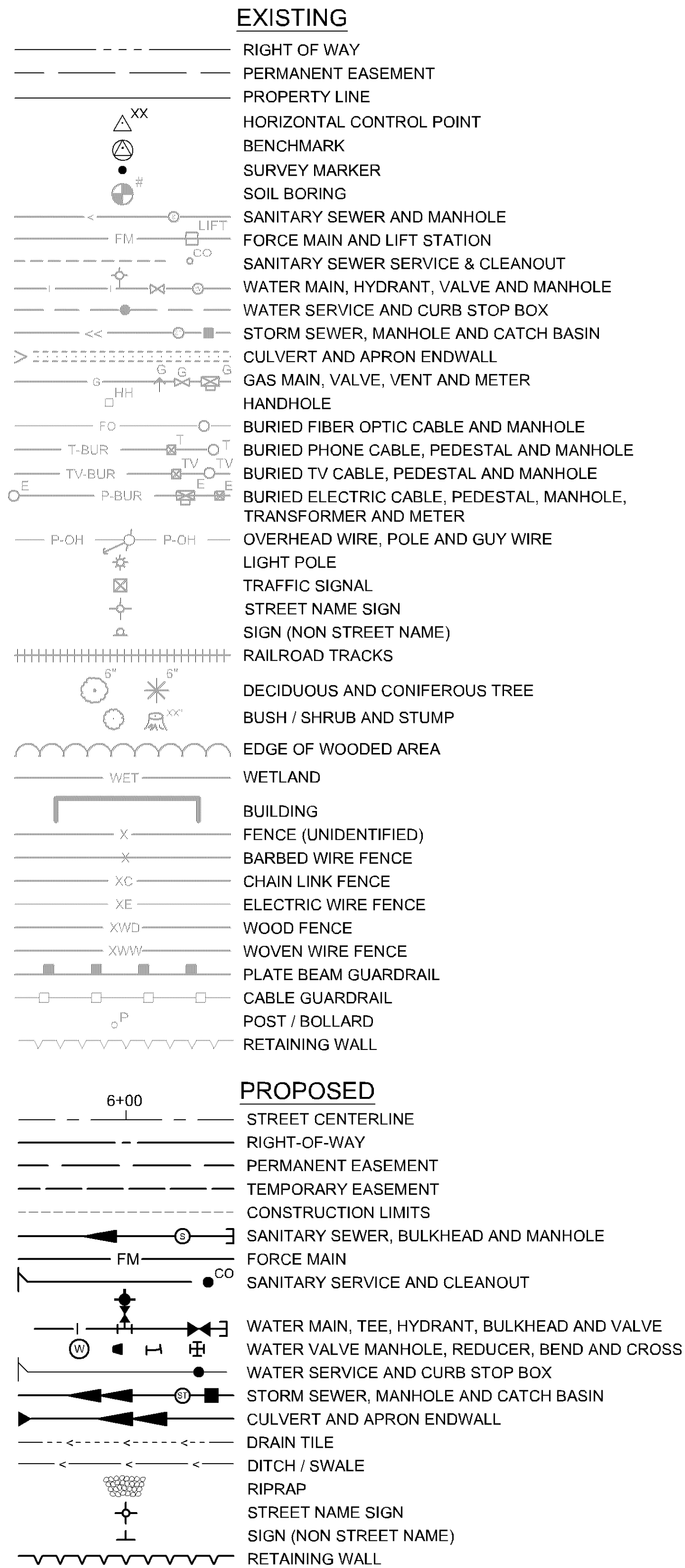


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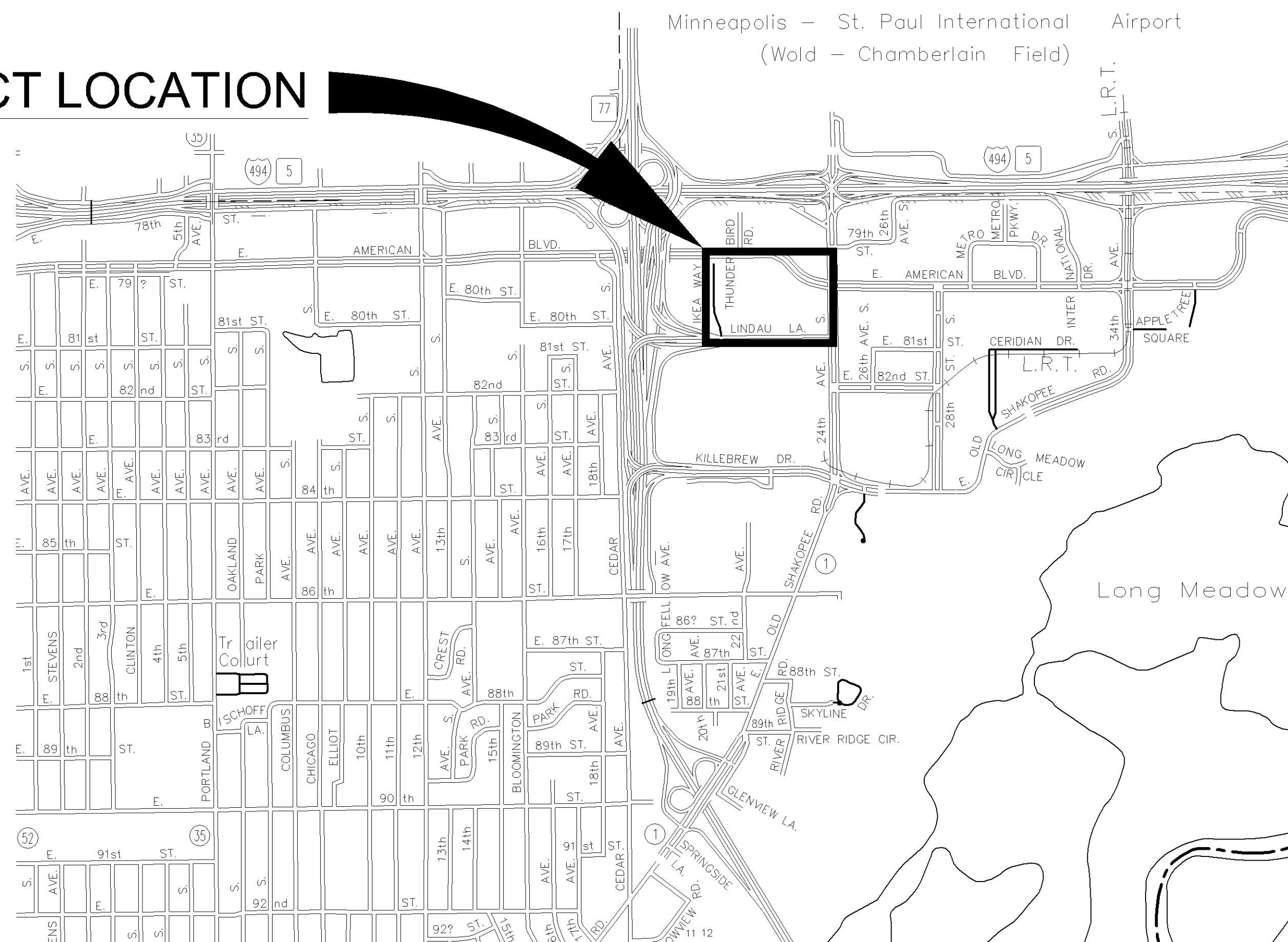
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7-17-2019	50% SUBMITTAL
9-9-2019	100% SD SUBMITTAL
9-20-2019	100% SD SUBMITTAL
10-2-2019	FDP SUBMITTAL

CITY OF BLOOMINGTON, MINNESOTA

CONSTRUCTION PLANS FOR SANITARY SEWER, WATER MAIN, STORM SEWER, AGGREGATE BASE, CONCRETE CURB AND GUTTER, BITUMINOUS SURFACING, CONCRETE SIDEWALK, STREET LIGHTING

SOUTH LOOP WATERPARK & PARKING RAMP AT SOUTH LOOP

PROJECT LOCATION



NOTE:
THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D.
THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE
GUIDELINES OF CI/ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE
COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

THE CONTRACTOR SHALL CALL THE GOPHER STATE ONE CALL SYSTEM AT
811 BEFORE COMMENCING EXCAVATION.



