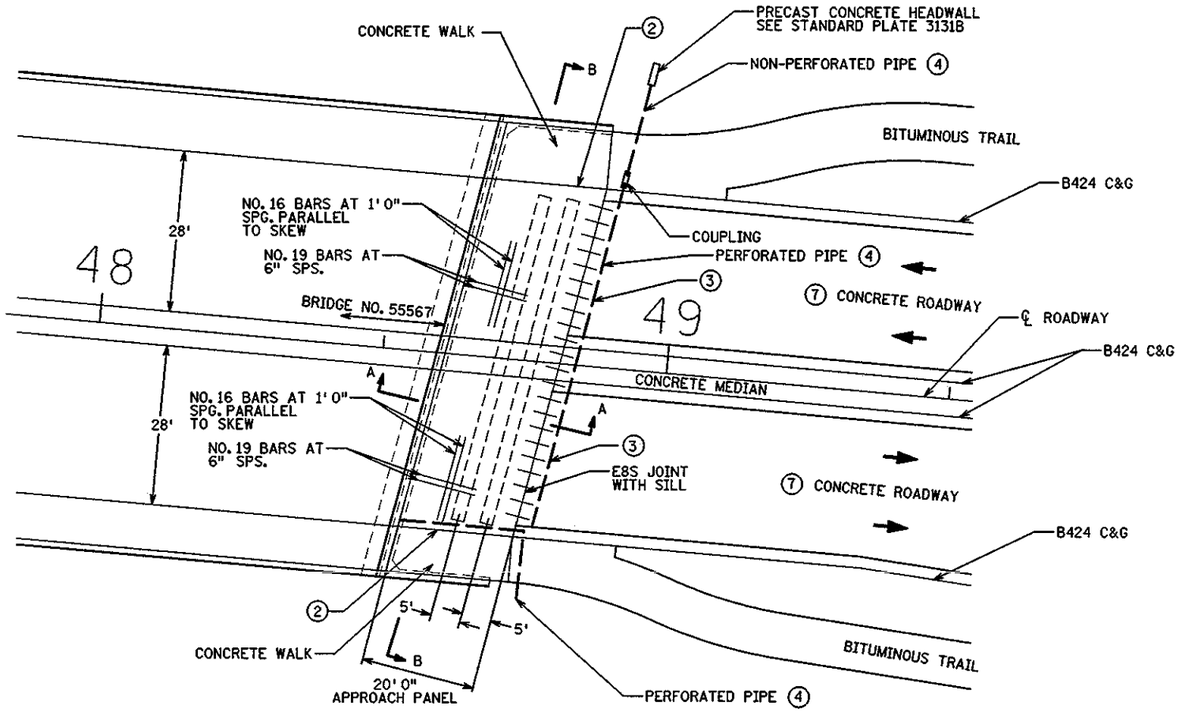
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CERTIFIED BY Brent O. Parker LIC. NO. 26880 3/29 2001
LICENSED PROFESSIONAL ENGINEER

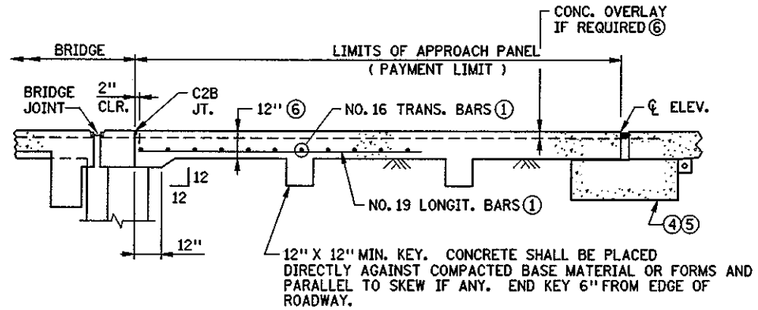
TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
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OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | DETAILS | SHEET 29 OF 100 SHEETS



APPROACH PANEL DETAIL

(THIS DETAIL SHALL ALSO BE USED FOR THE SOUTH APPROACH PANEL)



SECTION A-A

(SOME REINFORCEMENT NOT SHOWN)

ALL REINFORCEMENT BARS ARE IN METRIC DESIGNATION

NOTES:

(1) ALL REINFORCEMENT IN APPROACH PANEL, SILL AND CURB SHALL BE GRADE 60 AND EPOXY COATED AS PER SPEC. 3301.

(2) TRANSITION FACE OF 4" CURB INTO PROFILE OF BRIDGE RAILING. SEE CURB TRANSITION DETAILS.

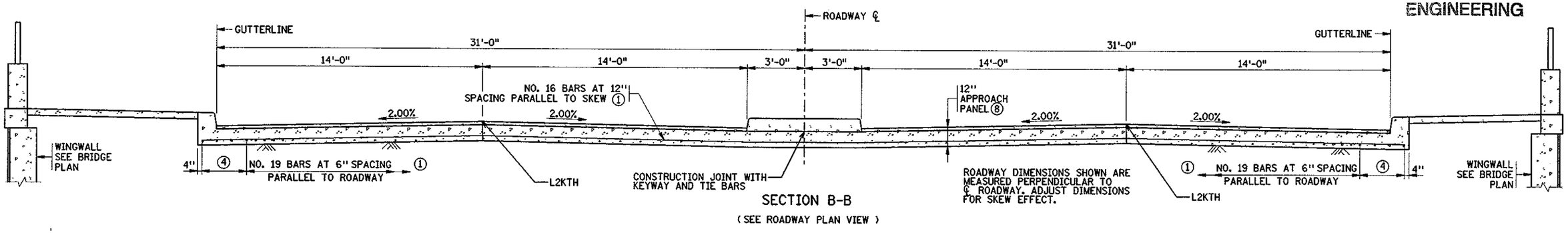
(3) L2KTH LONGITUDINAL JOINTS ARE REQUIRED BEFORE AND AFTER CONCRETE OVERLAY IS APPLIED. SEE SHEET 34 FOR DETAILS.

(4) SEE SHEET 31 FOR REQUIRED MISCELLANEOUS DETAILS NOT SHOWN.

(5) 18" x 4'0" CONCRETE SILL UNDER TRAFFIC LANES ONLY. CONCRETE SILL AND CURBING IS INCLUDED IN APPROACH PANEL PAY ITEM.

(6) APPROACH SLAB THICKNESS SHOWN INCLUDES CONCRETE OVERLAY CHECK BRIDGE PLANS FOR OVERLAYS. CONCRETE OVERLAYS TO BE INCLUDED IN BRIDGE QUANTITIES AND DONE AT THE SAME TIME BY BRIDGE CONTRACTOR.

(7) SEE PLAN SHEETS 40 AND 41 FOR BRIDGE APPROACH ROADWAY INFORMATION.



SECTION B-B

(SEE ROADWAY PLAN VIEW)

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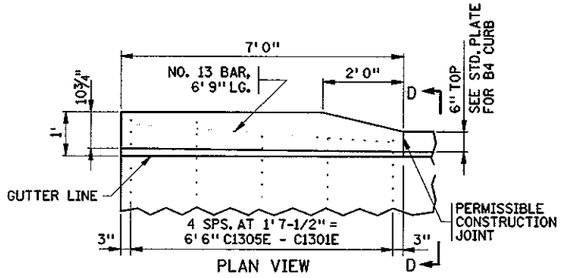
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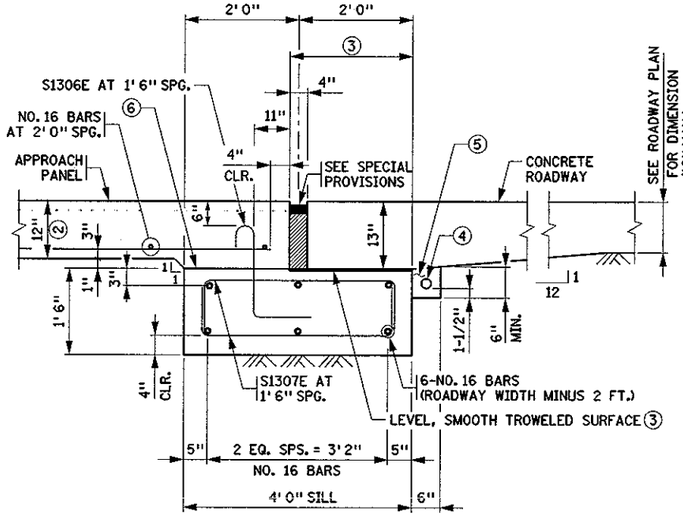
CERTIFIED BY Brent D. Paulsen LIC. NO. 26880 7/18 2001
LICENSED PROFESSIONAL ENGINEER

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

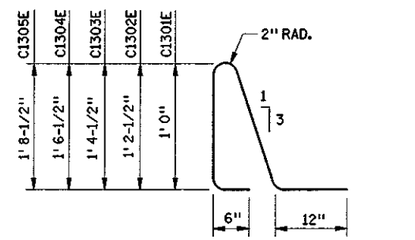
OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | BRIDGE APPROACH PANEL DETAILS | SHEET 30 OF 100 SHEETS



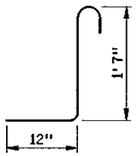
PLAN VIEW



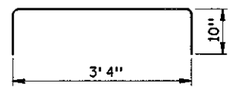
E8S JOINT DETAIL ①
USE AT ABUTMENTS WITH JOINTS



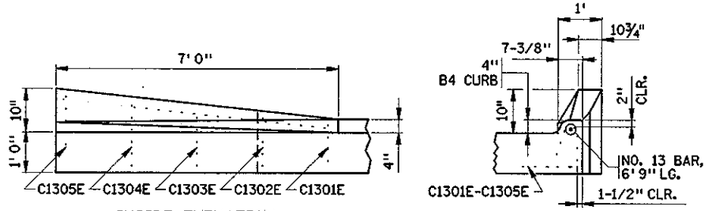
C1301E- C1305E ①



S1306E ①



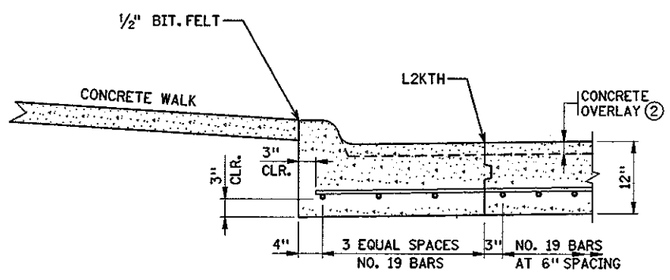
S1307E ①



INSIDE ELEVATION

SECTION D-D

CURB TRANSITION DETAILS ①



CURB DETAIL ①

NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

① ALL REINFORCEMENT IN APPROACH PANEL, SILL AND CURB SHALL BE GRADE 60 AND EPOXY COATED AS PER SPEC. 3301.

② APPROACH SLAB THICKNESS SHOWN INCLUDES CONCRETE OVERLAY CHECK BRIDGE PLANS FOR OVERLAYS. CONCRETE OVERLAYS TO BE INCLUDED IN BRIDGE QUANTITIES AND DONE AT THE SAME TIME BY BRIDGE CONTRACTOR.

③ PLACE PLASTIC SHEETING SPEC. 3756 AS APPROVED BY THE ENGINEER TO BREAK BOND. COVER AREA SHOWN IN DETAIL.

④ 2 INCH OR 4 INCH NOMINAL DIA. THERMOPLASTIC PIPE, AS PER ASTM D1785M, SCHEDULE 40. SLOPE PIPE TO DITCH. FURNISHING AND INSTALLING DRAIN SYSTEM SHALL BE INCIDENTAL, WITH NO DIRECT PAYMENT. WRAP PERFORATED PIPE WITH GEOTEXTILE AS PER SPEC. 3733. 1/8 INCH PER 12 INCH MINIMUM SLOPE.

⑤ BACKFILL WITH FINE AGGREGATE, SPEC. 3149, MODIFIED TO 0-3% PASSING A NO. 200 SIEVE.

⑥ REQUIRED CONSTRUCTION JOINT.

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CERTIFIED BY Brent O. Pawlson LIC. NO. 26980 3/28 2001
LICENSED PROFESSIONAL ENGINEER

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ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

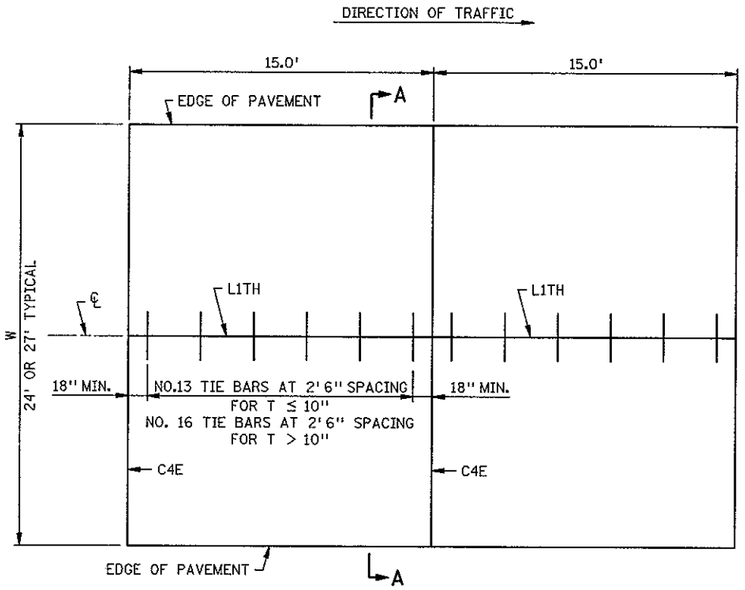
OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

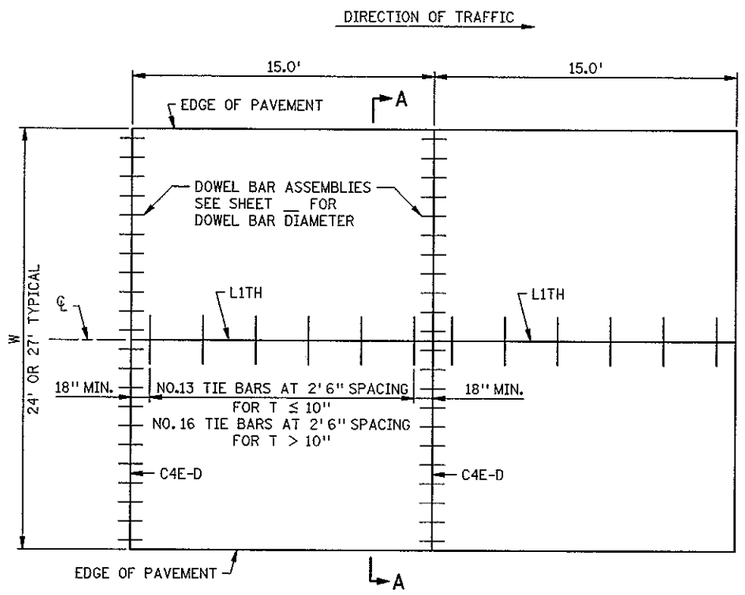
BRIDGE APPROACH PANEL MISCELLANEOUS DETAILS

SHEET 31 OF 100 SHEETS

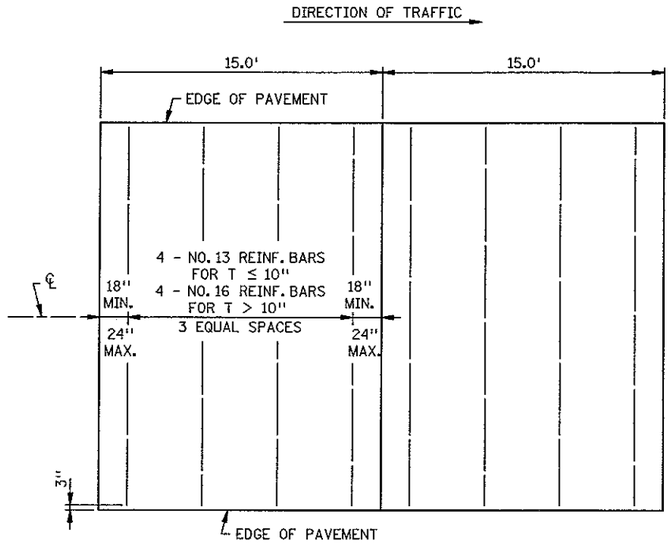
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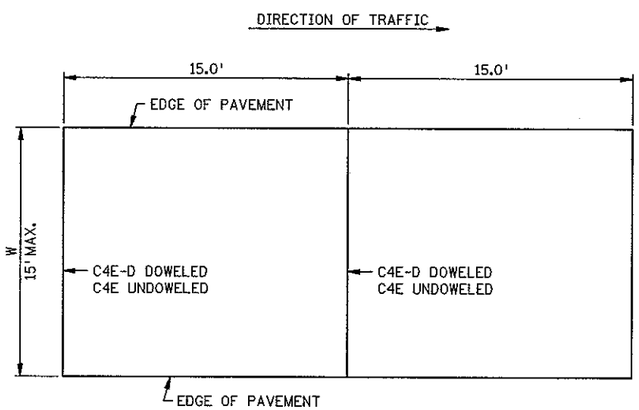
MAINLINE PAVEMENT
UNDOWELED



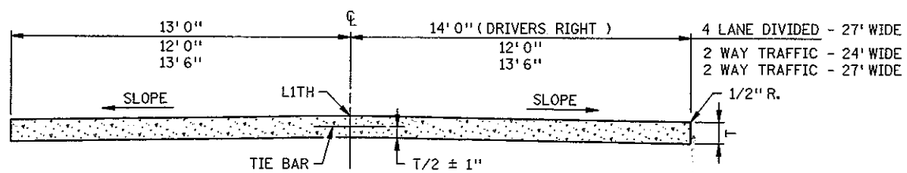
MAINLINE PAVEMENT
DOWELED



SUPPLEMENTAL PANEL REINFORCEMENT



PAVEMENT 2 FT. THRU 15 FT. WIDTH



SECTION A-A

AS-BUILT

FEB 18 2005

ENGINEERING

GENERAL NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, T.

WHEN RIGID PAVEMENT ADJOINS FLEXIBLE PAVEMENT, BRIDGE APPROACHES, R.R. CROSSINGS OR OTHER TYPES OF FREE ENDS, THE FOLLOWING MODIFICATIONS SHALL BE MADE: THE FIRST OR LAST 10 JOINTS SHALL BE DOWELED CONTRACTION JOINTS, C4E-D.

DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE 1103.

ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301 AND SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31 OR M-53. FOR ADDITIONAL REINFORCEMENT OVER CULVERTS, SEE STANDARD PLATE 1070.

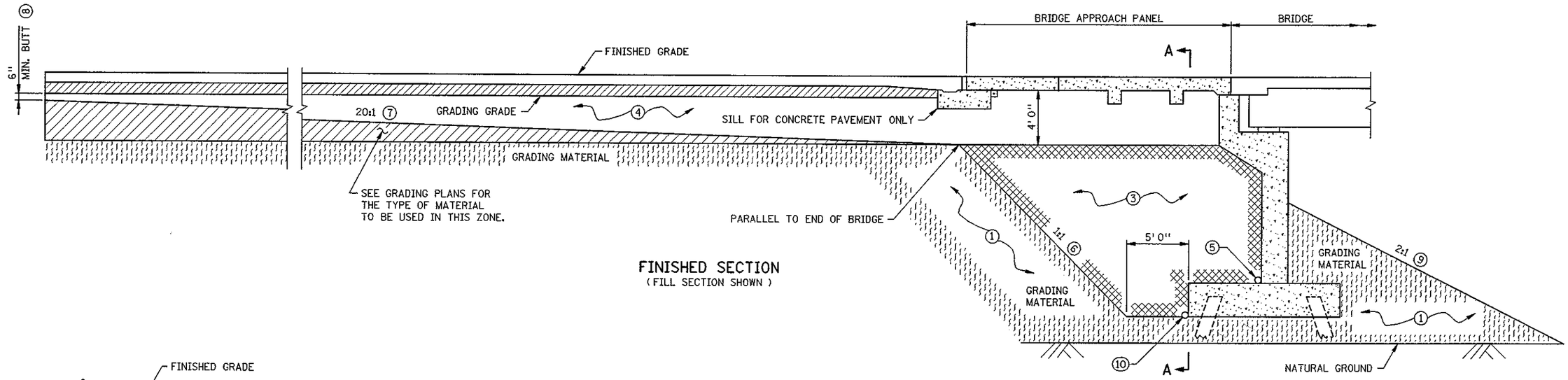
TIE BARS:
USE NO. 13 BARS 2'6" LONG, AT 2'6" SPACING. FOR T ≤ 10" USE NO. 16 BARS 3'0" LONG AT 2'6" SPACING FOR T > 10".