Know what's below.
Call before you dig.

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF
TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION"
SHALL GOVERN EXCEPT AS MODIFIED BY THE SPECIFICATIONS FOR THIS PROJECT.

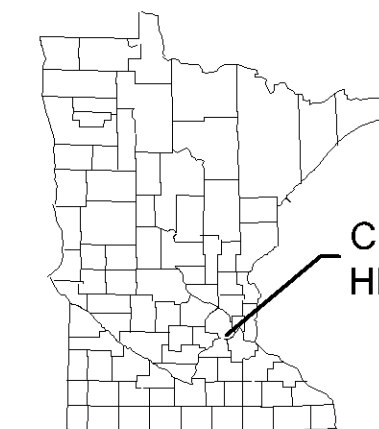
ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE
MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST
FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX

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2	EXISTING CONDITIONS
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16	EROSION CONTROL PLAN
17-18	SWPPP
19	REMOVAL PLAN
20	TRAFFIC CONTROL PLAN
21	HAUL AND DELIVERY ROUTE PLAN
22	OVERALL SITE PLAN
23	OVERALL SITE UTILITY PLAN
24	SANITARY SEWER & WATER MAIN PLAN AND PROFILE - LINDAU LANE
25-27	SANITARY SEWER & WATER MAIN PLAN AND PROFILE - RING ROAD
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THIS PLAN CONTAINS 72 SHEETS.

PROJECT LOCATION



CITY OF BLOOMINGTON,
HENNEPIN COUNTY

APPROVED:

CITY ENGINEER OF BLOOMINGTON

DATE

APPROVED:

COUNTY ENGINEER

DATE

BLOOMINGTON, MINNESOTA



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.

PRELIMINARY

Date: _____ Lic. No. _____

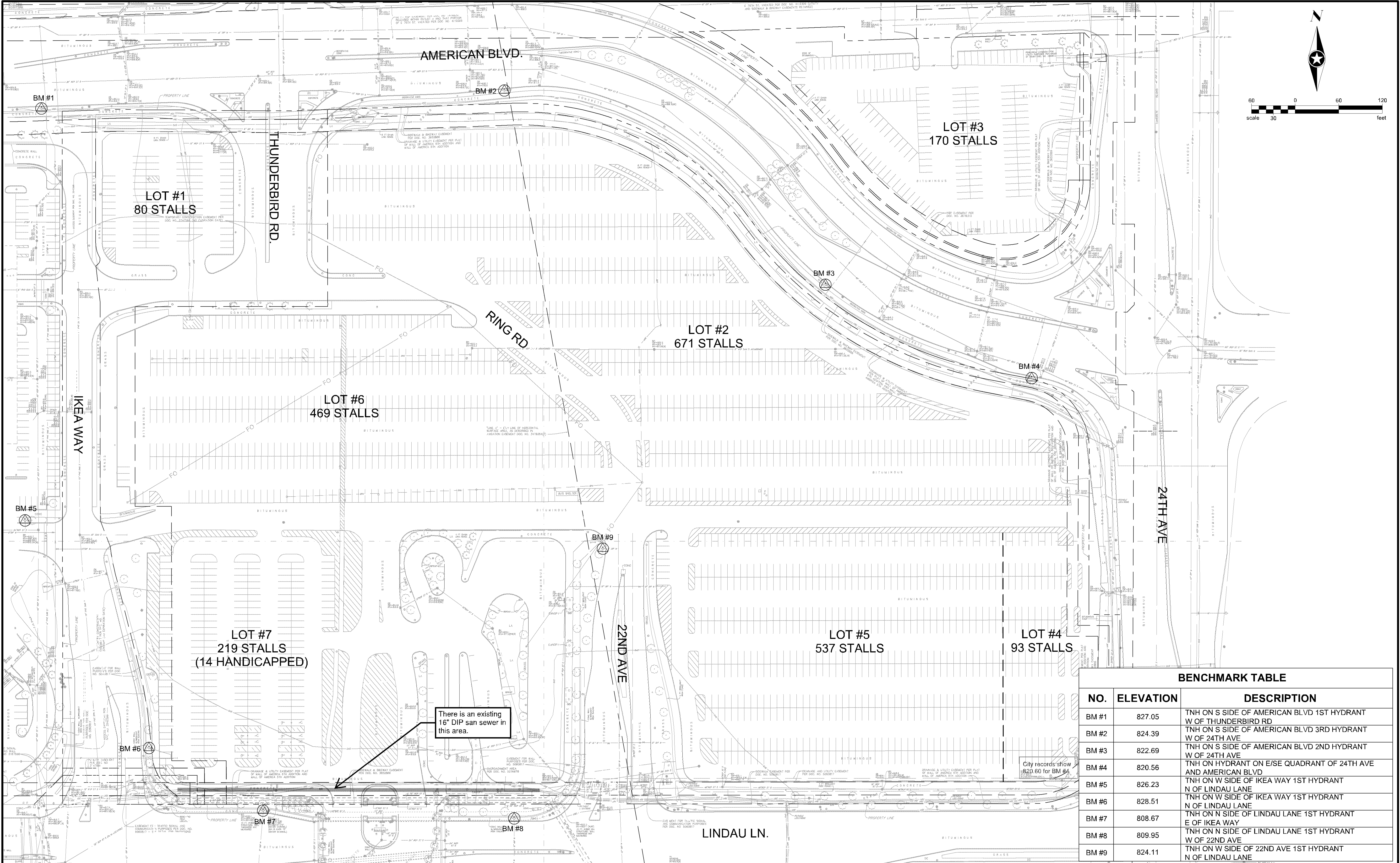
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BENCHMARK TABLE		
NO.	ELEVATION	DESCRIPTION
BM #1	827.05	TNH ON S SIDE OF AMERICAN BLVD 1ST HYDRANT W OF THUNDERBIRD RD
BM #2	824.39	TNH ON S SIDE OF AMERICAN BLVD 3RD HYDRANT W OF 24TH AVE
BM #3	822.69	TNH ON S SIDE OF AMERICAN BLVD 2ND HYDRANT W OF 24TH AVE
BM #4	820.56	TNH ON HYDRANT ON E/SE QUADRANT OF 24TH AVE AND AMERICAN BLVD
BM #5	826.23	TNH ON W SIDE OF IKEA WAY 1ST HYDRANT N OF LINDAU LANE
BM #6	828.51	TNH ON W SIDE OF IKEA WAY 1ST HYDRANT N OF LINDAU LANE
BM #7	808.67	TNH ON N SIDE OF LINDAU LANE 1ST HYDRANT E OF IKEA WAY
BM #8	809.95	TNH ON N SIDE OF LINDAU LANE 1ST HYDRANT W OF 22ND AVE
BM #9	824.11	TNH ON W SIDE OF 22ND AVE 1ST HYDRANT N OF LINDAU LANE

DRAWN BY:	CS				
DESIGNER:	JG				
CHECKED BY:	JG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS	



PHONE: 952.912.2800
10901 RED CIRCLE DRIVE,
SUITE 300
MINNETONKA, MN 55343
www.sehinc.com

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.

PRELIMINARY

Date: _____ Lic. No. _____

www.ryancompanies.com

**SOUTH LOOP
WATERPARK**
BLOOMINGTON, MINNESOTA

EXISTING CONDITIONS


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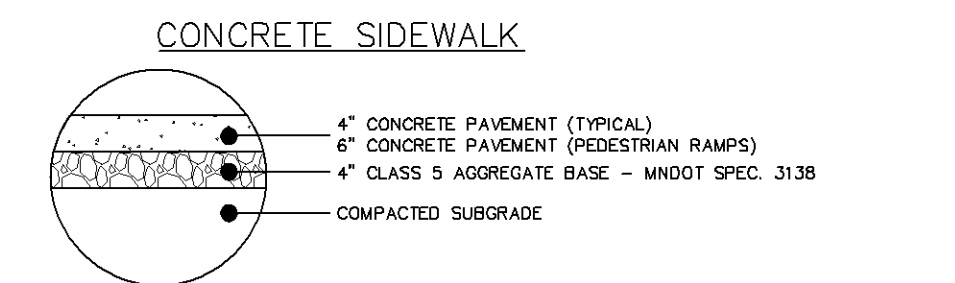
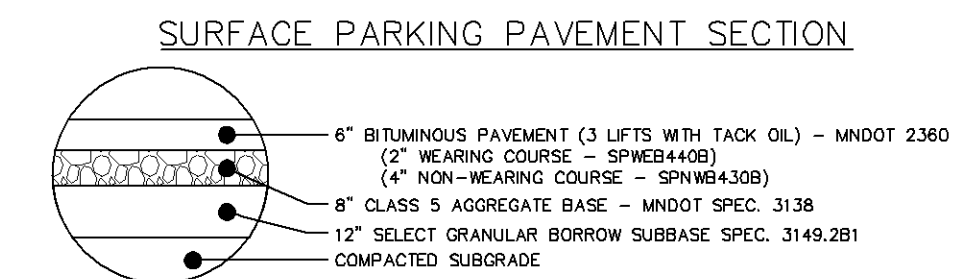
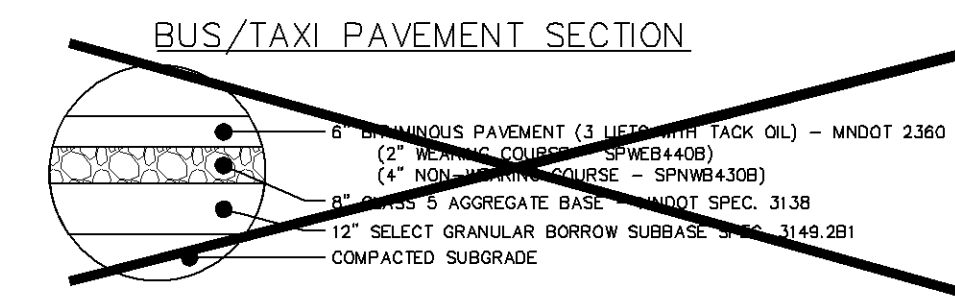
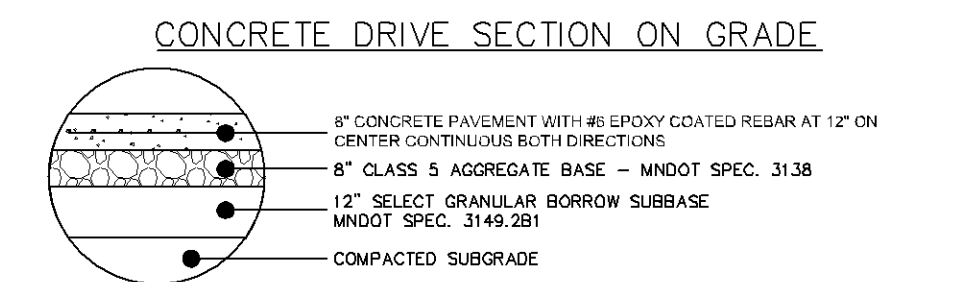
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PROPOSED SANITARY SEWER SCHEDULE												
STRUCTURE	ALIGNMENT	STATION	OFFSET	DRAINS TO	TOP OF CASTING ELEVATION	INLET INV. EL.	OUTLET INV. EL.	PIPE LENGTH	PIPE DIA.	GRADE %	STRUCTURE DIA.	STRUCTURE HEIGHT
1	Ring Road	140+51.72	0.00		821.25	803.28 (E)					48 IN MH	17.97'
2	Ring Road	144+51.72	0.00	1	825.15	804.40 (E) 810.94 (N) 804.40 (N)	804.40 (W)	400'	12"	0.28%	48 IN MH	20.75'
3	Ring Road	147+13.31	-4.48	2	823.27	805.13 (SE) 809.38 (NE) 811.60 (S) 805.13 (N) 805.13 (S)	805.13 (W)	262'	12"	0.28%	48 IN MH	18.14'
4	Ring Road	149+24.87	0.00	3	821.91	805.73 (SE) 808.04 (NE) 805.73 (NE)	805.73 (NW)	212'	12"	0.28%	48 IN MH	16.18'
5	Ring Road	149+99.60	-3.85	4	821.32	805.94 (S) 807.53 (E) 805.94 (E)	805.94 (NW)	75'	12"	0.28%	48 IN MH	15.38'
6	Ring Road	151+19.75	0.00	5	820.58		806.27 (N)	119'	12"	0.28%	48 IN MH	14.31'
11	Ikea Way - Flagline	201+76.56	-28.48		822.82	802.88 (E)					48 IN MH	20.19'
12	Ikea Way - Flagline	201+62.07	29.57	11	824.44	803.62 (E) 804.29 (S)	803.62 (W)	60'	12"	1.23%	48 IN MH	20.44'
223	Ring Road	141+16.12	308.37	224	0.45	804.75 (E)	804.75 (N)	7'	4"	1.23%	NULL STRUCTURE	???'
224	Ring Road	141+16.12	301.37	12	-4.58	804.66 (S)	804.66 (N)	30'	4"	1.23%	NULL STRUCTURE	???'