~~SUPPLEMENTAL PANEL REINFORCEMENT:~~
~~PLACE IN PANELS WHERE PAVEMENT WIDTH EXCEEDS 15.0' WITHOUT A LONGITUDINAL JOINT, AND IN THE MIDDLE LANE(S) WHERE TIED PAVEMENT WIDTH EXCEEDS 4 LANES. USE NO. 13 BARS FOR PAVEMENT THICKNESS 10" OR LESS. USE NO. 16 BARS FOR PAVEMENT THICKNESS GREATER THAN 10". PLACEMENT DEPTH SHALL BE PLANNED T/2 ± 1".~~

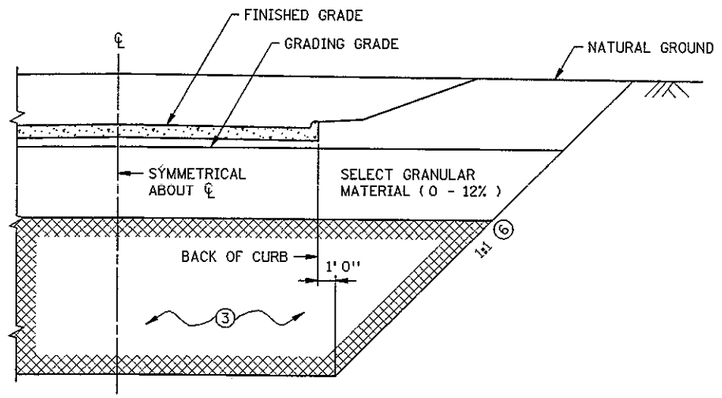
NO MORE THAN TWO LANES SHALL BE PAVED AT THE SAME TIME.

STANDARD SHEET NO. 5-297.217	TITLE: CONCRETE MAINLINE PAVEMENT 15.0 FT. PANEL LENGTH
STANDARD APPROVED: OCTOBER 1, 1998	
REVISION DATE 1-21-2000	S.P. 55-608-11

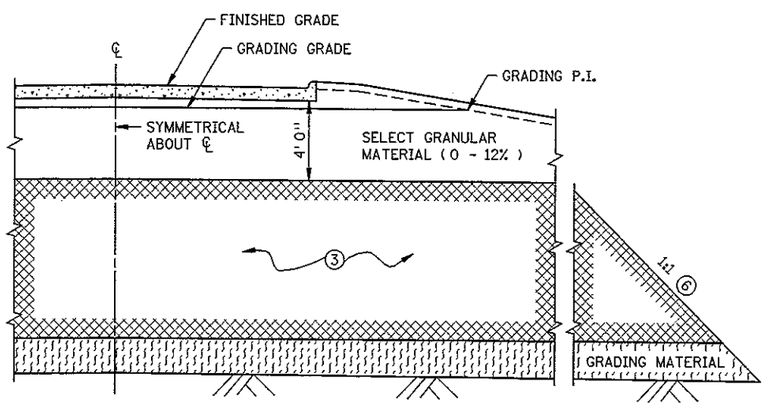
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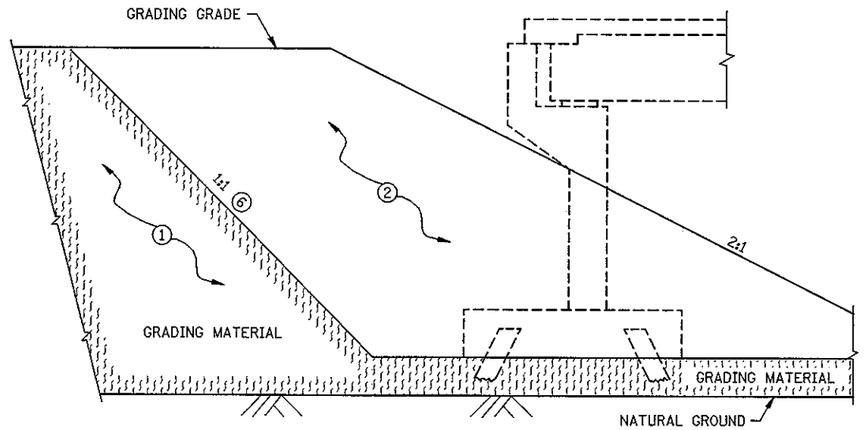
FINISHED SECTION
(FILL SECTION SHOWN)



HALF SECTION A-A
(CUT SECTION)



HALF SECTION A-A
(FILL SECTION)



GRADING SECTION AT ABUTMENT

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NOTES:

① GRADING MATERIAL PLACED BY THE CONTRACTOR.

② GRADING MATERIAL CONSTRUCTED BY THE CONTRACTOR PRIOR TO THE BRIDGE CONSTRUCTION. TO BE REMOVED LATER BY THE CONTRACTOR.

③ SELECT GRANULAR MATERIAL MODIFIED SHALL COMPLY WITH SPEC. 3149.2B, MODIFIED TO 10% OR LESS PASSING THE NUMBER 200 SIEVE. MATERIAL SHALL BE PLACED BY THE CONTRACTOR AFTER COMPLETION OF THE ABUTMENT.

④ BACKFILL PLACED BY THE CONTRACTOR. MATERIAL SHALL COMPLY WITH SPEC. 3149.2B (SELECT GRANULAR BORROW).

⑤ DRAIN IF REQUIRED. SEE BRIDGE STANDARD DETAIL B910.

⑥ ACTUAL SLOPE TO BE DETERMINED DURING CONSTRUCTION BY THE CONTRACTOR, DEPENDING ON INSITU SOIL PROPERTIES AND/OR SAFETY FACTORS. (USE 1:1 FOR DESIGN)

⑦ START 20:1 TAPER AT END OF APPROACH PANELS ON SKEWED BRIDGES.

⑧ GRADING TO BE SQUARED OFF ON SKEWED APPROACHES.

⑨ SEE BRIDGE PLANS FOR SLOPE PAVING.

⑩ SUBSURFACE PIPE DRAIN WHEN REQUIRED AS DIRECTED BY THE DISTRICT SOILS ENGINEER. 4 INCH NOM. DIA. PLASTIC PIPE PER SPEC. 3245 PLACED BY THE CONTRACTOR. PERFORATED PIPE TO BE WRAPPED WITH GEOTEXTILE MEETING THE REQUIREMENTS OF SPEC. 3733 TYPE 1. FOUNDATION SHALL BE SHAPED TO FIT LOWER ONE THIRD CIRCUMFERENCE OF PIPE.

FILE NAME S233H92.SPN

REVISION DATE 8-20-99

STANDARD SHEET NO. 5-297.233	TITLE: BRIDGE APPROACH TREATMENT FOR BOTH HIGH AND LOW ABUTMENTS ON PILING
STANDARD APPROVED: AUGUST 4, 1992	
S.P. 55-608-11	SHEET NO. 34A OF 100 SHEETS

NOTES:

1. ALL UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

LEGEND

- BITUMINOUS REMOVAL
- CLEAR AND GRUB (ACRE)
- CLEAR AND GRUB TREE

SCALE 0 25 50 100'

EXISTING R/W

CONSTRUCTION LIMITS

ADJUST HYD. AND 2-VALVES 22+52 55.7' LT.

+50 15' T.E.

MATCHLINE STA. 24+00

C.S.A.H. 8

SAWCUT BITUMINOUS PAVEMENT 36 L.F. 15+15

SAWCUT BITUMINOUS PAVEMENT 20 L.F. 16+22 25' RT.

CONSTRUCTION LIMITS

10' T.E.

SAWCUT BITUMINOUS PAVEMENT 13 L.F. 22+42 64' RT.

EXISTING R/W

RESIDENTIAL ENTRANCE 22+40 REMOVE ENTRANCE

TRAIL LT. 24+49 INPLACE 15" x 11' CMP REMOVE 11 L.F.

SAWCUT BITUMINOUS PAVEMENT 7 L.F. 24+57 76' LT.

REMOVE 38 L.F. CHAIN LINK FENCE 24+57 - 24+68 55.8' - 92.4' LT.

ADJUST HYD. AND VALVE 25+57 63.2' LT.

RECONSTRUCT MANHOLE 29+70 69.3' LT.

RELOCATE PEDESTAL (BY OTHERS)

℄ CULV. RT. 29+26 INPLACE 24"x53' CMP W/ APRONS REMOVE 60 L.F.

℄ CULVERT 9+46 INPLACE 24"x50' CMP REMOVE 50 L.F.

TRAIL LT. 30+43 INPLACE 24"x16' CMP W/ APRONS REMOVE 16 L.F.

SAWCUT BITUMINOUS PAVEMENT 7 L.F 31+15 65' LT.

RELOCATE POWER POLE (BY OTHERS)

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MATCHLINE STA. 9+25

MATCHLINE STA. 38+00

SAWCUT BITUMINOUS PAVEMENT 13 L.F. 24+97 62' RT.

RES. DR. RT. 25+11 INPLACE 15"x26' CMP REMOVE 26 L.F.

SAWCUT BITUMINOUS PAVEMENT 19 L.F. 10+73.5

MERRIHILLS DR. RT. 25+91 INPLACE 18"x46' CMP REMOVE 46 L.F.

℄ MERRIHILLS DR.

℄ MAYOWOOD RD. SW (CO. RD. 125)

MATCHLINE STA. 10+50

70' R/W

65' R/W

85' R/W

75' R/W

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CERTIFIED BY Brent O. Pawlson LIC. NO. 26880 3/28 2001
LICENSED PROFESSIONAL ENGINEER

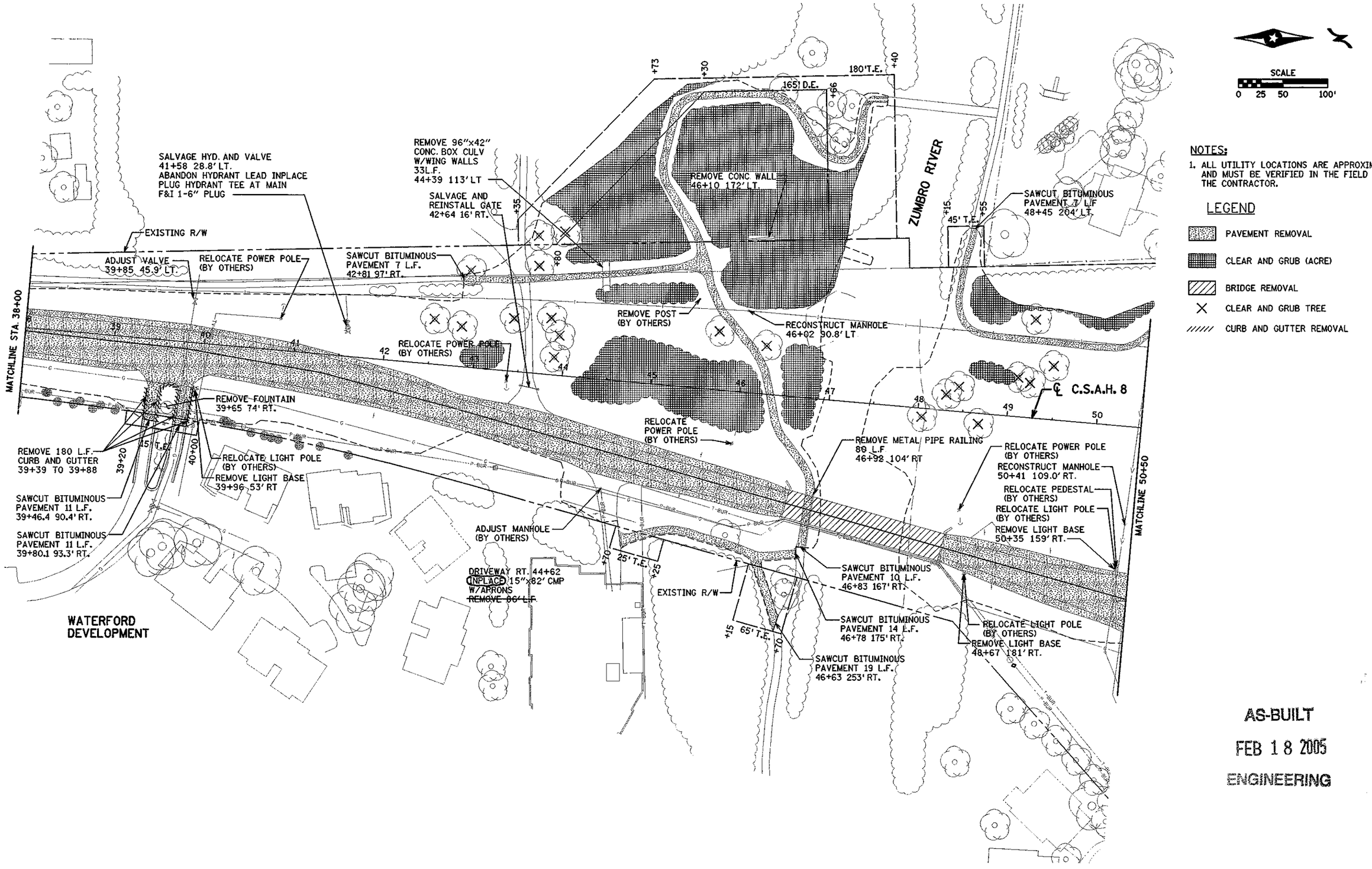
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OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

EXISTING CONDITIONS AND REMOVALS
STA. 15+15 TO 38+00

SHEET 35 OF 100 SHEETS



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CERTIFIED BY Brent J. Paulson LICENSED PROFESSIONAL ENGINEER LIC. NO. 26280 3/28 2001

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OLMSTED COUNTY

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S.P. 55-608-11

EXISTING CONDITIONS AND REMOVALS
STA. 38+00 TO 50+50

SHEET 36 OF 100 SHEETS

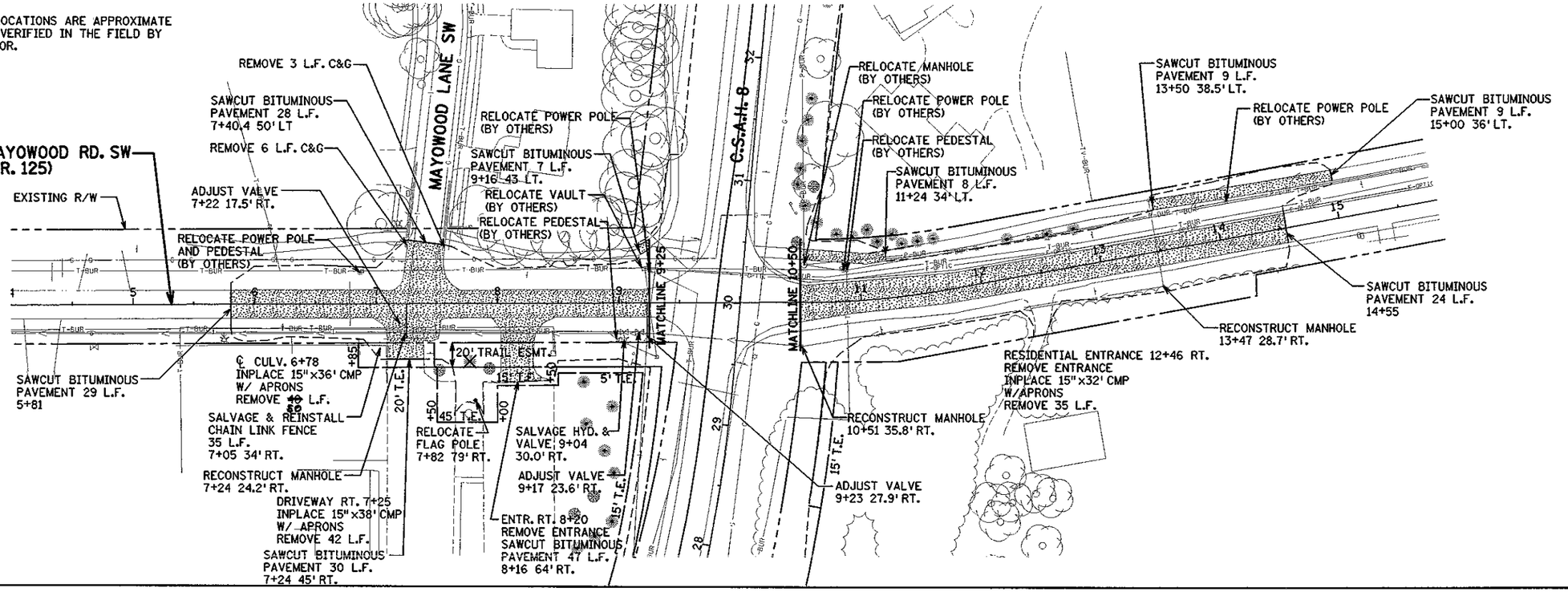
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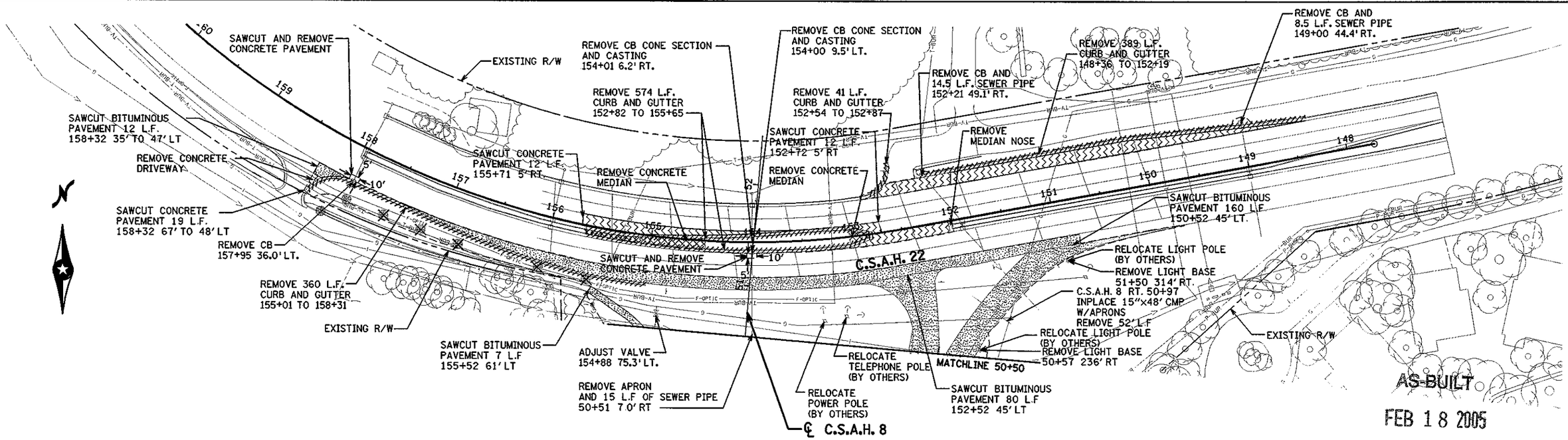
1. ALL UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

SCALE
0 25' 50' 100'

LEGEND

- CONCRETE PAVEMENT REMOVAL
- CONCRETE MEDIAN REMOVAL
- BITUMINOUS REMOVAL
- CLEAR AND GRUB (ACRE)
- CLEAR AND GRUB TREE
- CURB AND GUTTER REMOVAL





AS-BUILT
FEB 1 8 2005
ENGINEERING

CERTIFIED BY Brent J. Paulson LICENSED PROFESSIONAL ENGINEER LIC. NO. 26880 3/28 2001

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | EXISTING CONDITIONS AND REMOVALS C.R. 125 STA. 5+81-14+55, C.S.A.H. 8 STA. 50+50-50+95.87 | SHEET 37 OF 100 SHEETS

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NOTES:
1. ALL DIMENSIONS ARE TO FACE OF CURB.

SCALE
0 25 50 100'

℄ C.S.A.H. 8

BEGIN S.P. 55-608-11
STA. 15+15
MATCH EXISTING

BEGIN TAPER
STA. 15+15

EXISTING R/W

P.C. 20+35.02

BEGIN B424 CURB
AND GUTTER
23+60.97

CONSTRUCTION LIMITS

50' 15' T.E.

MATCHLINE STA. 24+00

10 11 12 13 14 15 16 17 18 19 20 21 22 23

12' LANE
8' SHOULDER
12' LANE
8' SHOULDER
12' LANE
12' LANE
12' LANE
14' LANE
10' TRAIL
4'
10' T.E.

BEGIN TAPER
18+61.68 12' RT.

CONSTRUCTION LIMITS

BEGIN B424 CURB
AND GUTTER
19+97.67 23' RT.

END TAPER
BEGIN TAPER
20+34.93 25.55' RT.

EXISTING R/W

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1060
1050
1040

MATCH EXISTING
STA. 15+15
EL. 1049.41

PROFILE GRADE (AT ℄)
TOP OF FINISHED SURFACE

VPC +14.50
EL. 1051.91

VPI +37.00
EL. 1053.02

+0.50%
-3.11%
445.00' V.C.

EXISTING GROUND LINE

1049.3 1049.4 1049.59 1049.6 1049.84 1049.7 1050.09 1049.8 1050.34 1049.8 1050.59 1050.1 1050.84 1049.8 1051.09 1049.5 1051.34 1049.5 1051.59 1049.9 1051.84 1050.3 1052.03 1050.0 1052.04 1050.1 1051.84 1049.9 1051.44 1049.8 1050.84 1049.0 1050.03 1047.8 1049.02 1046.5 1047.81

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

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LICENSED PROFESSIONAL ENGINEER

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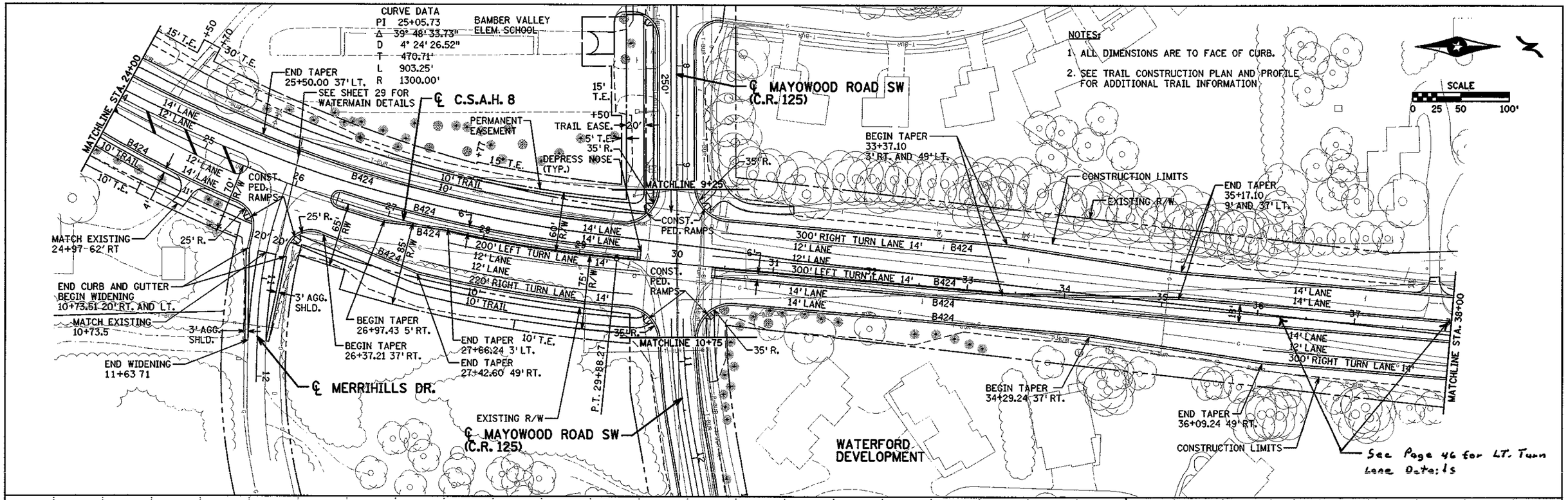
OLMSTED COUNTY

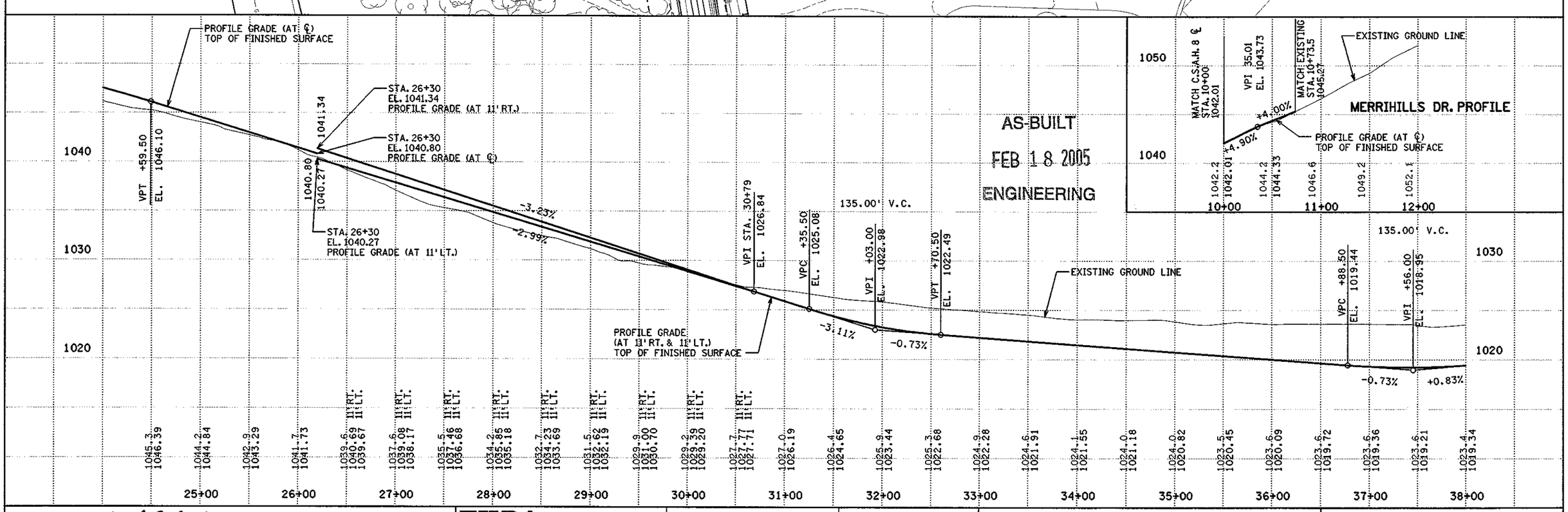
C.S.A.H. 8
S.P. 55-608-11

CONSTRUCTION PLAN AND PROFILE
STA. 15+15 TO 24+00

SHEET 38 OF 100 SHEETS

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OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

CONSTRUCTION PLAN AND PROFILE
STA. 24+00 TO 38+00

SHEET 39 OF 100 SHEETS

See Pages 46 & 47 for new turn lane details and new entrance.

NOTES:
1. ALL DIMENSIONS ARE TO FACE OF CURB.
2. SEE TRAIL CONSTRUCTION PLAN AND PROFILE FOR ADDITIONAL TRAIL INFORMATION.
3. SEE POND GRADING PLAN FOR POND GRADING INFORMATION.

SCALE
0 25 50 100'

CONSTRUCTION LIMITS
EXISTING R/W
℄ C.S.A.H. 8
MATCH EXISTING 43+39 106' LT.
BEGIN TAPER 42+24.34 3.0' RT
BEGIN TAPER 43+44.34 37' LT.
END BIT. SURFACE BEGIN AGG. SURFACE 43+54 93 51.9' LT.
END TAPER BEGIN TAPER 43+44.34 9' LT.
WETLAND LIMITS
END TAPER 46+14.34 31.0' LT.
END TAPER 46+14.34 3.0' LT.
STA. 48+60.84 END BRIDGE NO. 55567
MATCHLINE STA. 38+00
14' LANE B424
14' LANE B424
14' LANE 12' LANE
14' LANE 12' LANE
14' RIGHT TURN LANE B424
14' LANE 12' LANE 14' LEFT TURN LANE
10' TRAIL 10'
CONST. PED. RAMP
14' LANE 14' LANE B424
10' 10' TRAIL
25' R.
+20 +40
15' T.E.
MATCH EXISTING 39+46.4 90.4' RT.
MATCH EXISTING 39+80.1 93.3' RT.
CONSTRUCTION LIMITS
BEGIN TAPER 43+44.03 9' RT.
BEGIN TAPER 43+44.34 37' RT.
44+42.20 60.16 RT.
CONST. PED. RAMP
10' 8' TRAIL
15' R.
44+63.20 59.69 RT.
END TAPER 46+14.34 31.0' RT.
STA. 46+49.33 BEGIN BRIDGE NO. 55567
END TAPER 46+14.34 3.0' RT.
MATCHLINE 49+00
WETLAND LIMITS
END BIT. SURFACE BEGIN AGG. SURFACE 44+55 67 96 4' RT
MATCH EXISTING 44+67.5 157' RT.
+20 25' T.E. +25
EXISTING R/W
+15 65' T.E. +71
ZUMBRO RIVER
308 W
WATERFORD DEVELOPMENT
ROCHESTER PUBLIC UTILITY POWER SUBSTATION
+15 45' T.E. 55

135.00' V.C.
VPT +23.50 EL. 1019.51
PROFILE GRADE (AT 11' RT. & 11' LT.) TOP OF FINISHED SURFACE
STA. 43+58.96 EL. 1023.95 PROFILE GRADE (AT EDGES OF BITUMINOUS)
VPC +57.50 EL. 1025.60
VPI +25.00 EL. 1026.16
VPT +92.50 EL. 1025.52
+0.83%
-0.95%
STA. 46+28.65 EL. 1023.95 PROFILE GRADE (AT 5' RT. & 5' LT.)
EXISTING GROUNDLINE
1030
1020
1010
1000
38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00
1023.7 1020.14
1023.7 1020.56
1023.6 1020.97
1023.6 1021.39
1023.7 1021.80
1022.3 1022.22
1020.9 1022.63
1017.2 1023.05
1014.8 1023.46
1019.6 1023.88
1013.3 1024.29
1012.9 1024.71
1012.7 1025.12
1012.1 1025.54
1013.6 1025.83
1011.0 1025.81
1002.0 1025.45
1002.3 1024.97
1004.6 1024.50
1009.7 1024.02
1009.9 1023.55
MATCHLINE 49+00

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TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | CONSTRUCTION PLAN AND PROFILE STA. 38+00 TO 49+00 | SHEET 40 OF 100 SHEETS

END S.P. 55-608-11
STA. 51+08.09
MATCH EXISTING

℄ C.S.A.H. 22

END B424 CURB AND GUTTER END TAPER MATCH EXISTING 155+64.86 1.3' LT.

MATCH EXISTING 158+32 35' LT.

BEGIN TAPER 154+88.46 8.7' RT.

MATCH EXISTING 11' LT. AND 11' RT.

END B424 CURB AND GUTTER MATCH EXISTING 152+~~87.22~~ 97

Inplace Curb And Gutter

EXISTING R/W

~~BEGIN B424 CURB AND GUTTER 148+35.79~~

CONSTRUCT 6" ~~CONCRETE~~ Bituminous DRIVEWAY

END B424 CURB AND GUTTER MATCH EXISTING STA. 158+29.15 67.0' LT.

25' R.

14' RIGHT TURN LANE

MATCH EXISTING

CONST. PED. RAMP

CONST. OUTPUT B424 C&G

240' R.

50' R.

240' R.

150' R.

END B424 CURB AND GUTTER 152+63

MATCH EXISTING 150+77 35' LT.

14' LEFT TURN LANE

CONST. PED. RAMPS

END TAPER 49+85.20 34.20' RT.

EXISTING R/W

CONSTRUCTION LIMITS

RET WALL

10' TRAIL
10' 14' LANE
14' LANE
14' LANE
14' LANE
10' 8' TRAIL

℄ C.S.A.H. 8

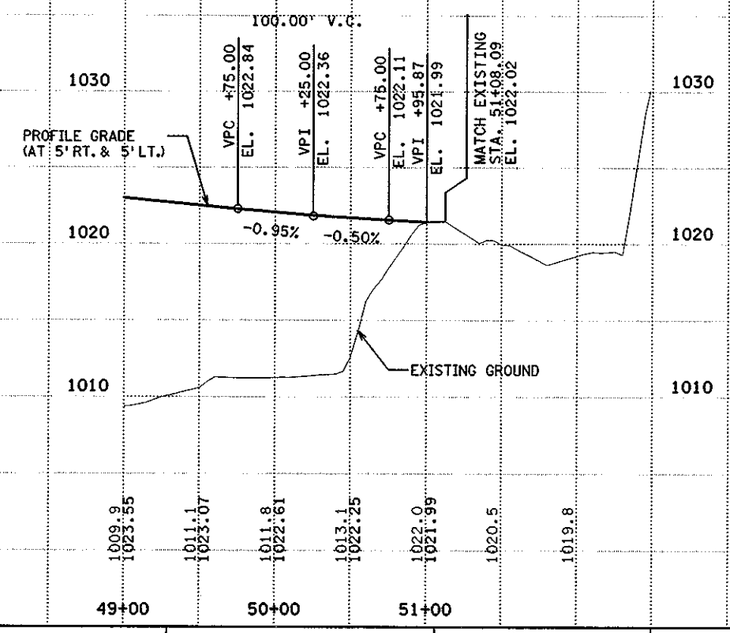
BEGIN TAPER 49+37.21 31' RT.

MATCHLINE 49+00

SCALE
0 25 50 100'

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB.
2. SEE TRAIL CONSTRUCTION PLAN AND PROFILE FOR ADDITIONAL TRAIL INFORMATION.
3. SEE POND GRADING PLAN FOR POND GRADING INFORMATION.



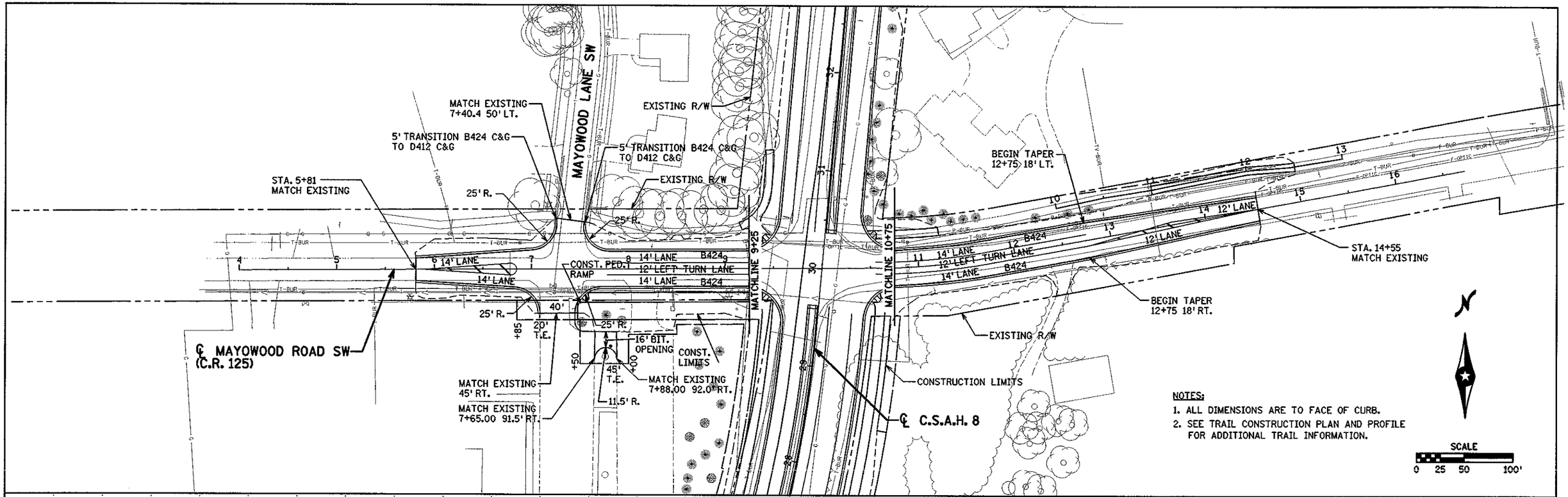
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FEB 18 2005
ENGINEERING

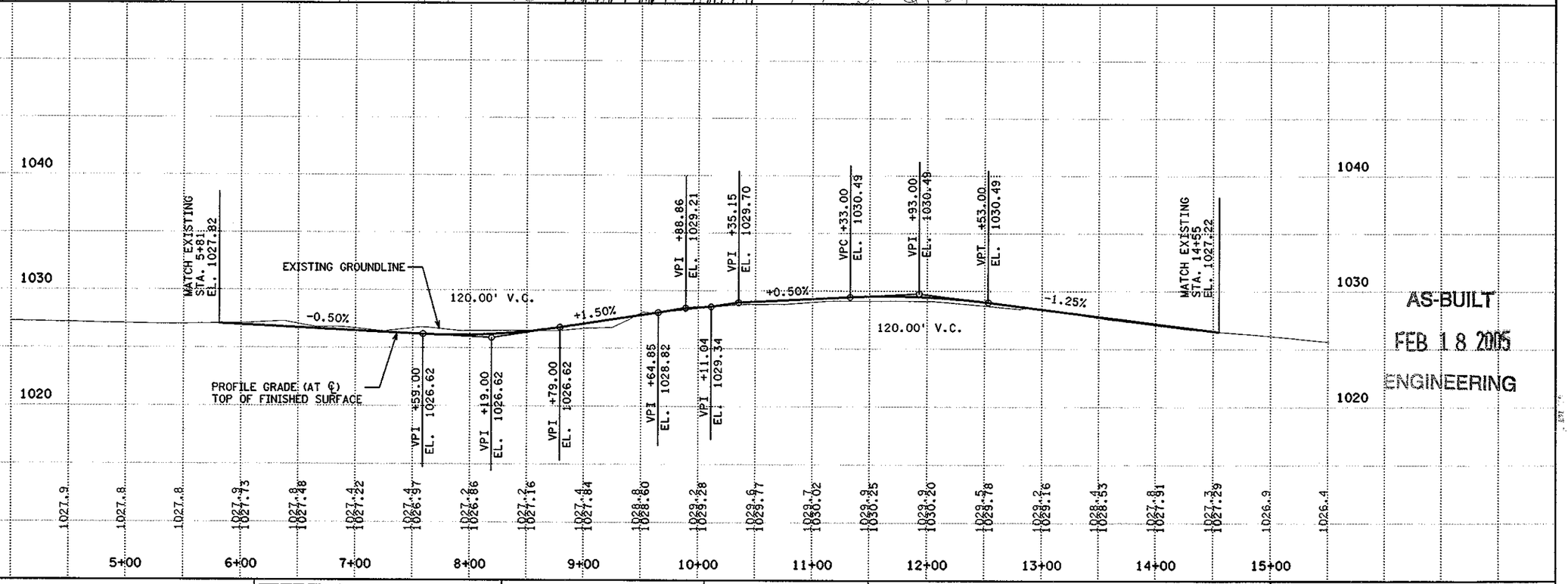
CERTIFIED BY _____ LIC. NO. 26880 3/28 2001
LICENSED PROFESSIONAL ENGINEER

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY | C.S.A.H. 8 S.P. 55-608-11 | CONSTRUCTION PLAN AND PROFILE STA. 49+00 TO 50+95.87 | SHEET 41 OF 100 SHEETS