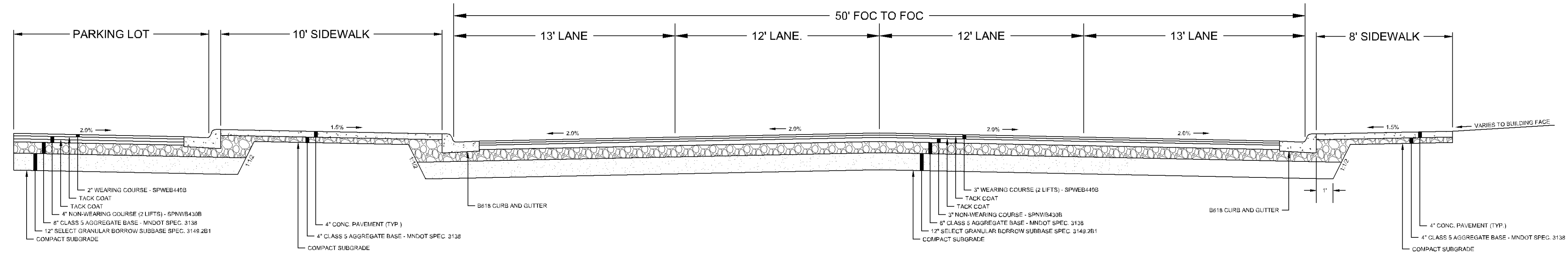
PROPOSED STORM SEWER SCHEDULE												
STRUCTURE	ALIGNMENT	STATION	OFFSET	DRAINS TO	TOP OF CASTING ELEVATION	INLET INV. EL.	OUTLET INV. EL.	PIPE LENGTH	PIPE DIA.	GRADE %	STRUCTURE DIA.	STRUCTURE HEIGHT
AREA WELL DRAIN	Ikea Way - Flagline	202+21.89	40.82		823.00		819.00 (SW)	71'	4"	1.26%	DESIGN H	4.00'
EX. MH 500	Lindau Ln Curb	31+95.87	-19.28		824.11	818.95 (W) 819.87 (E)					120 -4020 MH	5.16'
100	Ring Road	152+32.49	2.04		819.43	806.73 (NE) 809.14 (NW) 814.39 (E)					60 -4020 MH	12.70'
104	Ring Road	151+12.41	-18.00	100	820.20	809.46 (NE) 810.96 (E)	809.46 (SW)	121'	36"	2.26%	84 -4020 MH	10.74'
108	Ring Road	150+19.33	-25.02	104	820.68	810.08 (N) 816.20 (W)	810.08 (SW)	103'	36"	0.60%	60 -4020 CB	10.60'
112	Ring Road	149+41.98	-19.93	108	821.39	810.63 (NW)	810.63 (S)	91'	36"	0.60%	60 -4020 MH	10.77'
116	Ring Road	147+32.34	-25.00	112	822.67	811.95 (W) 818.19 (SW)	811.95 (SE)	220'	36"	0.60%	60 -4020 CB	10.72'
120	Ring Road	145+23.26	-25.00	116	824.10	813.25 (W) 819.60 (N) 819.60 (S)	813.25 (E)	219'	36"	0.60%	60 -4020 CB	10.85'
124	Ring Road	143+65.09	-25.00	120	825.06	815.95 (N) 815.95 (W) 817.08 (SE) 814.70 (S)	814.20 (E)	158'	36"	0.60%	96 -4020 MH	10.86'
128	Ring Road	142+07.44	-25.00	124	824.08	816.91 (W)	816.91 (E)	158'	15"	0.61%	48 -4020 CB	7.17'
132	Thunderbird Road	162+00.00	49.98	124	823.58	819.29 (W) 819.29 (E)	819.04 (S)	119'	15"	2.60%	48 -4020 CB	4.54'
136	Thunderbird Road	162+00.00	-34.96	132	824.08	820.14 (W)	820.14 (E)	85'	12"	1.00%	48 -4020 CB	3.94'
140	Ring Road	152+19.02	34.08	100	818.98	809.74 (S) 814.98 (NE)	809.49 (SE)	36'	15"	1.00%	48 -4020 CB	9.48'
142	Ring Road	153+06.16	64.92	140	814.75		810.79 (N)	105'	12"	1.00%	2' X 3' RECT STRUCTURE	3.96'
144	Ring Road	152+32.56	-24.92	100	818.66		814.66 (W)	27'	12"	1.00%	2' X 3' RECT STRUCTURE	4.00'
146	Ring Road	152+03.65	30.36	140	819.60		815.60 (SW)	20'	12"	3.10%	2' X 3' RECT STRUCTURE	4.00'
148	Ring Road	150+19.33	25.00	108	820.70		816.70 (E)	50'	12"	1.00%	2' X 3' RECT STRUCTURE	4.00'
152	Ring Road	147+32.34	25.00	116	822.67		818.69 (NE)	50'	15"	1.00%	2' X 3' RECT STRUCTURE	3.98'
156	Ring Road	145+23.26	25.00	120	824.10		820.10 (N)	50'	12"	1.00%	2' X 3' RECT STRUCTURE	4.00'
160	Ring Road	144+15.76	51.91	124	822.00		818.00 (NW)	92'	12"	1.00%	DESIGN H	4.00'
164	Ring Road	141+12.30	-41.81	128	821.40		817.39 (E)	97'	15"	0.50%	2' X 3' RECT STRUCTURE	4.01'
168	Thunderbird Road	162+00.00	66.32	132	823.81		819.81 (W)	16'	12"	3.18%	2' X 3' RECT STRUCTURE	4.00'
172	Thunderbird Road	162+00.00	-50.87	136	824.30		820.30 (E)	16'	12"	1.00%	2' X 3' RECT STRUCTURE	4.00'
176	Thunderbird Road	160+97.79	208.16	120	824.33		820.33 (S)	16'	12"	4.47%	2' X 3' RECT STRUCTURE	4.00'
200	Lindau Ln Curb	43+80.99	-80.98		812.52	800.00 (SW)					60 -4020 MH	12.52'
204	Lindau Ln Curb	43+43.00	-43.47	200	810.95	800.30 (W)	800.30 (NE)	53'	48"	0.56%	60 -4020 CB	10.65'
208	Lindau Ln Curb	38+16.98	-44.79	204	818.27	803.14 (SW)	803.14 (E)	526'	48"	0.54%	60 -4020 MH	15.13'
212	Lindau Ln Curb	38+01.54	-35.01	208	817.41		803.26 (NE)	23'	48"	0.54%	60 -4020 MH	14.15'
300	Ramp Road	183+84.58	25.00	316	816.79	812.38 (N)	812.13 (W)	148'	18"	0.45%	48 -4020 CB	4.66'
304	Ramp Road	183+84.58	-25.00	300	816.79	812.88 (N) 812.88 (W)	812.63 (S)	50'	15"	0.50%	48 -4020 CB	4.16'
308	Ramp Road	183+84.58	-36.34	304	816.94		812.94 (S)	11'	12"	0.50%	2' X 3' RECT STRUCTURE	4.00'
312	Ramp Road	183+74.58	-25.00	304	816.80		812.98 (E)	10'	12"	1.00%	2' X 3' RECT STRUCTURE	3.82'
316	Ramp Road	182+36.79	25.00	104	818.66	811.46 (E)	811.46 (W)	110'	18"	0.45%	48 -4020 CB	7.20'
400	Ikea Way - Flagline	203+80.91	-9.55		820.43	816.25 (NE) 816.25 (E)					48 -4020 MH	4.18'
404	Ikea Way - Flagline	203+79.81	4.25	400	820.27	816.58 (S)	816.58 (W)	14'	12"	2.39%	48 -4020 CB	3.69'
408	Ikea Way - Flagline	204+66.01	35.74	400	821.16		817.66 (SW)	96'	12"	1.46%	2' X 3' RECT STRUCTURE	3.50'
412	Ikea Way - Flagline	203+26.29	1.50	404	820.62		817.12 (N)	54'	12"	1.00%	2' X 3' RECT STRUCTURE	3.50'
501	Lindau Ln Curb	32+11.24	-15.54	EX. MH 500	823.95		819.95 (W)	16'	12"	0.50%	DESIGN H	4.00'
502	Lindau Ln Curb	31+00.48	-23.04	EX. MH 500	824.82	819.43 (N)	819.43 (E)	95'	12"	0.50%	48 -4020 MH	5.39'
503	Lindau Ln Curb	30+85.24	-67.97	502	824.23	819.66 (N)	819.66 (S)	47'	12"	0.50%	DESIGN H	4.57'
504	Ikea Way - Flagline	200+04.40	13.11	503	824.27		820.27 (S)	121'	12"	0.51%	DESIGN H	4.00'