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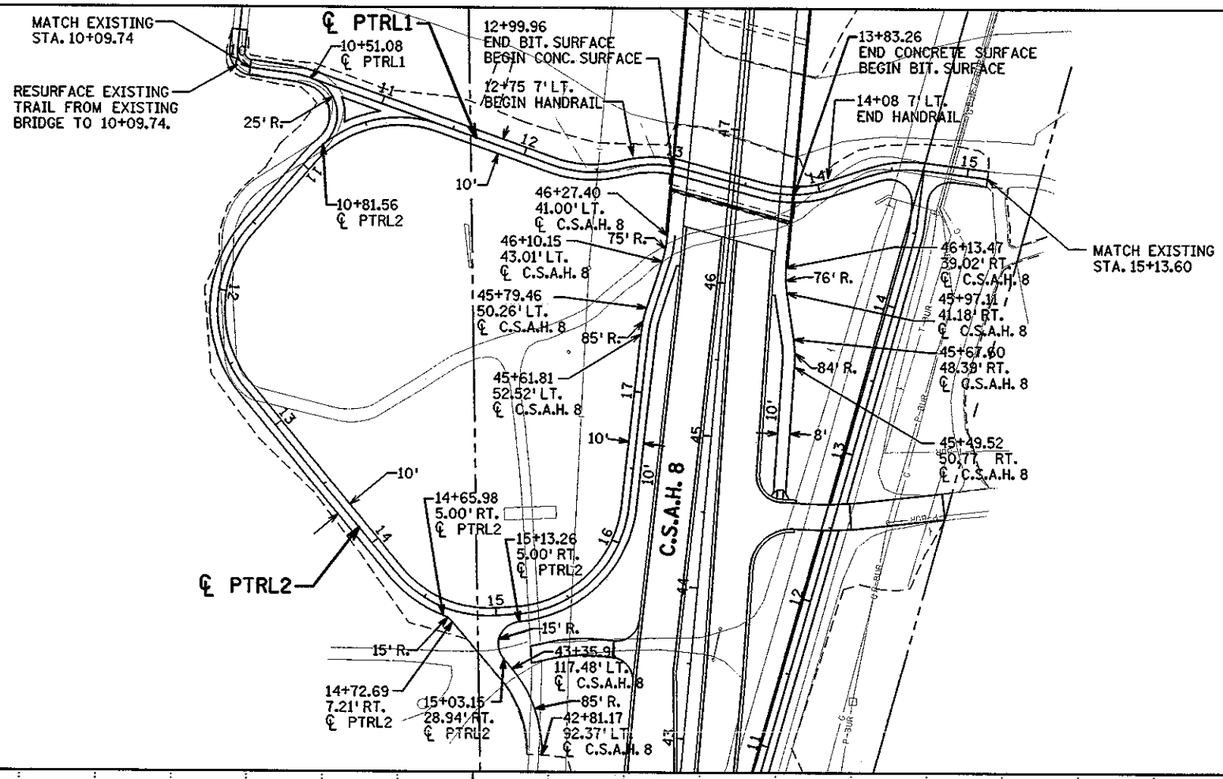
CERTIFIED BY Grant O. Paulson LICENSED PROFESSIONAL ENGINEER LIC. NO. 26880 3/27 2001

TKDA ENGINEERS·ARCHITECTS·PLANNERS TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED SAINT PAUL, MINNESOTA

OLMSTED COUNTY

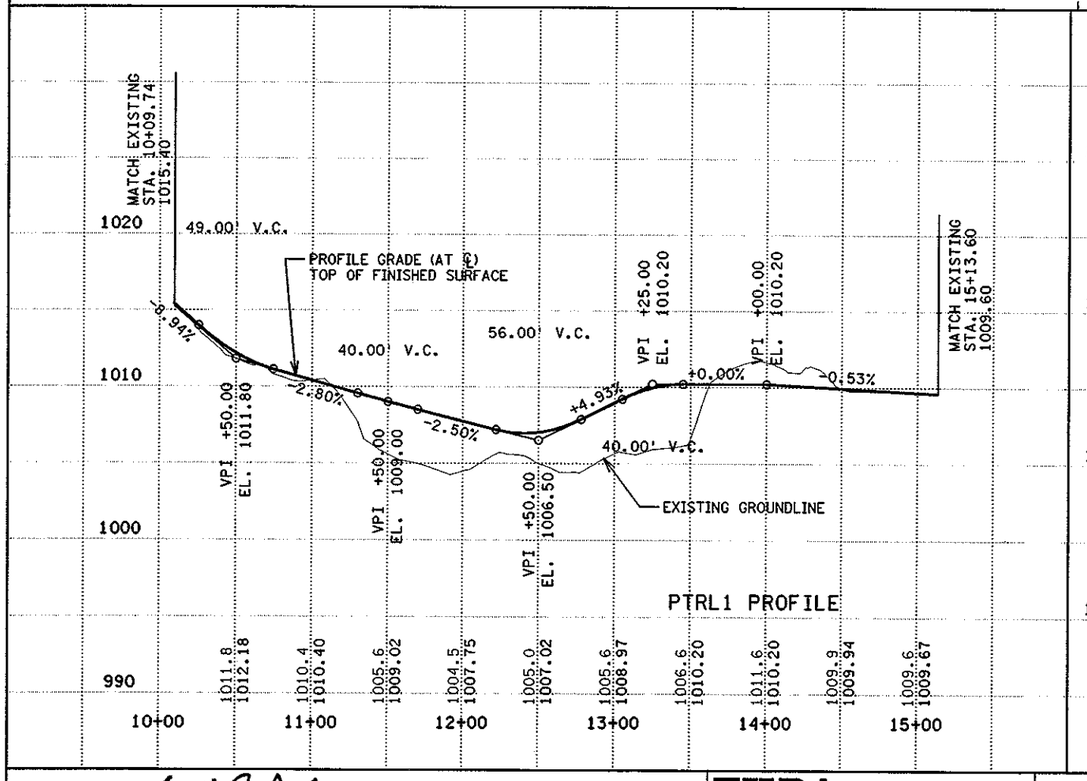
C.S.A.H. 8
S.P. 55-608-11

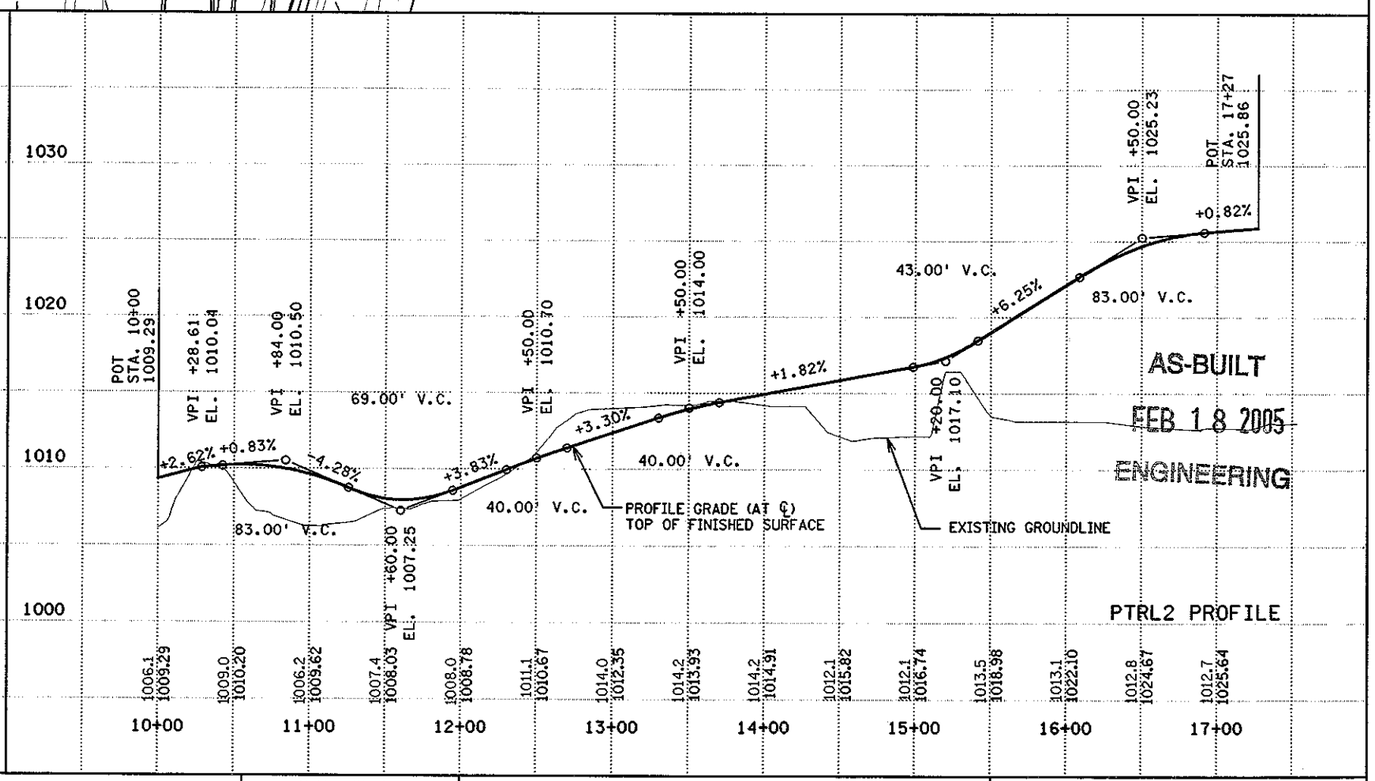
CONSTRUCTION PLAN AND PROFILE – C.R. 125
STA. 5+81 TO 14+55



NOTES:

1. SEE ALIGNMENT PLAN FOR TRAIL CENTERLINE ALIGNMENT INFORMATION





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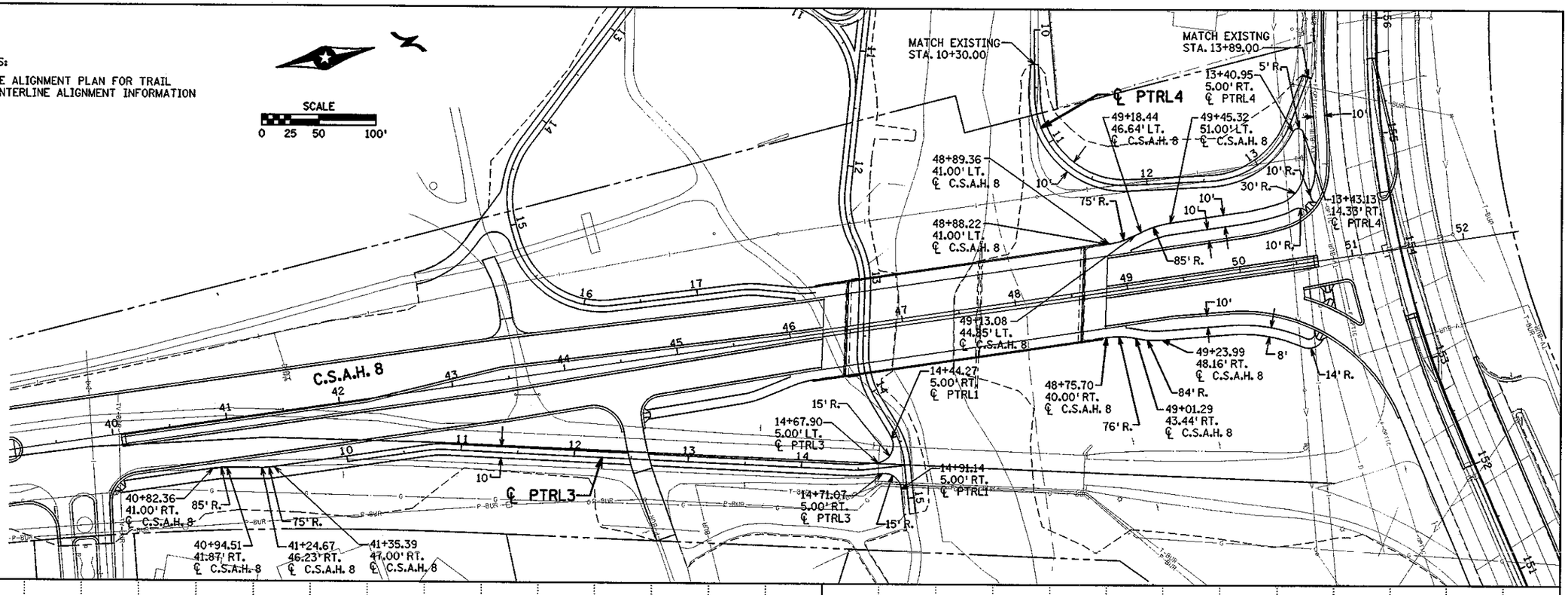
TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

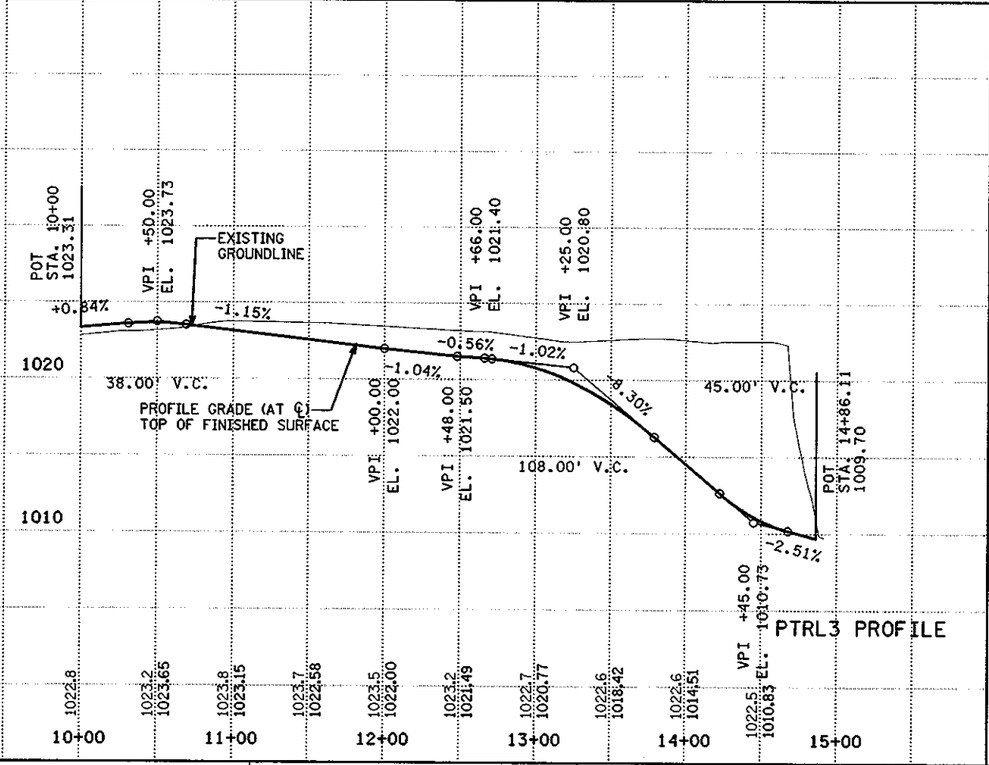
OLMSTED COUNTY	C.S.A.H. 8 S.P. 55-608-11	TRAIL CONSTRUCTION PLAN AND PROFILE	SHEET 43 OF 100 SHEETS

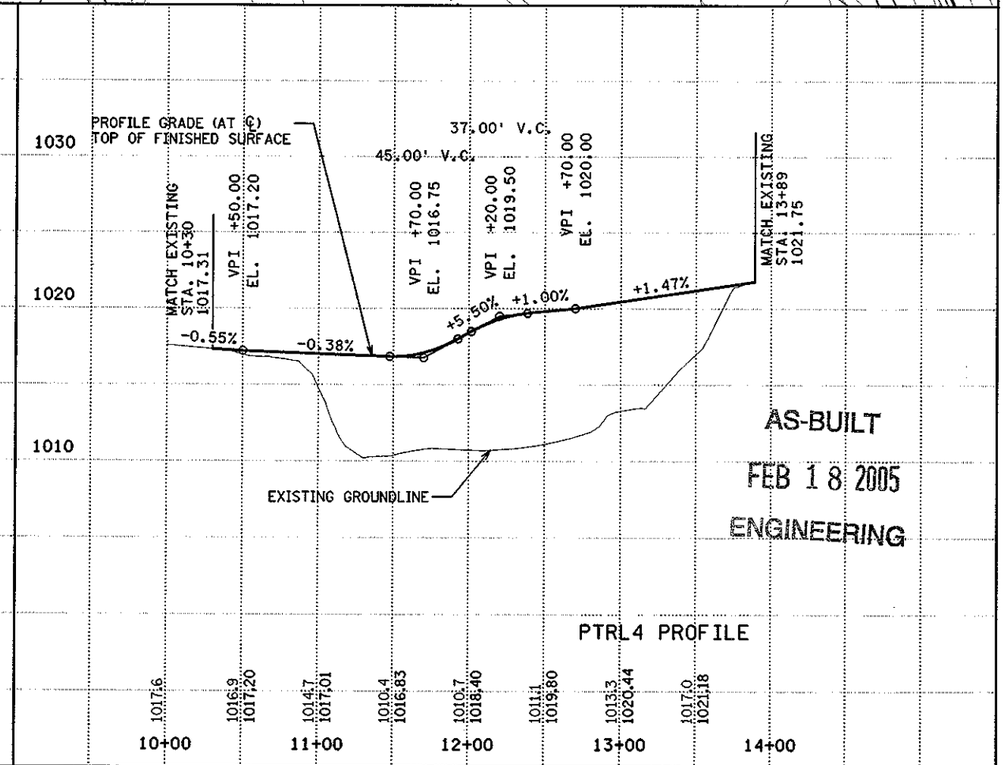
NOTES:

1. SEE ALIGNMENT PLAN FOR TRAIL CENTERLINE ALIGNMENT INFORMATION

SCALE
0 25 50 100'







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FEB 18 2005
ENGINEERING

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TKDA
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ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

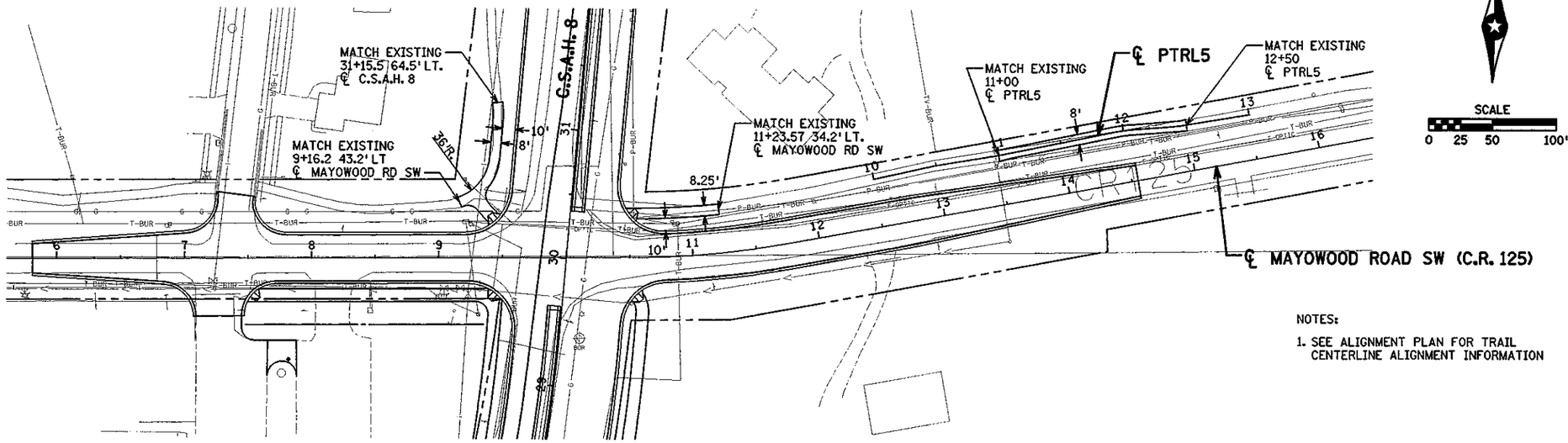
OLMSTED COUNTY

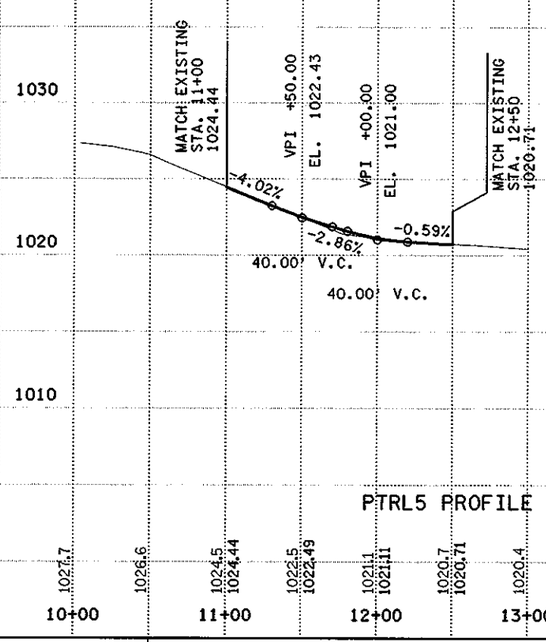
C.S.A.H. 8
S.P. 55-608-11

TRAIL CONSTRUCTION AND PROFILE

SHEET 44 OF 100 SHEETS

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ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

TRAIL CONSTRUCTION – C.R.125
AND PROFILE

SHEET 45 OF 100 SHEETS

LEGEND

BITUMINOUS SURFACING

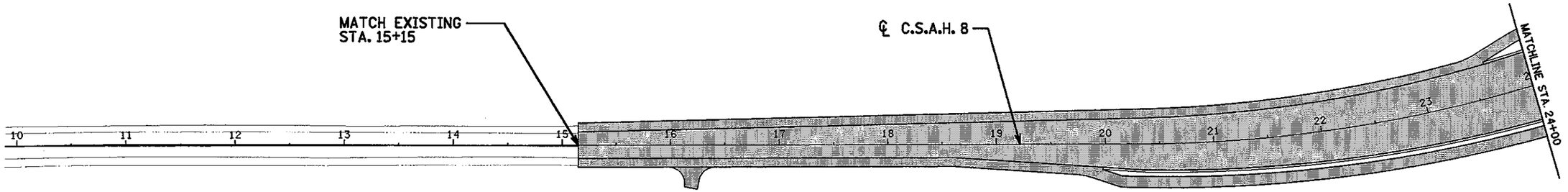
PANEL REINF. OVER CULVERT SEE STANDARD PLATE 1070L

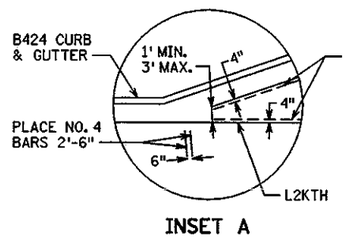
NOTE:

CONSTRUCTION HEADER JOINTS SHALL BE INCIDENTAL AND NO DIRECT PAYMENT WILL BE MADE.