- CITY OF BLOOMINGTON STANDARD NOTES:
- TEMPORARY STREET SIGNS, LIGHTING AND ADDRESSES SHALL BE PROVIDED DURING CONSTRUCTION.
 - CONTRACTOR SHALL OBTAIN A PUBLIC WORKS PERMIT APPLICATION FOR OBSTRUCTIONS AND CONCRETE WORK WITHIN THE RIGHT-OF-WAY. PERMIT IS REQUIRED PRIOR TO REMOVALS OR INSTALLATION. CONTACT SEAN JENKINS AT 952-563-4545 OR SJENKINS@CI.BLOOMINGTON.MN.US FOR PERMIT APPLICATION AND FEE INFORMATION.
 - PUBLIC WORKS PERMIT APPLICATION FOR UNDERGROUND WORK WITHIN THE RIGHT-OF-WAY IS REQUIRED PRIOR TO REMOVAL OR INSTALLATION OF SANITARY, WATER OR STORM WORK WITHIN THE PUBLIC RIGHT-OF-WAY. CONTACT UTILITIES AT 952-563-4568 FOR PERMIT APPLICATION AND FEE INFORMATION.
 - RESTORE CITY STREET BY COMPLYING WITH THE CITY STREET IMPROVEMENT POLICY; CONTACT UTILITIES AT 952-563-4568 FOR THE REQUIREMENTS.
 - ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL LAYOUTS.
 - ALL PUBLIC SIDEWALKS SHALL NOT BE OBSTRUCTED.
 - ALL PARKING STALLS TO BE PAINTED WITH WHITE STRIPING
 - ALL CONSTRUCTION AND POST-CONSTRUCTION PARKING SHALL BE ON SITE. NO ON STREET PARKING/LOADING/UNLOADING ALLOWED.
 - STORAGE OF MATERIALS OR EQUIPMENT SHALL NOT BE ALLOWED ON PUBLIC STREETS OR WITHIN PUBLIC RIGHT-OF-WAY.
 - INSTALL CROSSWALK PAVEMENT MARKINGS IN ACCORDANCE WITH MMUTCD.
 - A MN LICENSED CIVIL ENGINEER MUST DESIGN AND SIGN ALL RETAINING WALLS 4-FOOT HIGH AND HIGHER.
 - CONTRACTOR TO CONTACT UTILITIES DIVISION @ 952-563-8777 REGARDING PERMIT FOR STORM SEWER CONSTRUCTION.
 - CONTRACTOR SHALL OBTAIN HENNEPIN COUNTY PERMIT FOR WORK WITHIN RIGHT-OF-WAY. CONTACT HENNEPIN COUNTY PERMIT ENGINEER AT 612-596-0336 FOR PERMIT APPLICATION AND FEE INFORMATION.
 - A REVIEW OF ALL PRIOR PDP AND FDP COUNCIL CONDITIONS WILL BE COMPLETED FOR THIS SUBMITTAL.
 - STREET LIGHTING AND INTERCONNECT CONDUIT MUST BE EXPOSED FOR CITY INSPECTION PRIOR TO POURING CONCRETE OR BACKFILLING EXCAVATIONS IN CITY RIGHT-OF-WAY.
 - SEE SHEET 7 - DETAILS 2 FOR CASTING DETAILS. CATCH BASINS WITHIN SIDEWALK TO RECEIVE ADA FRAME AND GRATE CASTING.
- GENERAL CONSTRUCTION NOTES:
- ALL REFERENCE TO THE OWNER IN THESE PLANS SHALL BE INTERPRETED TO MEAN SOUTH LOOP WATERPARK.
 - THE LOCATIONS & ELEVATIONS OF PUBLIC OR PRIVATE UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. SEH AND THE OWNER DO NOT GUARANTEE THEIR ACCURACY. BACKGROUND INFORMATION SHOWN IS FROM SURVEY PROVIDED BY SUNDE LAND SURVEYING, FOR THE OWNER AND CITY OF BLOOMINGTON, MN. OTHER UTILITY AND LINDAU LANE INFORMATION PROVIDED BY THE CITY. EXISTING CONDITIONS SHALL BE VERIFIED PRIOR TO START OF CONSTRUCTION.
 - CONTRACTOR MUST PROVIDE ALL NECESSARY PEDESTRIAN AND VEHICULAR TRAFFIC CONTROL. ALL TRAFFIC FLOW THROUGH CONSTRUCTION AREA MUST NOT BE INTERRUPTED AT ANY TIME. CONTRACTOR SHALL COORDINATE ALL TRAFFIC CONTROL AND PHASING/STAGING WITH OWNER AND CITY ROADWAY PROJECT.
 - CONTRACTOR SHALL SAWCUT PAVEMENT, CURB, AND SIDEWALKS AS INDICATED ON THE PLANS ACCORDING TO THE CONSTRUCTION LIMITS SHOWN. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE THE ASPHALT, OR CONCRETE THAT ARE DESIGNATED TO REMAIN. ANY DAMAGE TO THE EXISTING MATERIALS DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
 - ALL WATERMAIN SHALL BE CLASS 52 DIP & WRAPPED IN 8 MIL POLYWRAP.
 - INSTALL INTERNAL CHIMNEY SEALS ON ALL SANITARY MANHOLES.
 - APPROPRIATE STORM SEWER INLET SILT PROTECTION AND EROSION CONTROL SILT FENCE/FILTER LOGS SHALL BE INSTALLED BY CONTRACTOR IN ALL NECESSARY LOCATIONS AND STORM SEWER STRUCTURES. THIS WORK MUST BE APPROVED BY THE CITY PRIOR TO START OF CONSTRUCTION.
 - ALL DIMENSIONS SHOWN ON THE PLAN ARE THE EDGE OF PAVEMENT OR FACE/GUTTER OF CURB UNLESS NOTED.
 - CONTRACTOR SHALL PROTECT ALL INPLACE UTILITIES, PAVEMENT, AND STRUCTURES NOT IDENTIFIED FOR REMOVAL.
 - ALL CONSTRUCTION PHASING, STAGING, PARKING, MATERIAL/EQUIPMENT STORAGE, AND ALL LOADING/UNLOADING SHALL BE COORDINATED WITH THE OWNER AND CITY'S ROADWAY PROJECT. ALL WORK SHALL BE STAGED AND OCCUR FROM PRIVATE PROPERTY.
 - SOIL BORING INFORMATION FOR THE BORINGS SHOWN ON THE PLAN CAN BE PROVIDED UPON REQUEST.
 - CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL AND PHASING PLANS TO BE APPROVED BY THE OWNER AND THE CITY PRIOR TO THE START OF CONSTRUCTION.
 - CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY RESTROOM FACILITIES ON SITE FOR ALL WORKERS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR THE REQUIRED PERMITS FROM THE CITY OF BLOOMINGTON. PERMITS INCLUDE BUT NOT LIMITED TO A STORM SEWER PERMIT, REQUIRED FROM THE UTILITIES DEPT. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING THE NPDES PERMIT WITH THE APPLICATION PREPARED BY ENGINEER. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING THE SWPPP ON SITE AT ALL TIMES AND FOLLOWING/IMPLEMENTING THE REQUIREMENTS OUTLINED IN THE SWPPP.
 - PARKING LOT STRIPING SHALL BE REPLACED IN THE SAME CONFIGURATION AND LAYOUT AS THE EXISTING PARKING LOT FOLLOWING PAVING WORK UNLESS NOTED OTHERWISE ON THE PLAN. CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO NOTE THE CHARACTERISTICS OF THE EXISTING LOT STRIPING SUCH AS THE LOCATIONS OF SYMBOLS, AND LAYOUT. STRIPING SHALL BE ACRYLIC OR LATEX ALKYD. **NOTE ALL STRIPING SHALL BE WHITE IN COLOR**
 - CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE CASTINGS OR VALVE BOXES AS NECESSARY PRIOR TO PAVING. CONTRACTOR SHALL REPLACE ANY BROKEN OR DAMAGED CASTINGS OR VALVE BOXES.
 - UTILITY AS-BUILTS MUST BE PROVIDED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE OUTLINED WITHIN THE SWPPP.
 - UTILITY PERMITS ARE REQUIRED FOR CONNECTIONS TO THE PUBLIC STORM, SANITARY, AND WATER SYSTEM. CONTACT UTILITIES (952-563-8777) FOR PERMIT INFORMATION.
 - MAINTAIN MINIMUM 10-FOOT HORIZONTAL SEPARATION AND 18-INCH VERTICAL SEPARATION BETWEEN WATERMAIN AND SEWERS. MAINTAIN MINIMUM 8' OF COVER ABOVE SANITARY SEWER AND WATER MAIN TO PREVENT FREEZING. IF COVER WILL BE LESS THAN 8', PROVIDE INSULATION ABOVE MAIN.
 - ALL UNUSED WATER SERVICES MUST BE PROPERLY ABANDONED AT THE MAIN. ALL UNUSED SANITARY SEWER SERVICES MUST BE PROPERLY ABANDONED AT THE PROPERTY LINE.
 - INSTALL INTERNAL CHIMNEY SEALS ON ALL SANITARY SEWER MANHOLES.
 - TAPS OF LIVE WATER MAINS ARE TO BE COMPLETED BY CITY FORCES AND PAID FOR AND COORDINATED BY THE CONTRACTOR.
 - UTILITY AND MECHANICAL CONTRACTORS MUST COORDINATE THE INSTALLATION OF ALL WATER AND SEWER SERVICE PIPES INTO THE BUILDING TO ACCOMMODATE CITY INSPECTION AND TESTING.
 - COMBINATION FIRE AND DOMESTIC SERVICES MUST TERMINATE WITH A THREAD ON FLANGE OR AN MJ TO FLANGE ADAPTER.
 - ALL COMPONENTS OF THE WATER SYSTEM, UP TO THE WATER METER OR FIRE SERVICE EQUIPMENT MUST UTILIZE PROTECTIVE INTERNAL COATINGS MEETING CURRENT ANSI/AWWA STANDARDS FOR CEMENT MORTAR LINING OR SPECIAL COATINGS. THE USE OF UNLINED OR UNCOATED PIPE IS NOT ALLOWED.

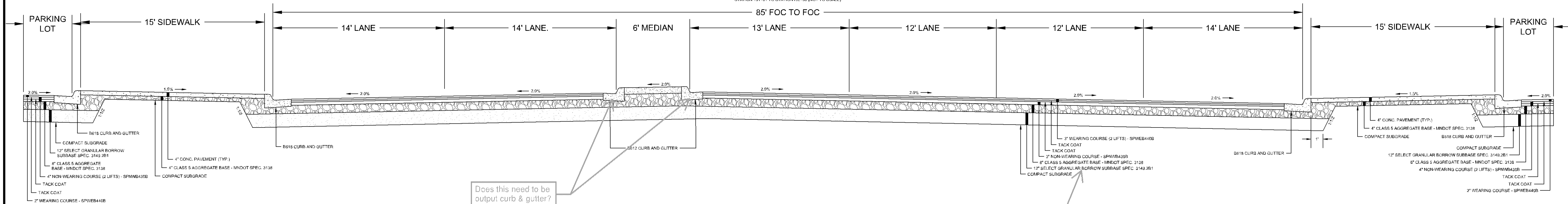
DRAWN BY: CS						 <div>PHONE: 952.912.2600 10901 RED CIRCLE DRIVE, SUITE 300 MINNETONKA, MN 55343 www.sehinc.com</div>	<div>I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA</div> <div>PRELIMINARY</div> <div>Date: _____ Lic. No. _____</div>	www.ryancompanies.com	SOUTH LOOP WATERPARK BLOOMINGTON, MINNESOTA	NOTES AND STRUCTURE SCHEDULE	FILE NO. 151051	<div>3</div> <div>72</div>
DESIGNER: JG												
CHECKED BY: JG												
DESIGN TEAM	NO.	BY	DATE	REVISIONS								



STATION 181+50 TO STATION 185+10 (NOT TO SCALE)



STATION 151+31 TO STATION 162+65 (NOT TO SCALE)



Does this need to be
subset, such as B , rather?