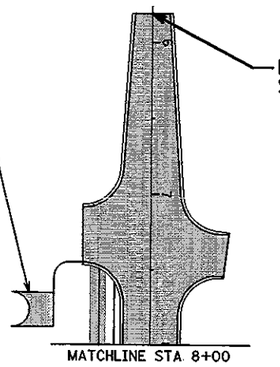
(1) JOINTS IN THIS AREA SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

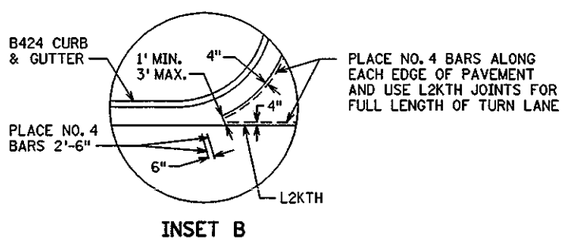
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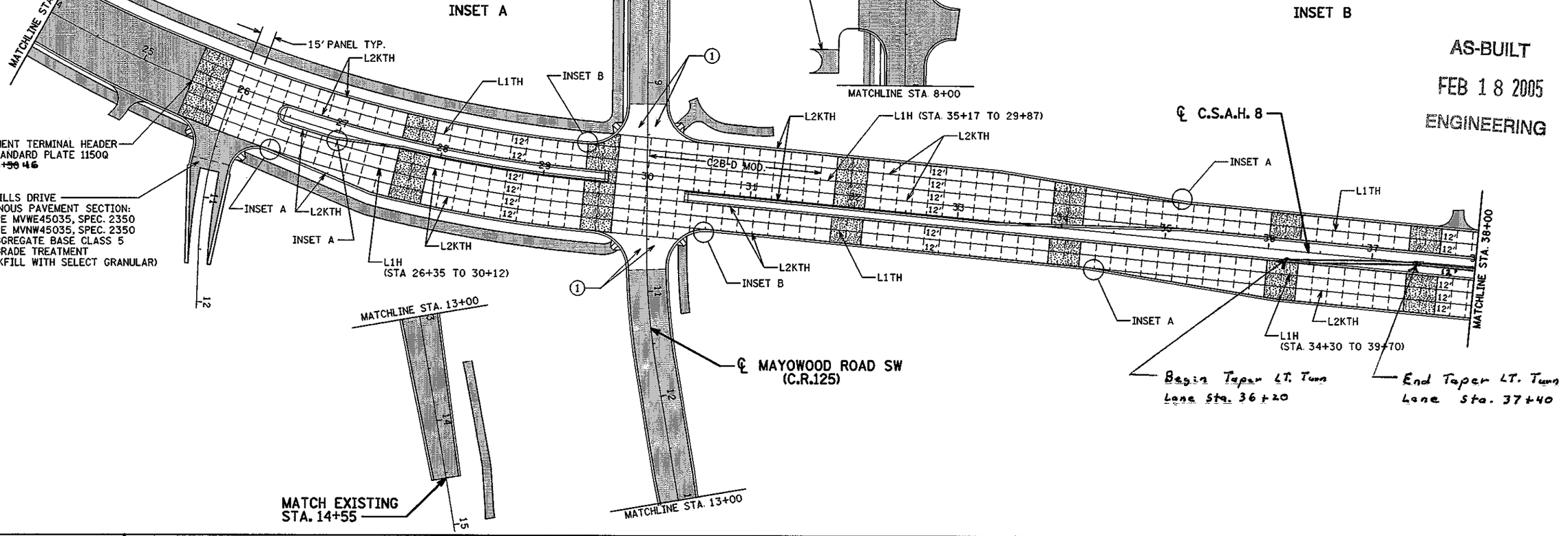


INSET A





INSET B



AS-BUILT

FEB 18 2005

ENGINEERING

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LEGEND

BITUMINOUS SURFACING

PANEL REINF. OVER CULVERT SEE STANDARD PLATE 1070L

NOTES:

1 CONSTRUCTION HEADER JOINTS SHALL BE INCIDENTAL AND NO DIRECT PAYMENT WILL BE MADE.

2 PROPOSED JOINTS SHALL MATCH EXISTING JOINT LOCATIONS ALONG CSAH 22. DRILL EXISTING CONCRETE PAVEMENT TO INSTALL TIE BARS.

(1) JOINTS IN THIS AREA SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

SCALE
0 25 50 100'

℄ Sta. 39+82.10
Δ Lt. 83°13'05"

Begin Taper 42+11

End Taper 43+31

MATCHLINE STA. 38+00

L2KTH

L1TH

L1H (STA. 43+45 TO 39+55)

INSET A

C2B-D MOD.

BRIDGE NO. 55567

L1H (STA 34+30 TO 39+70)

INSET B

WATERFORD ENTRANCE

WATERFORD ENTRANCE
BITUMINOUS PAVEMENT SECTION:
2" TYPE MVWE45035, SPEC. 2350
4" TYPE MVNW45035, SPEC. 2350
12" AGGREGATE BASE CLASS 5
1' SUBGRADE TREATMENT
(BACKFILL WITH SELECT GRANULAR)

℄ C.S.A.H. 8

RPU ENTRANCE
BITUMINOUS PAVEMENT SECTION:
2" TYPE MVWE45035, SPEC. 2350
4" TYPE MVNW45035, SPEC. 2350
12" AGGREGATE BASE CLASS 5
1' SUBGRADE TREATMENT
(BACKFILL WITH SELECT GRANULAR)

CONCRETE TRAIL
8' JOINT SPACING
(SAWED 1" DEPTH)

℄ C.S.A.H. 22

C.S.A.H. 22
CONCRETE PAVEMENT SECTION:
9" NON-REINFORCED CONCRETE PAVEMENT
6" AGGREGATE BASE CLASS 5
1' SUBGRADE TREATMENT
(BACKFILL WITH SELECT GRANULAR)

C.S.A.H. 22
CONCRETE MEDIAN SECTION:
3" CONCRETE WALK
2" GRANULAR BEDDING

C.S.A.H. 22
CONCRETE PAVEMENT SECTION:
9" NON-REINFORCED CONCRETE PAVEMENT
6" AGGREGATE BASE CLASS 5

C.S.A.H. 22
CONCRETE MEDIAN SECTION:
3" CONCRETE WALK
2" GRANULAR BEDDING

10'

B424 CURB & GUTTER
1' MIN. 3' MAX.
4"
PLACE NO. 4 BARS 2'-6"
6"
L2KTH
PLACE NO. 4 BARS ALONG EACH EDGE OF PAVEMENT AND USE L2KTH JOINTS FOR FULL LENGTH OF TURN LANE

INSET A

INSET B

AS-BUILT
FEB 18 2005
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ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY

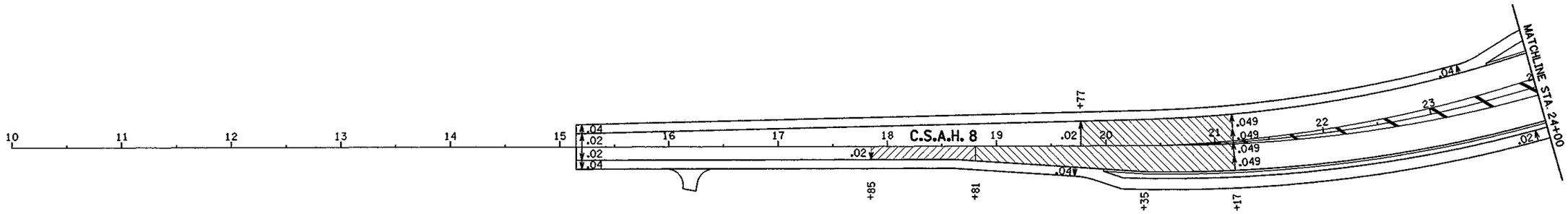
C.S.A.H. 8
S.P. 55-608-11

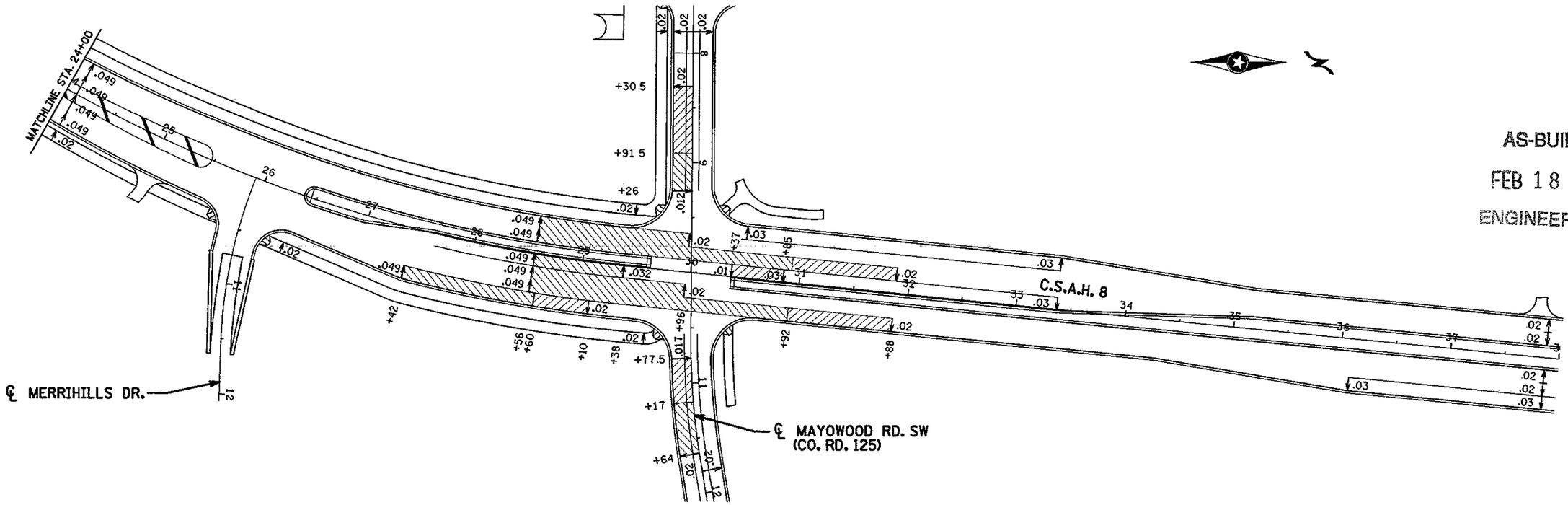
SURFACING PLAN
STA. 38+00 TO 51+00

SHEET 47 OF 100 SHEETS

CROSS SLOPE IN TRANSITION

SCALE
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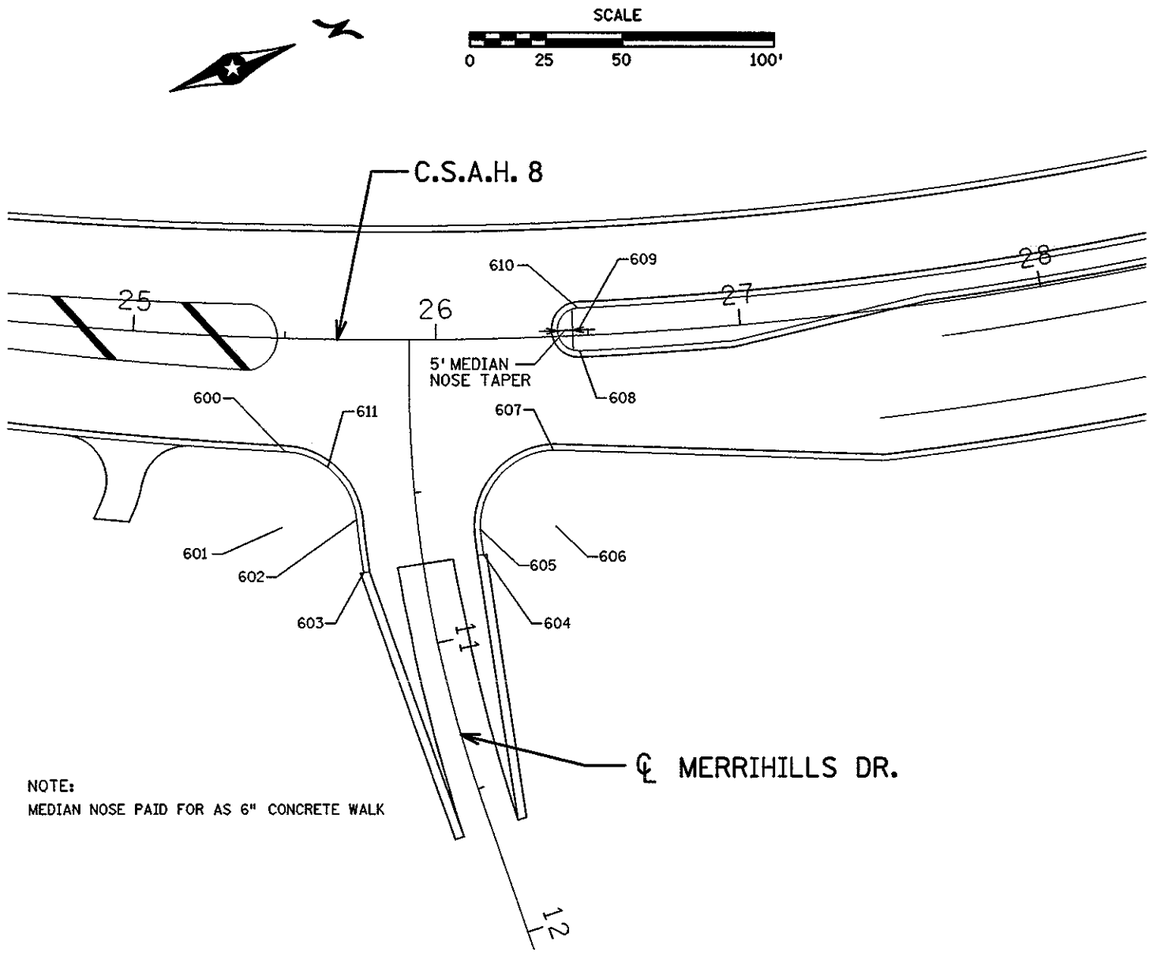
AS-BUILT

FEB 18 2005

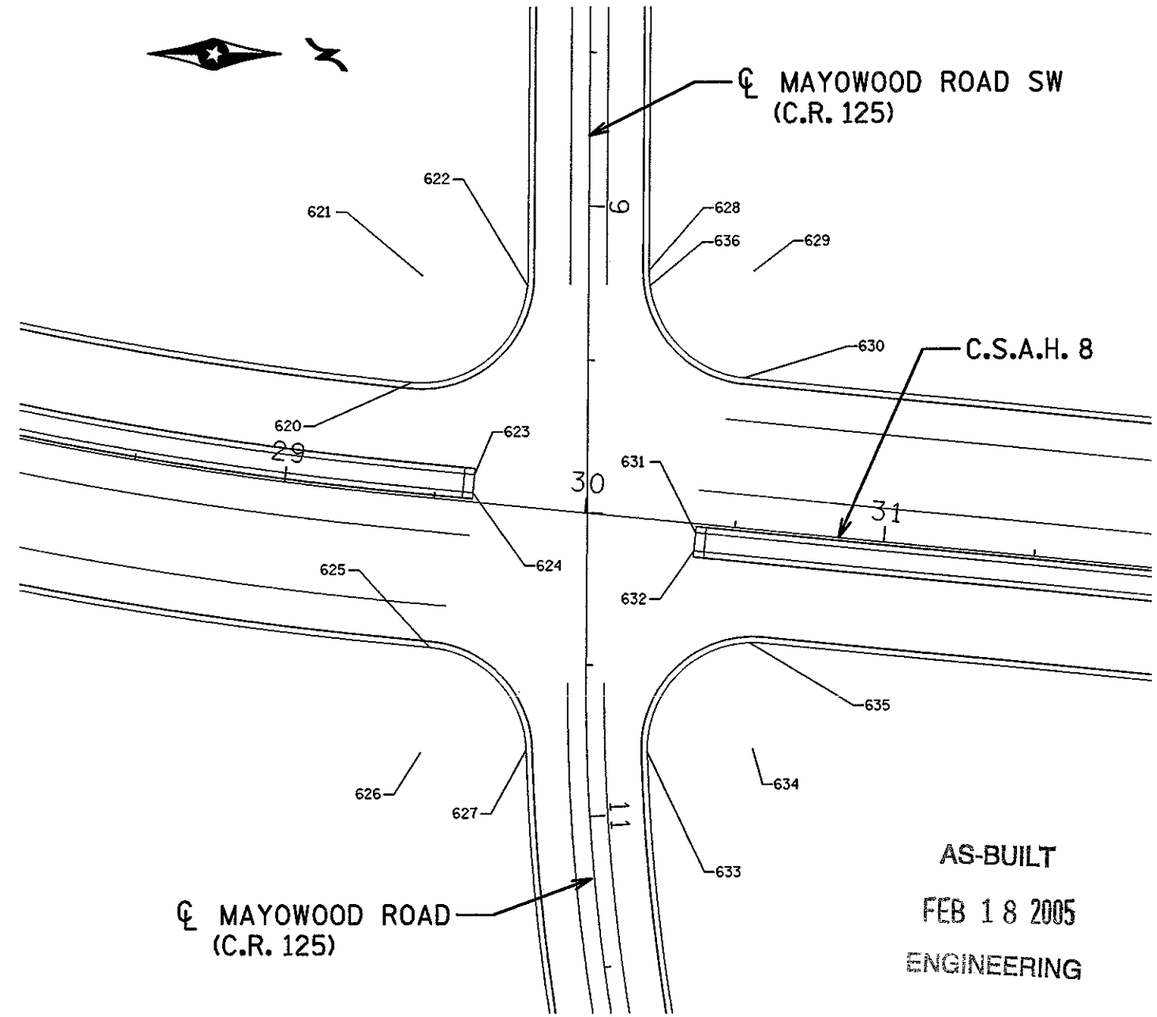
ENGINEERING

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CERTIFIED BY Brent J. Parker LICENSED PROFESSIONAL ENGINEER LIC. NO. 26880 3/28 2001	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA	OLMSTED COUNTY	C.S.A.H. 8 S.P. 55-608-11	SUPERELEVATION PLAN	SHEET 48 OF 100 SHEETS



NOTE:
MEDIAN NOSE PAID FOR AS 6" CONCRETE WALK



AS-BUILT

FEB 18 2005

ENGINEERING

POINT NO.	CENTERLINE	STATION	OFFSET	COORDINATES		GUTTER EL.	DESCRIPTION
				X	Y		
600	C.S.A.H. 8	25+51.22	37.00' RT.	395282.727	65131.114		BEGIN 25' RADIUS
601	C.S.A.H. 8	25+50.71	62.02' RT.	395305.709	65121.275		CENTER 25' RADIUS
602	MERRI	10+56.65	50.00' RT.	395305.709	65121.275	EL. 1044.82	END 25' RADIUS
603	MERRI	10+73.52	20.00' RT.	395328.990	65141.569		END B424 C&G
604	MERRI	10+73.49	20.00' LT.	395337.161	65180.726		BEGIN B424 C&G
605	MERRI	10+64.69	20.11' LT.	395328.992	65182.635	EL. 1044.51	BEGIN 25' RADIUS
606	C.S.A.H. 8	26+37.21	62.00' RT.	395336.787	65206.388		CENTER 25' RADIUS
607	C.S.A.H. 8	26+37.21	37.00' RT.	395313.033	65214.183		END 25' RADIUS
608	C.S.A.H. 8	26+46.98	5.00' RT.	395285.652	65233.495		BEGIN 7' RADIUS
609	C.S.A.H. 8	26+46.98	2.00' RT.	395278.985	65235.627		CENTER 7' RADIUS
610	C.S.A.H. 8	26+46.98	9.00' LT.	395272.317	65237.760		END 7' RADIUS
611	C.S.A.H. 8	25+64.80	41.77' RT.	395272.298	65142.374	EL. 1044.57	LOW POINT IN RADIUS

POINT NO.	CENTERLINE	STATION	OFFSET	COORDINATES		GUTTER EL.	DESCRIPTION
				X	Y		
620	C.S.A.H. 8	29+38.85	37.00' LT.	395301.112	65523.781		BEGIN 35' RADIUS
621	C.S.A.H. 8	29+38.84	72.00' RT.	395266.239	65526.753		CENTER 35' RADIUS
622	MAYO	9+25.83	20.15' RT.	395269.211	65561.627	EL. 1028.33	END 35' RADIUS
623	C.S.A.H. 8	29+62.43	9.00' LT.	395331.023	65544.886		END MEDIAN NOSE
624	C.S.A.H. 8	29+62.43	3.00' LT.	395337.002	65544.374		END MEDIAN NOSE
625	C.S.A.H. 8	29+53.57	49.00' RT.	395388.055	65531.102	EL. 1031.30	BEGIN 35' RADIUS
626	C.S.A.H. 8	29+53.56	84.00' RT.	395422.927	65528.114		CENTER 35' RADIUS
627	MAYO	10+77.49	20.00' RT.	395421.501	65563.085	EL. 1030.09	END 35' RADIUS
628	MAYO	9+20.71	20.00' LT.	395263.840	65601.740	EL. 1027.68	BEGIN 35' RADIUS
629	C.S.A.H. 8	30+48.20	84.00' LT.	395263.619	65636.739		CENTER 35' RADIUS
630	C.S.A.H. 8	30+48.20	49.00' LT.	395298.492	65633.751		END 35' RADIUS
631	C.S.A.H. 8	30+37.11	3.00' RT.	395349.355	65618.263		BEGIN MEDIAN NOSE
632	C.S.A.H. 8	30+37.11	9.00' RT.	395355.333	65617.750		BEGIN MEDIAN NOSE
633	MAYO	10+79.32	20.00' LT.	395421.744	65603.126	EL. 1029.44	BEGIN 35' RADIUS
634	C.S.A.H. 8	30+62.93	72.00' RT.	395420.307	65638.097		CENTER 35' RADIUS
635	C.S.A.H. 8	30+58.51	37.28' RT.	395385.337	65636.660		END 35' RADIUS
636	MAYO	9+25.69	20.36' LT.	395268.821	65602.128	EL. 1027.73	HIGH POINT IN RADIUS

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LICENSED PROFESSIONAL ENGINEER

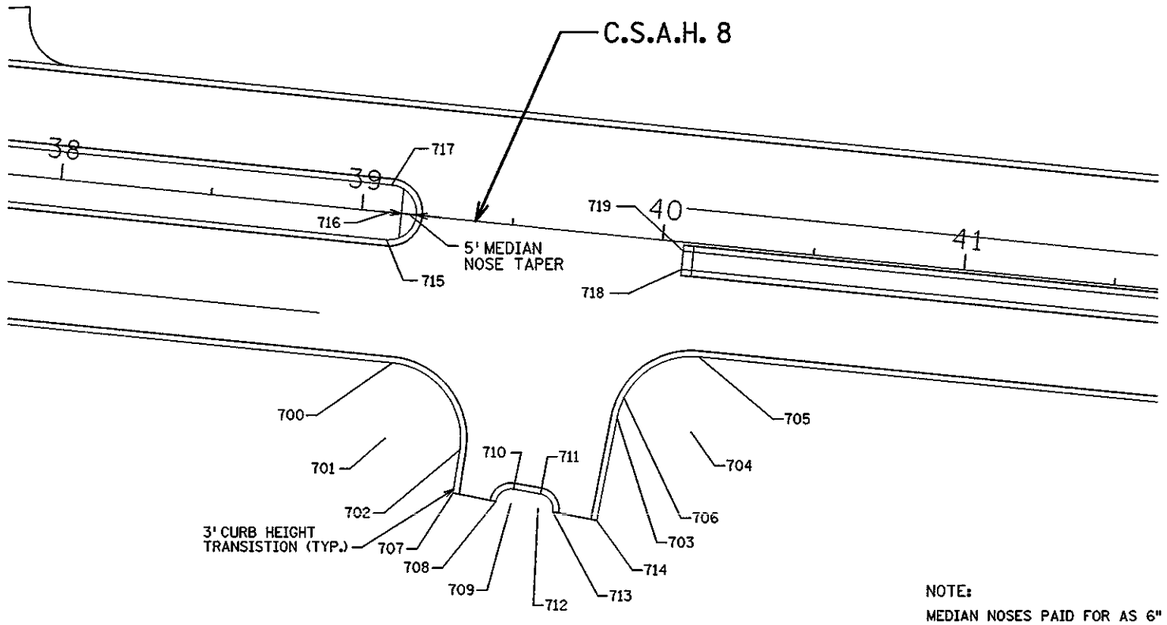
TKDA ENGINEERS·ARCHITECTS·PLANNERS — TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED — SAINT PAUL, MINNESOTA

OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

INTERSECTION GEOMETRICS

SCALE
0 25 50 100'



NOTE:
MEDIAN NOSES PAID FOR AS 6" CONCRETE WALK

WATERFORD DEVELOPMENT

POINT NO.	CENTERLINE	STATION	OFFSET	COORDINATES		GUTTER EL.	
				X	Y		
700	C.S.A.H. 8	39+15.00	49.00' RT.	395470.135	66489.002		
701	C.S.A.H. 8	39+15.00	74.00' RT.	395495.044	66486.887		CENTER 25' RADIUS
702	C.S.A.H. 8	39+40.00	74.00' RT.	395497.178	66511.796	EL. 1020.78	END 25' RADIUS
703	C.S.A.H. 8	39+90.80	59.63' RT.	395487.194	66563.639	EL. 1020.85	BEGIN 25' RADIUS
704	C.S.A.H. 8	40+15.69	62.00' RT.	395491.684	66588.233		CENTER 25' RADIUS
705	C.S.A.H. 8	40+15.69	37.00' RT.	395466.775	66590.367		END 25' RADIUS
706	C.S.A.H. 8	39+92.43	52.82' RT.	395480.551	66565.848	EL. 1020.80	LOW POINT IN RADIUS
707	C.S.A.H. 8	39+39.24	89.71' RT.	395512.761	66509.701		END C&G
708	C.S.A.H. 8	39+53.61	91.08' RT.	395515.353	66523.897		BEGIN 5' RADIUS
709	C.S.A.H. 8	39+58.59	91.43' RT.	395516.136	66528.835		CENTER 5' RADIUS
710	C.S.A.H. 8	39+58.95	86.45' RT.	395511.197	66529.618		END 5' RADIUS
711	C.S.A.H. 8	39+68.19	87.11' RT.	395512.649	66538.767		BEGIN 5' RADIUS
712	C.S.A.H. 8	39+67.71	92.09' RT.	395517.567	66537.864		CENTER 5' RADIUS
713	C.S.A.H. 8	39+72.69	92.57' RT.	395518.470	66542.782		END 5' RADIUS
714	C.S.A.H. 8	39+87.52	93.98' RT.	395521.146	66557.441		BEGIN C&G
715	C.S.A.H. 8	39+09.01	9.00' RT.	395429.770	66486.468		BEGIN 25' RADIUS
716	C.S.A.H. 8	39+09.01	0.00' RT.	395420.803	66487.236		CENTER 9' RADIUS
717	C.S.A.H. 8	39+09.01	9.00' LT.	395411.836	66488.004		END 25' RADIUS
718	C.S.A.H. 8	40+07.16	9.00' RT.	395438.149	66584.262		BEGIN MEDIAN NOSE
719	C.S.A.H. 8	40+07.16	3.00' RT.	395432.171	66584.774		BEGIN MEDIAN NOSE

AS-BUILT
FEB 18 2005
ENGINEERING

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LICENSED PROFESSIONAL ENGINEER

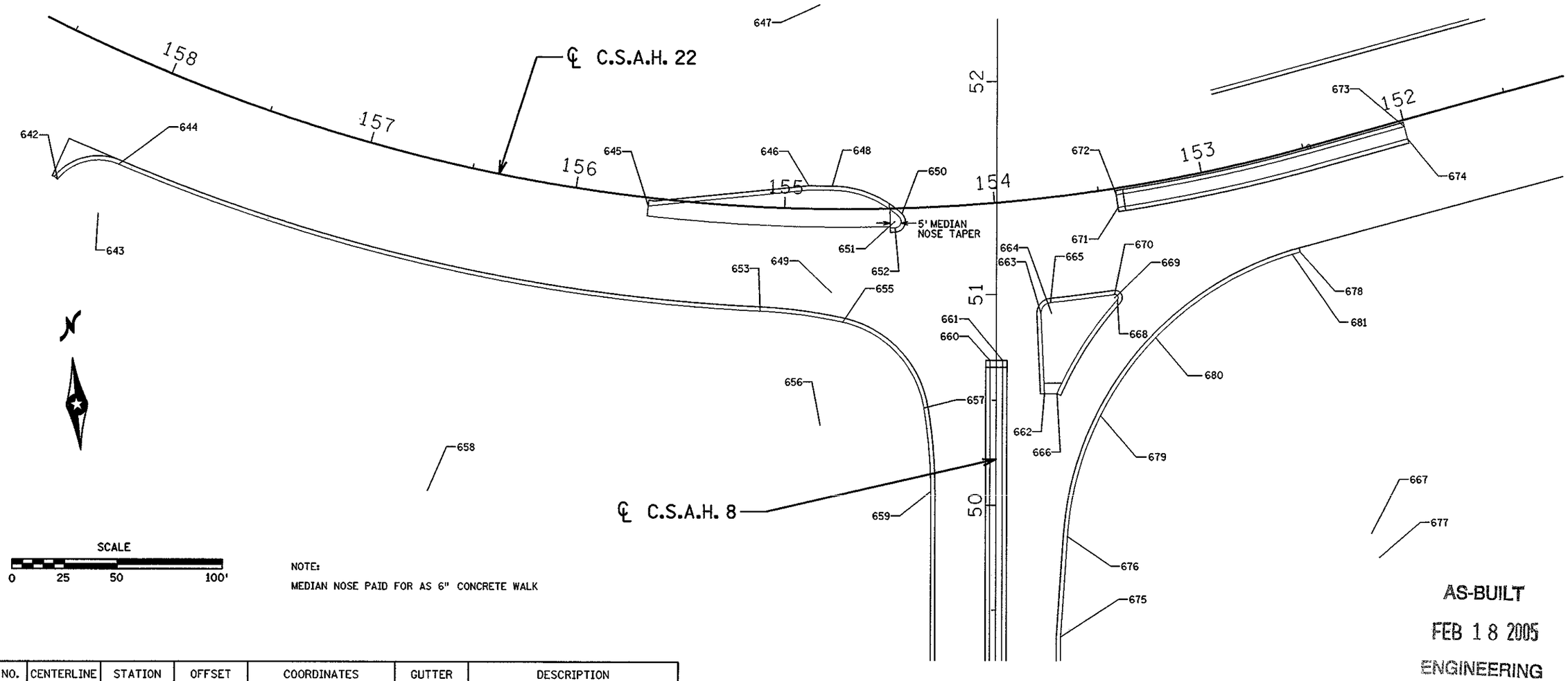
TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

INTERSECTION GEOMETRICS

SHEET 50 OF 100 SHEETS



SCALE

0 25 50 100'

NOTE:

MEDIAN NOSE PAID FOR AS 6" CONCRETE WALK

AS-BUILT

FEB 18 2005

ENGINEERING

POINT NO.	CENTERLINE	STATION	OFFSET	COORDINATES		GUTTER EL.	DESCRIPTION
				X	Y		
642	C.S.A.H. 22	158+27.53	65.80' LT.	395083.592	67765.327		BEGIN 25' RADIUS
643	C.S.A.H. 22	158+05.71	74.00' LT.	395100.525	67746.935		CENTER 25' RADIUS
644	C.S.A.H. 22	158+05.71	49.00' LT.	395112.058	67769.116		END 25' RADIUS
645	C.S.A.H. 22	155+64.86	3.91' LT.	395360.406	67729.279		BEGIN B424 C&G, BEGIN TAPER
646	C.S.A.H. 22	154+88.46	8.76' RT.	395437.596	67730.370		END TAPER, BEGIN 816.93' RADIUS
647	C.S.A.H. 22	155+66.84	825.57' RT.	395521.555	68542.959		CENTER 816.93' RADIUS
648	C.S.A.H. 22	154+77.27	8.77' RT.	395448.615	67729.293		END 816.93' RADIUS, BEGIN 48' RADIUS
649	C.S.A.H. 22	154+77.14	39.23' LT.	395444.329	67681.485		CENTER 48' RADIUS
650	C.S.A.H. 22	154+45.38	3.95' LT.	395479.396	67714.262		END 48' RADIUS, BEGIN 3' RADIUS
651	C.S.A.H. 22	154+47.44	6.12' LT.	395477.204	67712.213		CENTER 3' RADIUS
652	C.S.A.H. 22	154+47.43	9.12' LT.	395477.044	67709.218		END 3' RADIUS
653	C.S.A.H. 22	155+09.51	49.03' LT.	395409.397	67675.529		BEGIN 240' RADIUS
654	C.S.A.H. 22	155+09.53	289.03' LT.	395378.164	67437.570		CENTER 240' RADIUS
655	C.S.A.H. 22	154+71.96	53.25' LT.	395448.515	67667.027		END 240' RADIUS, BEGIN 50' RADIUS
656	C.S.A.H. 22	154+81.32	102.20' LT.	395433.859	67619.224		CENTER 50' RADIUS
657	C.S.A.H. 8	50+46.27	34.33' LT.	395483.694	67623.279		END 50' RADIUS, BEGIN 240' RADIUS
658	C.S.A.H. 8	50+06.46	271.00' LT.	395244.484	67603.815		CENTER 240' RADIUS
659	C.S.A.H. 8	50+06.46	31.00' LT.	395483.608	67583.325		END 240' RADIUS
660	C.S.A.H. 8	50+68.88	3.00' LT.	395516.835	67643.126		END MEDIAN NOSE
661	C.S.A.H. 8	50+68.88	3.00' RT.	395522.813	67642.614		END MEDIAN NOSE
662	C.S.A.H. 8	50+53.15	23.00' RT.	395541.398	67625.241	EL. 1022.34	BEGIN MEDIAN NOSE
663	C.S.A.H. 8	50+91.06	21.22' RT.	395542.862	67663.166		BEGIN 5' RADIUS

POINT NO.	CENTERLINE	STATION	OFFSET	COORDINATES		GUTTER EL.	DESCRIPTION
				X	Y		
664	C.S.A.H. 22	153+78.41	54.22' LT.	395547.858	67662.974		CENTER 5' RADIUS
665	C.S.A.H. 22	153+78.40	49.22' LT.	395547.748	67667.972		END 5' RADIUS
666	C.S.A.H. 8	50+53.15	29.00' RT.	395547.376	67624.729	EL. 1022.30	BEGIN MEDIAN NOSE, BEGIN 165' RADIUS
667	C.S.A.H. 8	49+86.77	180.06' RT.	395692.215	67545.694		CENTER 165' RADIUS
668	C.S.A.H. 22	153+48.12	51.95' LT.	395579.923	67666.589	EL. 1022.11	END 165' RADIUS, BEGIN 1.5' RADIUS
669	C.S.A.H. 22	153+49.01	50.80' LT.	395578.903	67667.688		CENTER 1.5' RADIUS
670	C.S.A.H. 22	153+49.01	49.30' LT.	395578.819	67669.185		END 1.5' RADIUS
671	C.S.A.H. 22	153+41.65	9.00' LT.	395583.875	67709.888		BEGIN MEDIAN NOSE
672	C.S.A.H. 22	153+41.65	3.00' LT.	395583.471	67715.874		BEGIN MEDIAN NOSE
673	C.S.A.H. 22	152+00.18	3.00' LT.	395723.762	67735.859		END B424 C&G (MEDIAN)
674	C.S.A.H. 22	152+00.18	9.00' LT.	395724.829	67729.954		END B424 C&G (MEDIAN)
675	C.S.A.H. 8	49+37.21	31.00' RT.	395539.470	67509.036		BEGIN TAPER
676	C.S.A.H. 8	49+85.20	34.20' RT.	395546.755	67556.580		END TAPER, BEGIN 150' RADIUS
677	C.S.A.H. 8	49+75.22	183.87' RT.	395695.024	67533.861		CENTER 150' RADIUS
678	C.S.A.H. 22	152+62.98	46.82' LT.	395668.866	67681.563		END 150' RADIUS, END B424 C&G
679	C.S.A.H. 8	50+42.65	49.88' RT.	395567.278	67612.480	EL. 1021.91	POINT ON RADIUS
680	C.S.A.H. 22	153+33.71	72.46' LT.	395596.750	67647.185	EL. 1021.67	POINT ON RADIUS
681	C.S.A.H. 22	152+66.77	46.94' LT.	395664.937	67680.812	EL. 1021.32	LOW POINT IN RADIUS

CERTIFIED BY Brent D. Peterson LICENSED PROFESSIONAL ENGINEER LIC. NO. 16880 3/28 2001

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS•ARCHITECTS•PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

INTERSECTION GEOMETRICS

SHEET 51 OF 100 SHEETS

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AS-BUILT

FEB 18 2005

ENGINEERING

SCALE 0 25 50 100'

GRADE TO DRAIN

MATCHLINE 9+50

MATCHLINE 10+50

MATCHLINE STA. 38+00

C.S.A.H. 8

℄ MERRIHILLS DR.