Verify all pavement sections meet geotech report

DRAWN BY: _____ CS
DESIGNER: _____ JG
CHECKED BY: _____ JG
DESIGN TEAM

NO.	BY	DATE	REVISIONS



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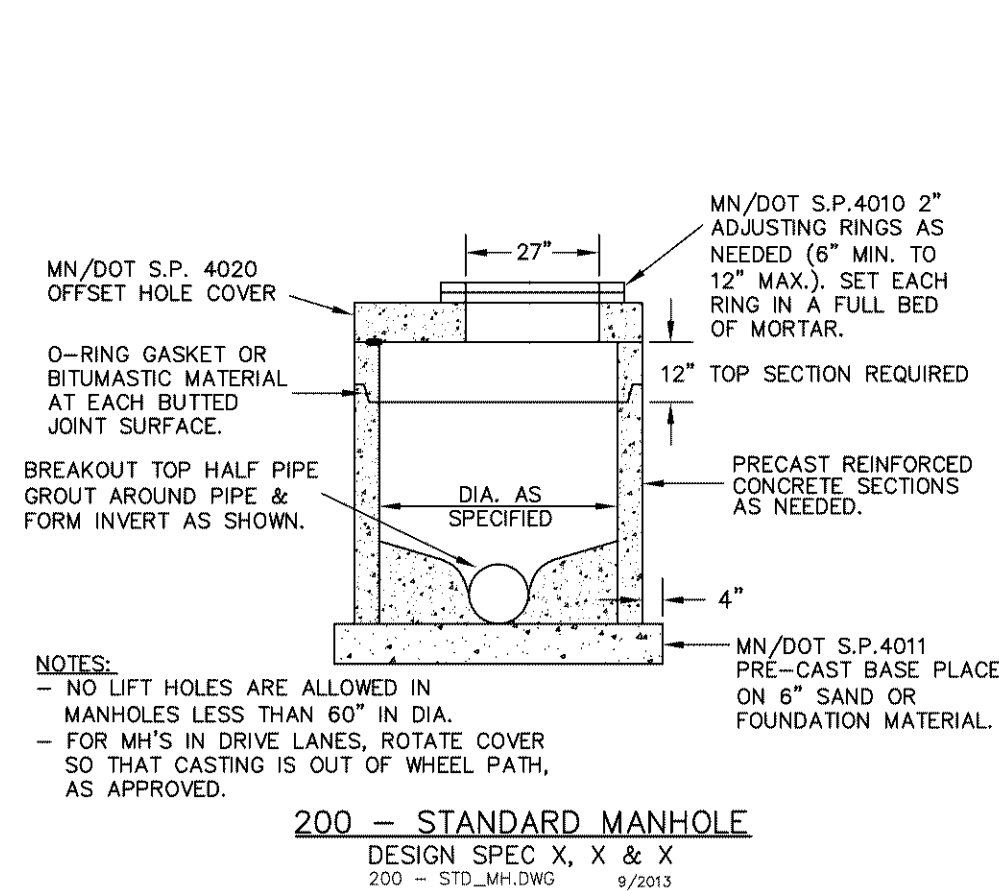