℄ MAYOWOOD ROAD SW
(C.R. 125)

C.B. 21 R
sta. 37+51.66
Lt. 2'

C.B. 21 Covered With
Conc. Cover

CB-1
23+80.00
52.50' RT
T.C. 1049.43
I.E. 1046.24

CB-2
23+80.00
32.25' RT
T.C. 1049.69
I.E. 1045.99 E
I.E. 1045.74 N

CB-4
25+60.00
38.86' RT
T.C. 1044.50
I.E. 1040.55 S
I.E. 1040.30 E
I.E. 1037.10 W
I.E. 1036.60 N

CB-8A
27+70.00
48.00' RT
T.C. 1037.41
I.E. 1033.21 S
I.E. 1030.45 W
I.E. 1030.20 N

CB-9A
27+70.00
2.00' LT
T.C. 1036.07
I.E. 1030.90 W
I.E. 1030.65 E

CB-11A
27+70.00
36.00' LT
T.C. 1034.74
I.E. 1031.04 E

CB-8
29+49.00
48.00' RT
T.C. 1031.39
I.E. 1027.19 S
I.E. 1024.65 E
I.E. 1019.53 W
I.E. 1018.78 N

CB-19
32+00.00
48.00' LT
T.C. 1022.92
I.E. 1019.22 E

CB-18
32+00.00
2.00' RT
T.C. 1022.92
I.E. 1019.02 E
I.E. 1019.02 W

CB-17
32+00.00
10.00' RT
T.C. 1023.28
I.E. 1018.99 W
I.E. 1018.74 E

CB-16
32+00.00
36.00' RT
T.C. 1023.28
I.E. 1018.63 W
I.E. 1018.03 S
I.E. 1017.38 N

CB-23B
34+00.00
43.80' LT
T.C. 1021.23
I.E. 1017.53 E

CB-22B
34+00.00
2.20' LT
T.C. 1021.15
I.E. 1017.36 E
I.E. 1017.36 W

CB-20B
34+00.00
36.00' RT
T.C. 1021.38
I.E. 1017.21 W
I.E. 1016.18 S
I.E. 1015.71 N

CB-23C
35+70.00
47.00' LT
T.C. 1019.30
I.E. 1016.33 NE

CB-23A
36+13.00
36.00' LT
T.C. 1019.83
I.E. 1015.95 E
I.E. 1015.95 SW

CB-22A
36+13.00
10.00' LT
T.C. 1019.83
I.E. 1015.85 E
I.E. 1015.85 W

CB-21A
36+13.00
10.00' RT
T.C. 1019.83
I.E. 1015.77 E
I.E. 1015.77 W

CB-20A
36+13.00
48.00' RT
T.C. 1019.47
I.E. 1015.62 W
I.E. 1014.27 S
I.E. 1014.12 N

CB-23
37+51.66
36.00' LT
T.C. 1019.06
I.E. 1015.36 E

CB-22
37+51.66
10.00' LT
T.C. 1019.06
I.E. 1015.26 E
I.E. 1015.26 W

CB-21
37+51.66
10.00' RT
~~T.C. 1019.06~~
I.E. 1015.18 W
I.E. 1014.93 E

CB-20
37+51.66
48.00' RT
T.C. 1018.70
I.E. 1014.75 W
I.E. 1013.50 S
I.E. 1013.25 N

CB-3
24+84.00
57.00' RT
T.C. 1046.56
I.E. 1043.39 N

CB-6
25+68.00
58.80' RT
T.C. 1044.10
I.E. 1040.89 S
I.E. 1040.39 W

CB-5
25+60.00
36.00' LT
T.C. 1041.10
I.E. 1037.40 E

12" x 20' RCP @1.24%

15" x ~~185'~~ 184' RCP @2.80%

18" x ~~217'~~ 219' RCP @1.57%

18" x 185' RCP @1.63%

12" x ~~54'~~ 35' RCP @ 0.40%

15" x ~~50'~~ 51' RCP @ 0.40%

12" x ~~50'~~ 51' RCP @ 0.40%

12" x 8' RCP @ 0.40%

15" x 26' RCP @ 0.40%

12" x ~~42'~~ 43' RCP @ 0.40%

12" x 38' RCP @ 0.40%

12" x ~~44'~~ 45' RCP @ 0.40%

12" x ~~26'~~ 27' RCP @ 0.40%

12" x 20' RCP @ 0.40%

12" x 38' RCP @ 0.40%

12" x ~~26'~~ 27' RCP @ 0.40%

12" x ~~20'~~ 19' RCP @ 0.40%

15" x ~~30'~~ 33' RCP @ 0.46%

12" x 88' RCP @2.85%

18" x 22' RCP @0.40%

12" x ~~74'~~ 75' RCP @0.40%

30" x ~~251'~~ 252' RCP @ 0.30%

30" x ~~200'~~ 199' RCP @ 0.60%

30" x 213' RCP @ 0.68%

30" x ~~139'~~ 140' RCP @ 0.45%

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CERTIFIED BY Brent J. Peulen LIC. NO. ~~26880~~ 3/38 2001
LICENSED PROFESSIONAL ENGINEER

TKDA ENGINEERS·ARCHITECTS·PLANNERS — TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED — SAINT PAUL, MINNESOTA

OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

STORM SEWER PLAN AND PROFILE
STA. 24+00 TO 38+00

SHEET 52 OF 100 SHEETS

C.B. 27 R Sta. 40+20
Lt. 48'
12'-12" R.C.P. Storm Sewer
to C.B. 27

C.B. 31 R Sta. 42+50
Lt. 45'
7'-12" R.C.P. Storm Sewer
to C.B. 31 A

44+30.3, 142.6' LT.
FL. 1004.00

CONST. CULV.
15"x~~112'~~ CSP
2 APRONS
114'

43+29.6, 85.0' LT.
FL. 1013.20

GRADE TO DRAIN

46+51.0, 184.2' LT.
FL. 1004.00

POND A
(See Pond Grading Plans)

OUTLET 1

CL. III RIPRAP

MH31B

CL. IV RIPRAP

46+99.8, 166.5' LT.
FL. 1003.20

CL. III RIPRAP

GRADE TO DRAIN

CONST. CULV.
15"x48' CSP
2 APRONS

ZUMBRO RIVER

MATCHLINE STA. 38+00

MATCHLINE STA. 47+75

C.S.A.H. 8

CB27 CB31A CB26 CB25 CB30A CB31 CB30 CB29A CB28A CB24 CB28 CB29

40+61.1, 81.5' RT.
FL. 1013.40

EXTEND 18" CSP
26 L.F.
1 APRON

44+35.0, 71.6' RT.
FL. 1020.42

CONST. CULV.
12"x19' CSP
2 APRONS

44+30.7, 93.9' RT.
FL. 1019.50

44+13.5, 138.0' RT.
FL. 1012.85

~~CONST. CULV.~~
~~15"x62' CSP~~
~~2 APRONS~~
In place

44+97.5, 155.5' RT.
FL. 1012.75

46+63.5, 112.0' RT.
FL. 1008.50

CONST. CULV.
12"x~~20' CSP~~ 23' C.S.P.
2 APRONS

46+63.0, 135.0' RT.
FL. 1008.10

46+96, 153.5' RT.
FL. 1007.20

GRADE TO DRAIN

46+69.5, 152.5' RT.
FL. 1007.70

CONST. CULV.
12"x~~23' CSP~~ 20' C.S.P.
2 APRONS

SCALE
0 25 50 100'

CB-28A
42+50.00
36.00' RT
T.C. 1022.89
I.E. 1019.19 E

CB-29A
42+50.00
10.0' RT
T.C. 1022.89
I.E. 1019.09 W
I.E. 1019.09 E

CB-30A
42+50.00
0.36' RT
T.C. 1022.56
I.E. 1018.86 W
I.E. 1018.86 E

28A 29A 30A 31A

12" x 26' RCP @ 0.40%

12" x 9' RCP @ 2.51%

12" x 37' RCP @ 0.40%

CB-28
44+82.00
33.15' RT
T.C. 1024.81
I.E. 1021.11 W

CB-29
44+82.00
7.15' RT
T.C. 1024.81
I.E. 1021.01 E
I.E. 1021.01 W

CB-30
44+82.00
7.15' LT
T.C. 1024.81
I.E. 1020.95 E
I.E. 1020.95 W

28 29 30 31

26.5'
12" x ~~26'~~ RCP @ 0.40%

12" x 15' RCP @ 0.40%

26.5'
12" x ~~26'~~ RCP @ 0.40%

CB-24
39+92.50
52.20' RT
T.C. 1020.79
I.E. 1012.53 NW
I.E. 1012.53 S

CB-25
40+20.00
10.00' RT
T.C. 1020.98
I.E. 1012.38 SE
I.E. 1012.38 W

CB-26
40+20.00
2.00' RT
T.C. 1020.62
I.E. 1012.35 E
I.E. 1012.35 W

Covered
~~CB-27~~
40+20.00
36.00' LT
~~T.C. 1020.98~~
I.E. 1012.24 E
I.E. 1012.24 N

20 24 25 26 27

241'
33" x ~~240'~~ RCP @ 0.30%

33" x 51' RCP @ 0.30%

33" x 8' RCP @ 0.30%

33" x ~~39'~~ 39' RCP @ 0.30%

231'
33" x ~~230'~~ RCP @ 0.30%

Covered
~~CB-31A~~
42+50.00
~~36.00' LT~~
T.C. 1022.89
I.E. 1018.71 E
I.E. 1011.55 S
I.E. 1011.55 N

31A

233'
33" x ~~232'~~ RCP @ 0.30%

CB-31
44+82.00
33.15' LT
T.C. 1024.81
I.E. 1020.84 E
I.E. 1010.85 S
I.E. 1010.85 W

31

64'
33" x ~~63'~~ RCP @ 2.09%

MH-31B
44+88.00
95.50' LT
T.C. 1015.00
I.E. 1009.55 E
I.E. 1004.24 W

31B

OUTLET 1
44+92.00
136.50' LT
I.E. 1004.00 E

33" x 34' RCP @ 0.50%

1030 1020 1010 1000

AS-BUILT

FEB 18 2005

ENGINEERING

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CERTIFIED BY Scott D. Parker LIC. NO. 26880 3/28 2001
LICENSED PROFESSIONAL ENGINEER

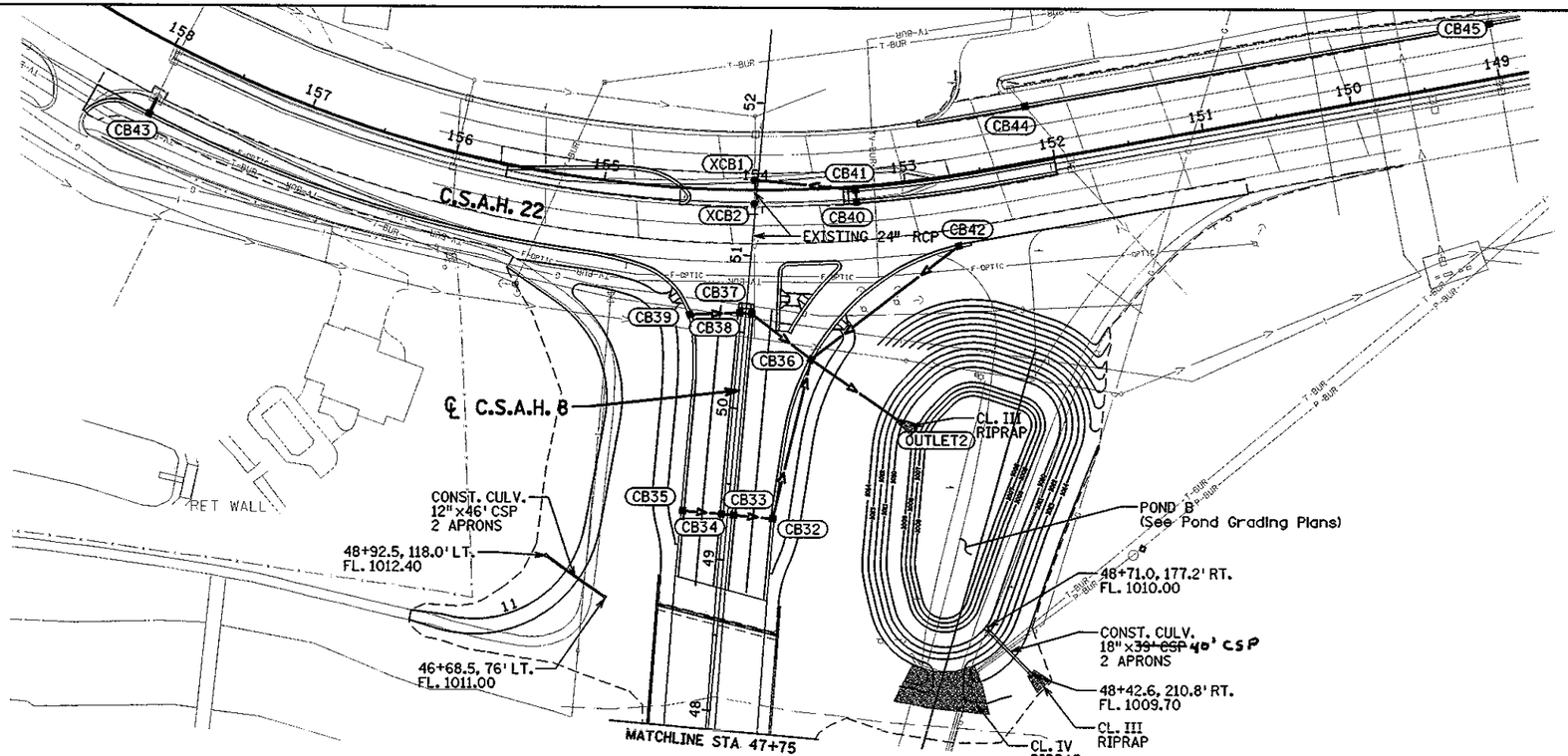
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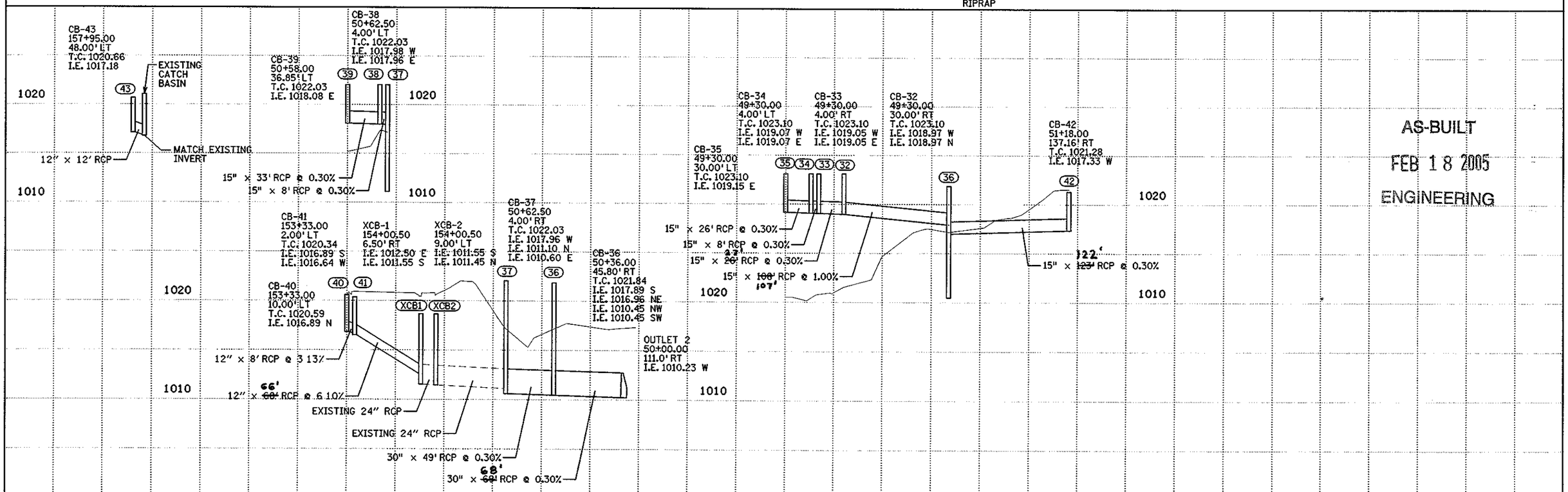
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C.S.A.H. 8
S.P. 55-608-11

STORM SEWER PLAN AND PROFILE
STA. 38+00 TO 47+75

SHEET 53 OF 100 SHEETS





AS-BUILT

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LICENSED PROFESSIONAL ENGINEER

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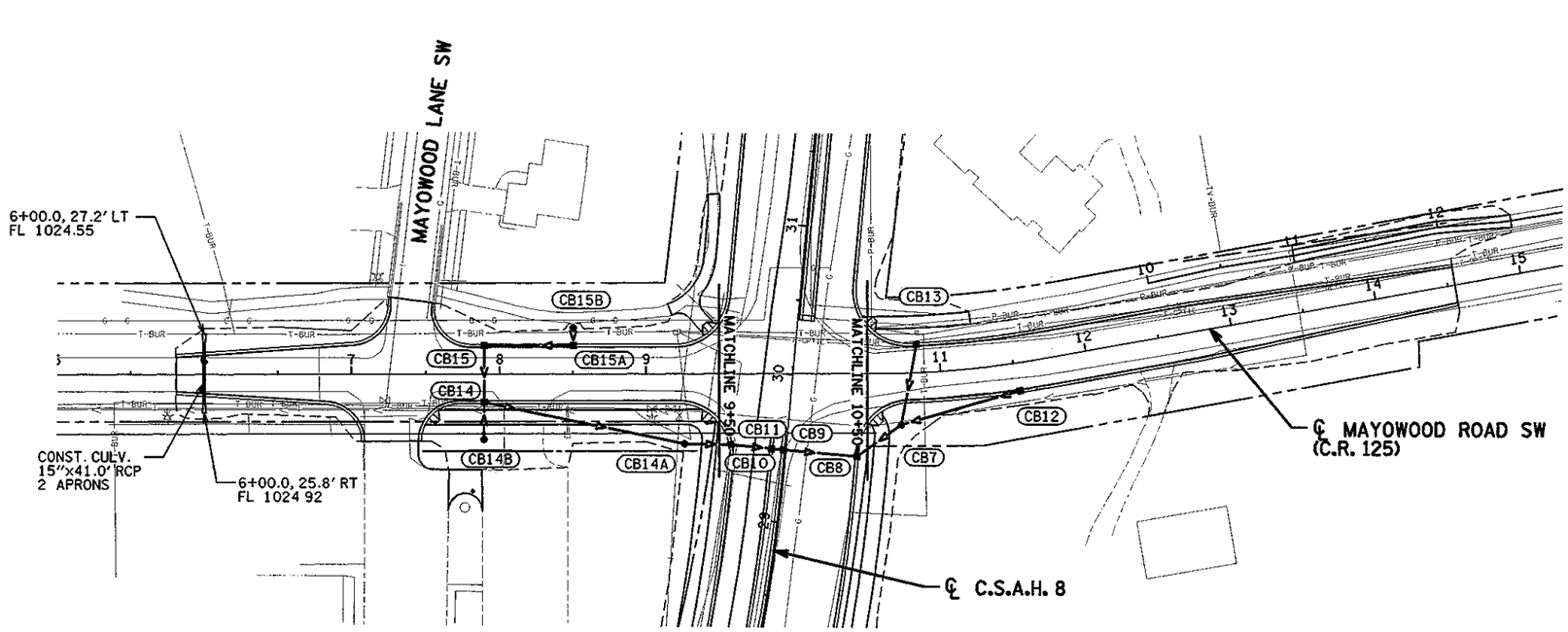
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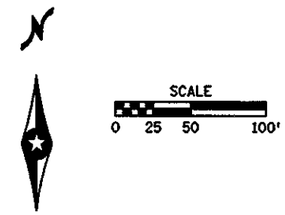
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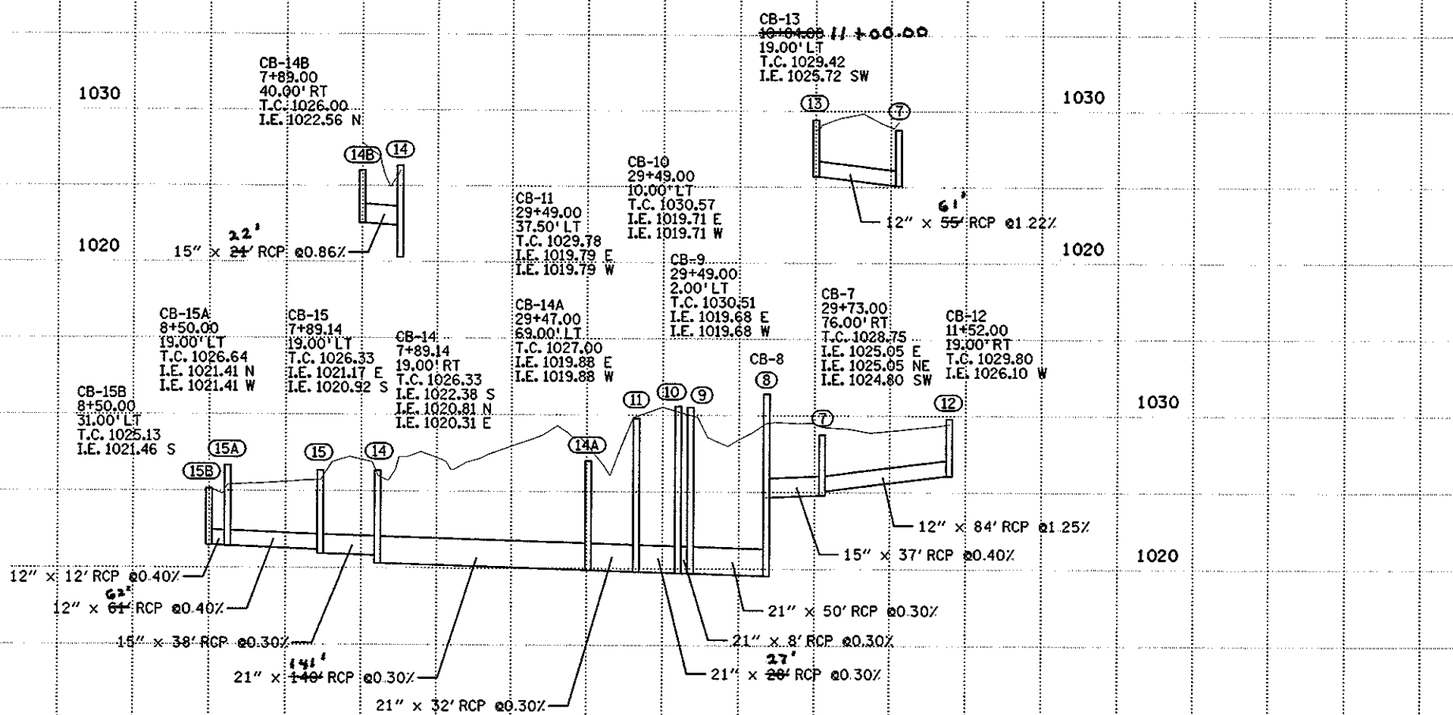
STORM SEWER PLAN AND PROFILE
STA. 47+75 TO 50+95.87

SHEET 54 OF 100 SHEETS

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AS-BUILT

FEB 18 2005

ENGINEERING

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OLMSTED COUNTY

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S.P. 55–608–11

STORM SEWER PLAN AND PROFILE – C.R. 125
STA. 5+81 TO 14+55

SHEET 55 OF 100 SHEETS

DRAINAGE

NOTES	STRUCTURE LOCATION (2) STR. NO.	STATION	OFFSET	TOP OF CSTG. ELEV. (1)	OUTLET ELEV. (1)	DESIGN	QUANT. EACH	F & I CASTING ASSEM.	RCP (DESIGN 3006) (5) 12" CL II LF	15" CL II LF	18" CL II LF	21" CL II LF	21" CL III LF	30" CL II LF	30" CL III LF	33" CL II LF	33" CL III LF	30" APR. EA	33" APR. EA	DRAINS TO STR. NO.	SLOPE OF PIPE %	INLET ELEV. (1)
	CB-1	CSAH 8 23+80.00	52.50 RT	1049.43	1046.24	G	1	M-2	20											CB-2	1.23	1045.99
	CB-2	CSAH 8 23+80.00	32.25 RT	1049.69	1046.74	G	1	B-17		~~165~~										CB-4	2.80	1040.55
	CB-3	CSAH 8 24+84.00	57.00 RT	1046.56	1043.39	G	1	M-2	88	~~184~~										CB-6	2.85	1040.89
(3)	CB-4	CSAH 8 25+60.00	38.86 RT	1044.50	1036.60	F	1	B-17			~~218~~ 217									CB-8A	1.57	1033.21
	CB-5	CSAH 8 25+60.00	36.00 LT	1041.10	1037.40	G	1	B-17	~~75~~ 74											CB-4	0.40	1037.10
	CB-6	CSAH 8 25+68.00	58.80 RT	1044.10	1040.39	G	1	M-2			22									CB-4	0.40	1040.30
	CB-7	CSAH 8 29+73.00	76.00 RT	1028.75	1024.80	G	1	M-2		37					152					CB-8	0.40	1024.65
(3)	CB-8	CSAH 8 29+49.00	48.00 RT	1031.39	1018.78	60-4020	1	B-17							~~251~~					CB-16	0.30	1018.03
(3)	CB-8A	CSAH 8 27+70.00	48.00 RT	1037.41	1030.20	F	1	B-17			185									CB-8	1.63	1027.19
(3)	CB-9	CSAH 8 29+49.00	2.00 LT	1030.51	1019.68	F	1	B-17					~~51~~ 50							CB-8	0.30	1019.53
(3)	CB-9A	CSAH 8 27+70.00	2.00 LT	1036.07	1030.65	F	1	B-17		~~51~~ 50										CB-8A	0.40	1030.45
(3)	CB-10	CSAH 8 29+49.00	10.00 LT	1030.57	1019.71	F	1	B-17					8							CB-9	0.30	1019.68
(3)	CB-11	CSAH 8 29+49.00	37.50 LT	1029.78	1019.79	F	1	B-17					~~27~~ 29							CB-10	0.30	1019.71
	CB-11A	CSAH 8 27+70.00	36.00 LT	1034.74	1031.04	G	1	B-17	~~35~~ 34											CB-9A	0.40	1030.90
	CB-12	MAYO. 11+52.00	19.00 RT	1029.80	1026.10	G	1	B-17	84											CB-7	1.25	1025.05
	CB-13	MAYO ~~11+60~~ 10+84.00	19.00 LT	1029.42	1025.72	G	1	B-17	~~61~~ 55											CB-7	1.22	1025.05
(3)	CB-14	MAYO. 7+89.14	19.00 RT	1026.33	1020.30	F	1	B-17				~~141~~ 140								CB-14A	0.30	1019.88
(3)	CB-14A	CSAH 8 29+47.00	69.00 LT	1027.00	1019.88	F	1	M-2				32								CB-11	0.30	1019.79
	CB-14B	MAYO. 7+89.00	40.00 RT	1026.00	1022.56	G	1	M-2		22~~24~~										CB-14	0.86	1022.38
(3)	CB-15	MAYO. 7+89.14	19.00 LT	1026.33	1020.92	F	1	B-17		38										CB-14	0.30	1020.80
(3)	CB-15A	MAYO. 8+50.00	19.00 LT	1026.64	1021.41	F	1	B-17	62	~~64~~										CB-15	0.40	1021.17
	CB-15B	MAYO. 8+50.00	31.00 LT	1025.13	1021.46	G	1	M-2	12	~~12~~										CB-15A	0.40	1021.41
(3)	CB-16	CSAH 8 32+00.00	36.00 RT	1023.28	1017.38	60-4020	1	B-17						~~199~~200						CB-20B	0.60	1016.18
	CB-17	CSAH 8 32+00.00	10.00 RT	1023.28	1018.74	G	1	B-17		26										CB-16	0.40	1018.63
	CB-18	CSAH 8 32+00.00	2.00 RT	1022.92	1019.02	G	1	B-17	8											CB-17	0.40	1018.99
	CB-19	CSAH 8 32+00.00	48.00 LT	1022.92	1019.22	G	1	B-17	~~51~~ 50							231				CB-18	0.40	1019.02
(3)	CB-20	CSAH 8 37+51.66	48.00 RT	1018.70	1013.25	54-4020	1	B-17								~~249~~				CB-24	0.30	1012.53
(3)	CB-20A	CSAH 8 36+13.00	48.00 RT	1019.47	1014.12	54-4020	1	B-17						~~190~~189						CB-20	0.44	1013.50
(3)	CB-20B	CSAH 8 34+00.00	36.00 RT	1021.38	1015.71	54-4020	1	B-17						213						CB-20A	0.68	1014.27
	CB-21	CSAH 8 37+51.66	10.00 RT	1019.06	1014.93	G	1	B-17		~~39~~ 38										CB-20	0.46	1014.75
	CB-21A	CSAH 8 36+13.00	10.00 RT	1019.83	1015.77	G	1	B-17	38											CB-20A	0.40	1015.62
	CB-22	CSAH 8 37+51.66	10.00 LT	1019.06	1015.26	G	1	B-17	~~19~~ 20											CB-21	0.40	1015.18
	CB-22A	CSAH 8 36+13.00	10.00 LT	1019.83	1015.85	G	1	B-17	20											CB-21A	0.40	1015.77
	CB-22B	CSAH 8 34+00.00	2.20 LT	1021.15	1017.36	G	1	B-17	38											CB-20B	0.40	1017.21
	CB-23	CSAH 8 37+51.66	36.00 LT	1019.06	1015.36	G	1	B-17	~~27~~ 26											CB-22	0.40	1015.26
	CB-23A	CSAH 8 36+13.00	36.00 LT	1019.83	1015.95	G	1	B-17	~~27~~ 26											CB-22A	0.40	1015.85
	CB-23B	CSAH 8 34+00.00	43.80 LT	1021.23	1017.53	G	1	B-17	~~43~~ 42											CB-22B	0.40	1017.36
	CB-23C	CSAH 8 35+70.00	47.00 LT	1019.30	1016.13	G	1	M-2	~~45~~ 44											CB-23A	0.40	1015.95
(3)	CB-24	CSAH 8 39+92.50	52.20 RT	1020.79	1012.53	60-4020	1	B-17								51				CB-25	0.30	1012.38
(3)	CB-25	CSAH 8 40+20.00	10.00 RT	1020.98	1012.38	54-4020	1	B-17								8				CB-26	0.30	1012.35
(3)	CB-26	CSAH 8 40+20.00	2.00 RT	1020.62	1012.35	54-4020	1	B-17								~~39~~ 38	231			CB-27	0.30	1012.24
(3)	CB-27	CSAH 8 40+20.00	36.00 LT	1020.98	1012.24	72-4020	1	B-17									~~230~~			CB-31A	0.30	1011.55
	CB-28	CSAH 8 44+82.00	33.15 RT	1024.81	1021.11	G	1	B-17	26.5											CB-29	0.40	1021.01
	CB-28A	CSAH 8 42+50.00	36.00 RT	1022.89	1019.19	G	1	B-17	26.5											CB-29A	0.40	1019.09
	CB-29	CSAH 8 44+82.00	7.15 RT	1024.81	1021.01	G	1	B-17	15											CB-30	0.40	1020.95
	CB-29A	CSAH 8 42+50.00	10.00 RT	1022.89	1019.09	G	1	B-17	9											CB-30A	2.51	1018.86
	CB-30	CSAH 8 44+82.00	7.15 LT	1024.81	1020.95	G	1	B-17	~~25~~ 26											CB-31	0.40	1020.84
	CB-30A	CSAH 8 42+50.00	0.36 RT	1022.56	1018.86	G	1	B-17	37											CB-31A	0.40	1018.71
(3)	CB-31	CSAH 8 44+82.00	33.15 LT	1024.81	1010.85	72-4020	1	B-17									64 ~~69~~			CB-31B	2.09	1009.55
(3)	CB-31A	CSAH 8 42+50.00	36.00 LT	1022.89	1011.55	54-4020	1	B-17									~~232~~			CB-31	0.30	1010.85
(3)	MH-31B	CSAH 8 44+88.00	95.50 LT	1015.00	1004.24	54-4020	1	A7-D								~~34~~ 40	233			OUTLET 1	0.50	1004.00
(4)	OUTLET 1	CSAH 8 44+92.00	136.50 LT		1004.00														1			
	CB-32	CSAH 8 49+30.00	30.00 RT	1023.10	1018.97	G	1	B-17		~~107~~100										CB-36	1.00	1017.89
	CB-33	CSAH 8 49+30.00	4.00 RT	1023.10	1019.05	G	1	B-17		27~~26~~										CB-32	0.30	1018.97
	CB-34	CSAH 8 49+30.00	4.00 LT	1023.10	1019.07	G	1	B-17		8										CB-33	0.30	1019.05
	CB-35	CSAH 8 49+30.00	30.00 LT	1023.10	1019.15	G	1	B-17		26										CB-34	0.30	1019.07
(3)	CB-36	CSAH 8 50+36.00	45.80 RT	1021.84	1010.45	54-4020	1	B-17						~~68~~ 69						OUTLET 2	0.30	1010.20
(4)	OUTLET 2	CSAH 8 50+00.00	111.00 RT		1010.23													1				
(3), (7)	CB-37	CSAH 8 50+62.50	4.00 RT	1022.03	1010.60	54-4020	1	B-17							~~48~~ 46					CB-36	0.30	1010.45
	CB-38	CSAH 8 50+62.50	4.00 LT	1022.03	1017.98	G	1	B-17		~~9~~ 8										CB-37	0.30	1017.96
	CB-39	CSAH 8 50+58.00	36.85 LT	1022.03	1018.08	G	1	B-17		33										CB-38	0.30	1017.98
	CB-40	CSAH 22 153+33.00	10.00 LT	1020.59	1016.89	G	1	B-17	8											CB-41	3.13	1016.64
(8)	CB-41	CSAH 22 153+33.00	2.00 LT	1020.34	1016.64	G	1	B-17	~~6~~8											XCB-2	6.10	1012.50
	CB-42	CSAH 8 51+18.00	137.16 RT	1021.28	1017.33	G	1	B-17		~~132~~133										CB-36	0.30	1016.96
(8)	CB-43	CSAH 22 157+95.00	48.00 LT	1020.66	1017.18	G	1	B-17	12													
(9)	XCB-1	CSAH 22 154+00.50	6.50 RT	1020.35	1011.55															XCB-3	0.65	1011.45
(9)	XCB-2	CSAH 22 154+00.50	9.00 LT	1020.47	1011.45															CB-37	0.49	1011.10
(7)	CB-44	CSAH 22 152+13.5	37.70 RT	1019.97	1015.14	~~G~~	~~1~~	~~B-17~~														
(7)	CB-45	CSAH 22 149+00	37.00 RT	1022.38	1018.34	~~G~~	~~1~~	~~B-17~~												CB-36	0.30	1016.96
TOTALS						~~65~~ 63			~~394~~ 978	~~800~~ 729	~~424~~ 426	~~172~~ 173	86	~~621~~ 620	300	~~386~~ 373	~~525~~ 528	1	1			

NOTES:

(1) TOP OF CASTING AND INVERT ELEVATIONS ARE TO CENTER OF CASTING OR END OF APRON.

(2) COORDINATES, STATIONS, AND OFFSET LOCATIONS ARE TO CENTER OF CASTING OR END OF APRON

(3) STRUCTURE TO INCLUDE MANHOLE STEPS 16" ON CENTER (CONSIDERED INCIDENTAL). SEE MNDOT STANDARD PLATE 4180J.

(4) TIE LAST THREE JOINTS AT APRON END. FURNISHING AND INSTALLING PIPE TIES CONSIDERED INCIDENTAL.

(5) LENGTH GIVEN TO END OF PIPE (DOES NOT INCLUDE APRON LENGTH)

(6) CONSTRUCT OVER EXISTING PIPE. VERIFY EXISTING PIPE ELEVATION IN THE FIELD. CONNECTION TO EXISTING STRUCTURE CONSIDERED INCIDENTAL.

(7) CONNECT TO EXISTING STRUCTURE. VERIFY EXISTING STRUCTURE INVERT IN THE FIELD. CONNECTION TO EXISTING STRUCTURE CONSIDERED INCIDENTAL.

(8) REMOVE CASTING AND CONE SECTION ON EXISTING STRUCTURE. CAP EXISTING STRUCTURE.

CASTING ASSEMBLIES

ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	CURB BOX	STANDARD PLATE NO.
B-17	806			4125D
		816		4154B
			825	4134A
M-2	700-7			4101D
		720		4140D
A-7D	700-7			4101D
		715		4110F

AS-BUILT

FEB 18 2005

ENGINEERING

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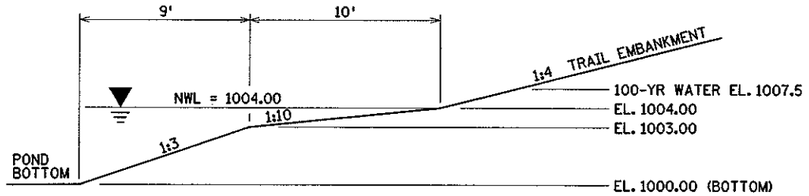
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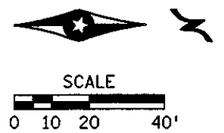
OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

STORM SEWER TABULATION



SECTION A-A



TEMP. EASEMENT

DRAINAGE EASEMENT

CONSTRUCTION LIMITS

PTRL2

PTRL1

R = 30.0'
N 395218.764
E 67170.162

R = 30.0'
N 395262.946
E 67199.176

WET POND A

BOTTOM EL. = 1000.00
NORMAL WATER LEVEL = 1004.00
100-YR WATER LEVEL = 1007.50
EMERGENCY OVERFLOW EL. 1007.00

R = 45.0'
N 395273.627
E 67184.176

R = 0.5'
N 395314.954
E 67036.470

RIPRAP CL III

RIPRAP CL III

RIPRAP CL IV

OVERFLOW

EXIST. R/W

MH31B

CB31

CB30

CROSS SECTION MATCH LINE ELEV. 1007.00

(SEE CSAH 8 AND TRAIL CROSS SECTIONS)

EMERGENCY OVERFLOW AREA EL. 1007.00

NO RIPRAP SHALL BE INSTALLED IN TRAIL CLEAR ZONE. (2' FROM EDGE OF BIT.)

℄ C.S.A.H. 8

ZUMBRO RIVER

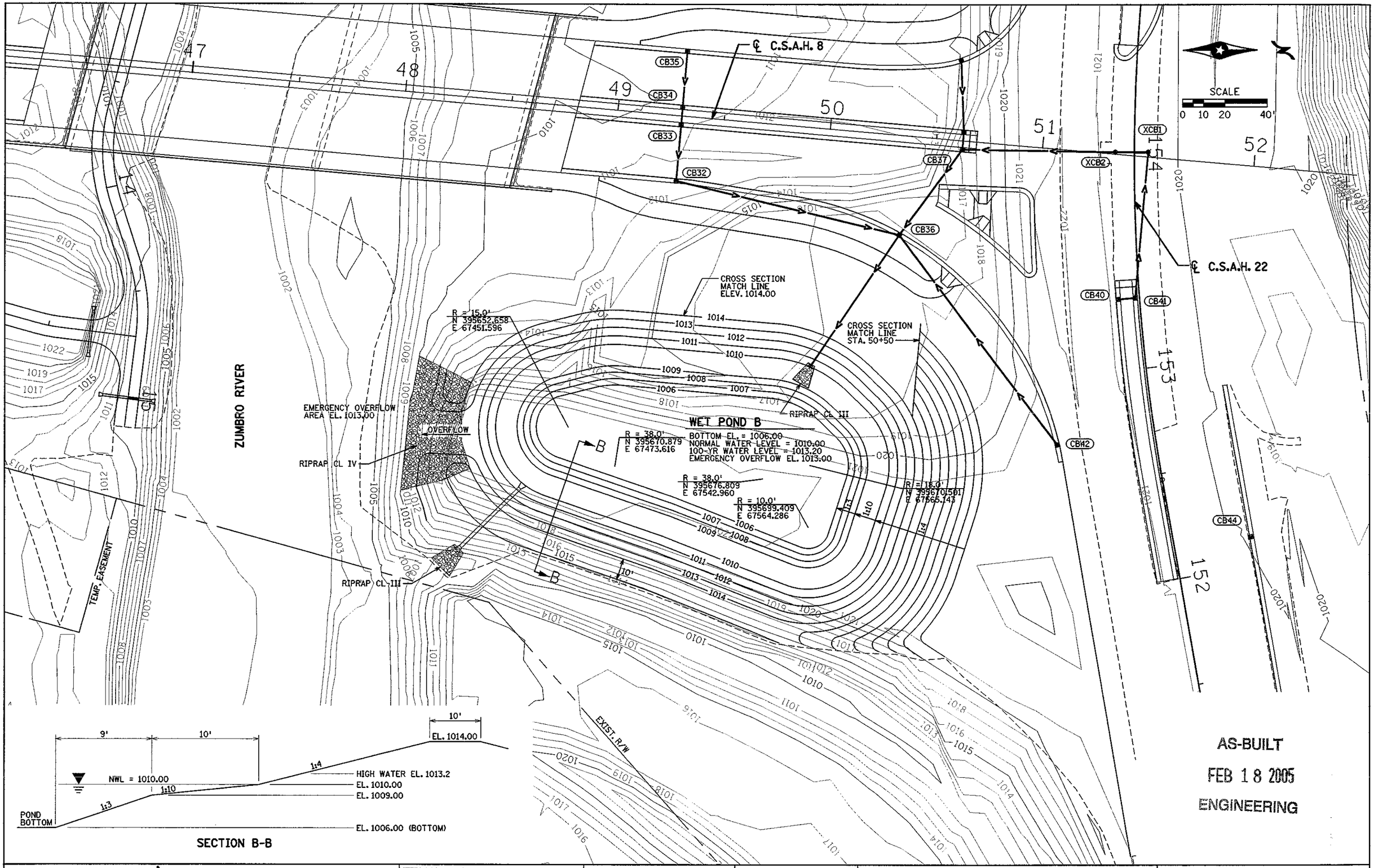
AS-BUILT

FEB 18 2005

ENGINEERING

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CERTIFIED BY Brent O. Anderson LICENSED PROFESSIONAL ENGINEER LIC. NO. 26880 3/28 2001	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA	OLMSTED COUNTY	C.S.A.H. 8 S.P. 55-608-11	GRADING PLAN WET POND A	SHEET 57 OF 100 SHEETS



AS-BUILT

FEB 18 2005

ENGINEERING

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CERTIFIED BY Grant J. Parker LIC. NO. 26880 3/28 2001
LICENSED PROFESSIONAL ENGINEER

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS·ARCHITECTS·PLANNERS SAINT PAUL, MINNESOTA

OLMSTED COUNTY

C.S.A.H. 8
S.P. 55-608-11

GRADING PLAN
WET POND B

SHEET 58 OF 100 SHEETS