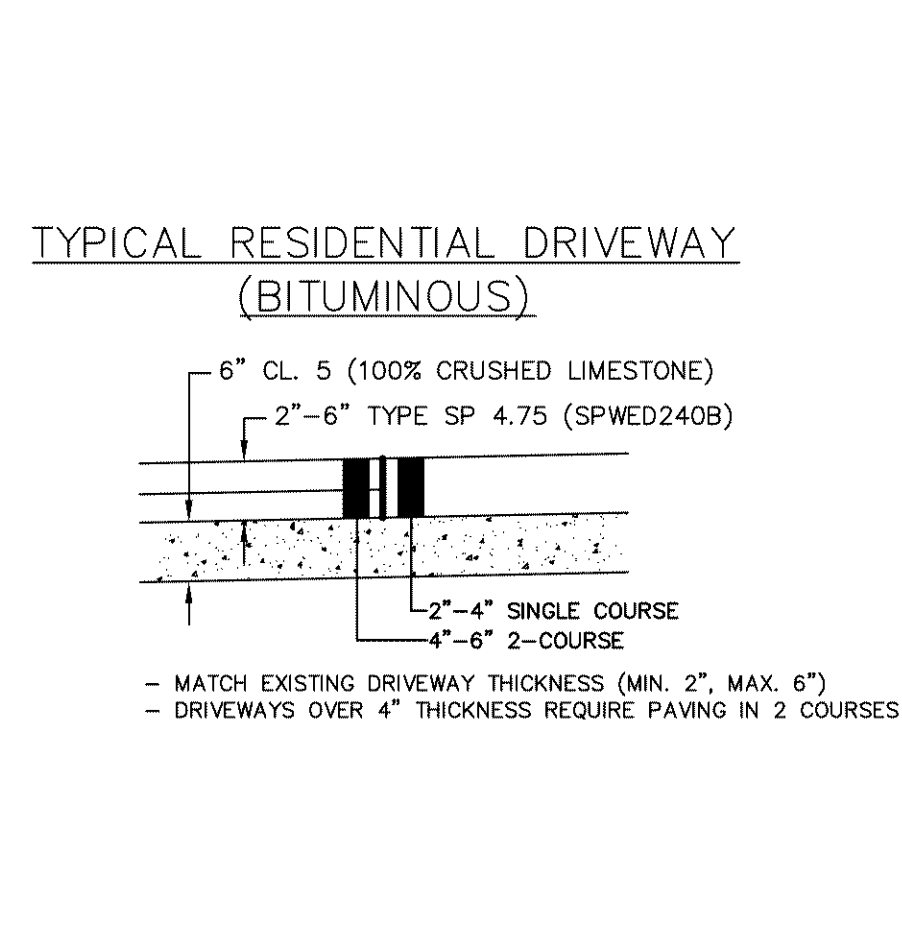
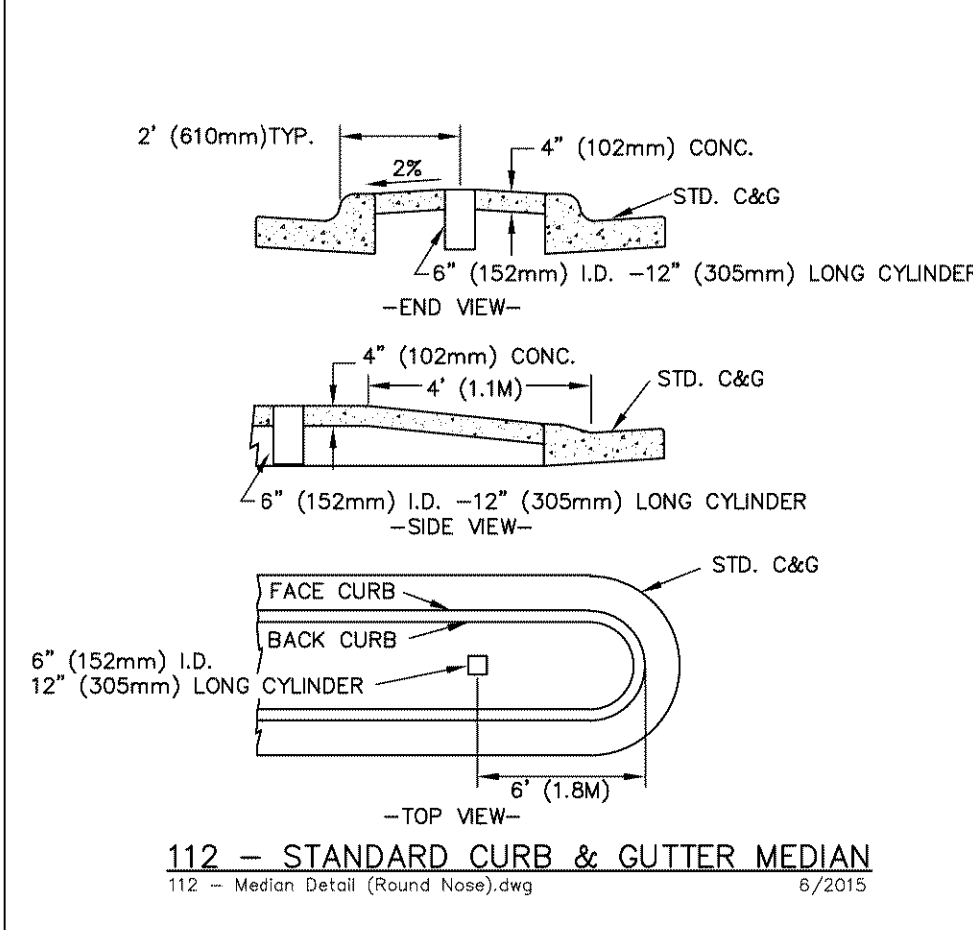
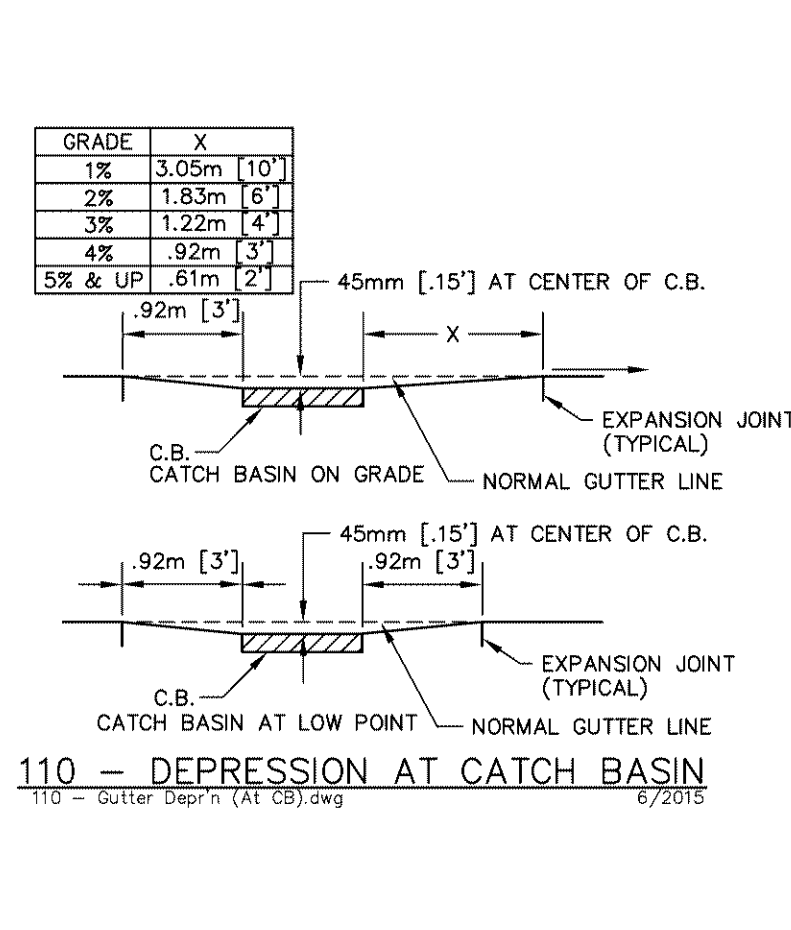
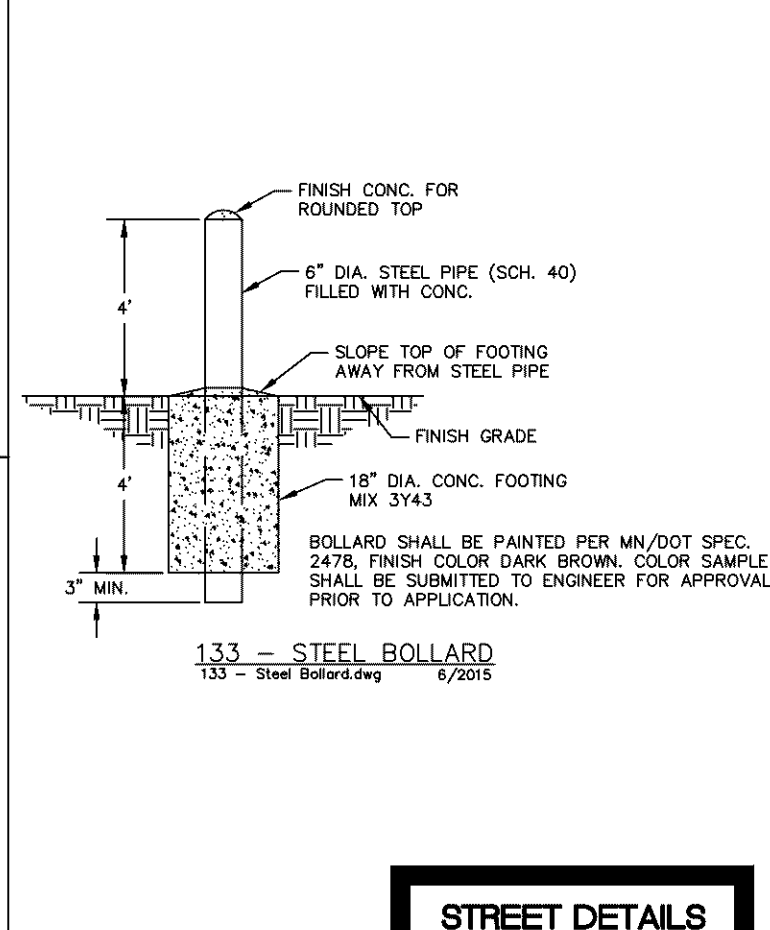
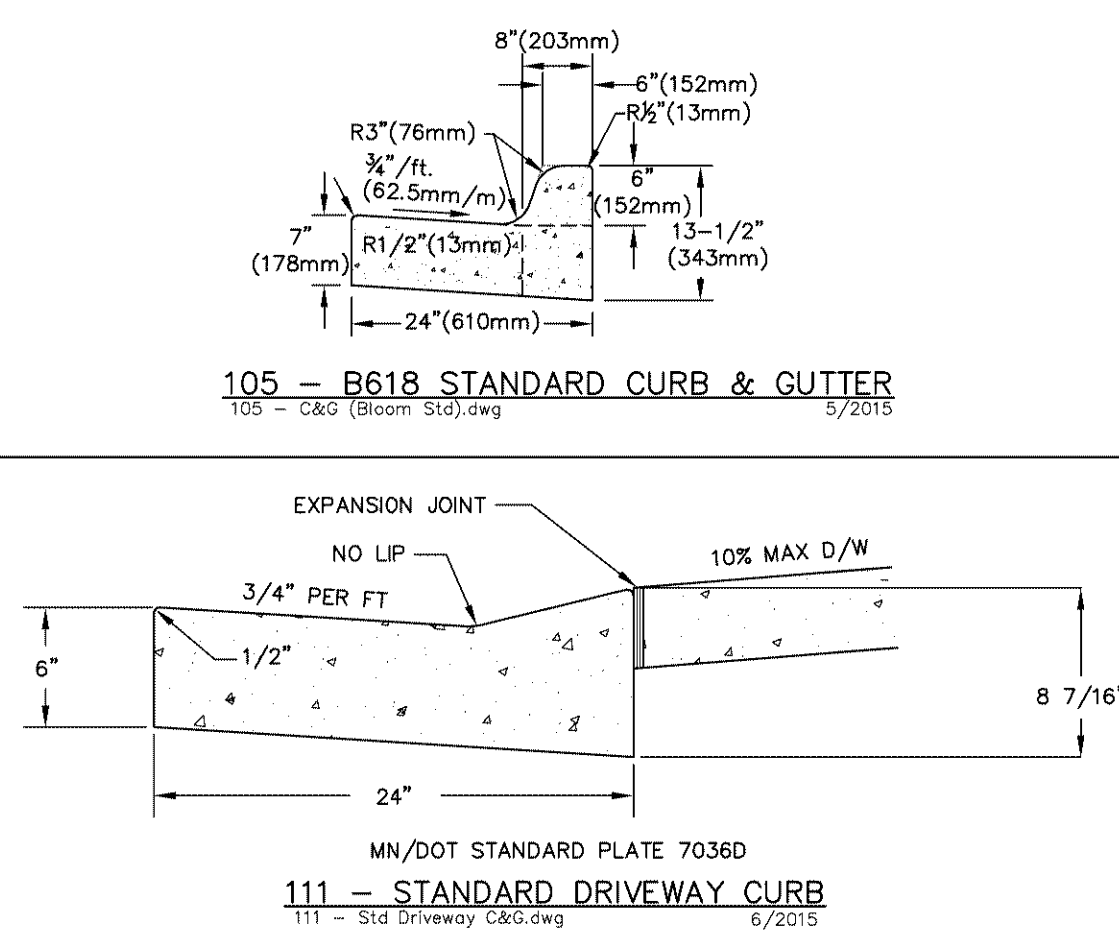
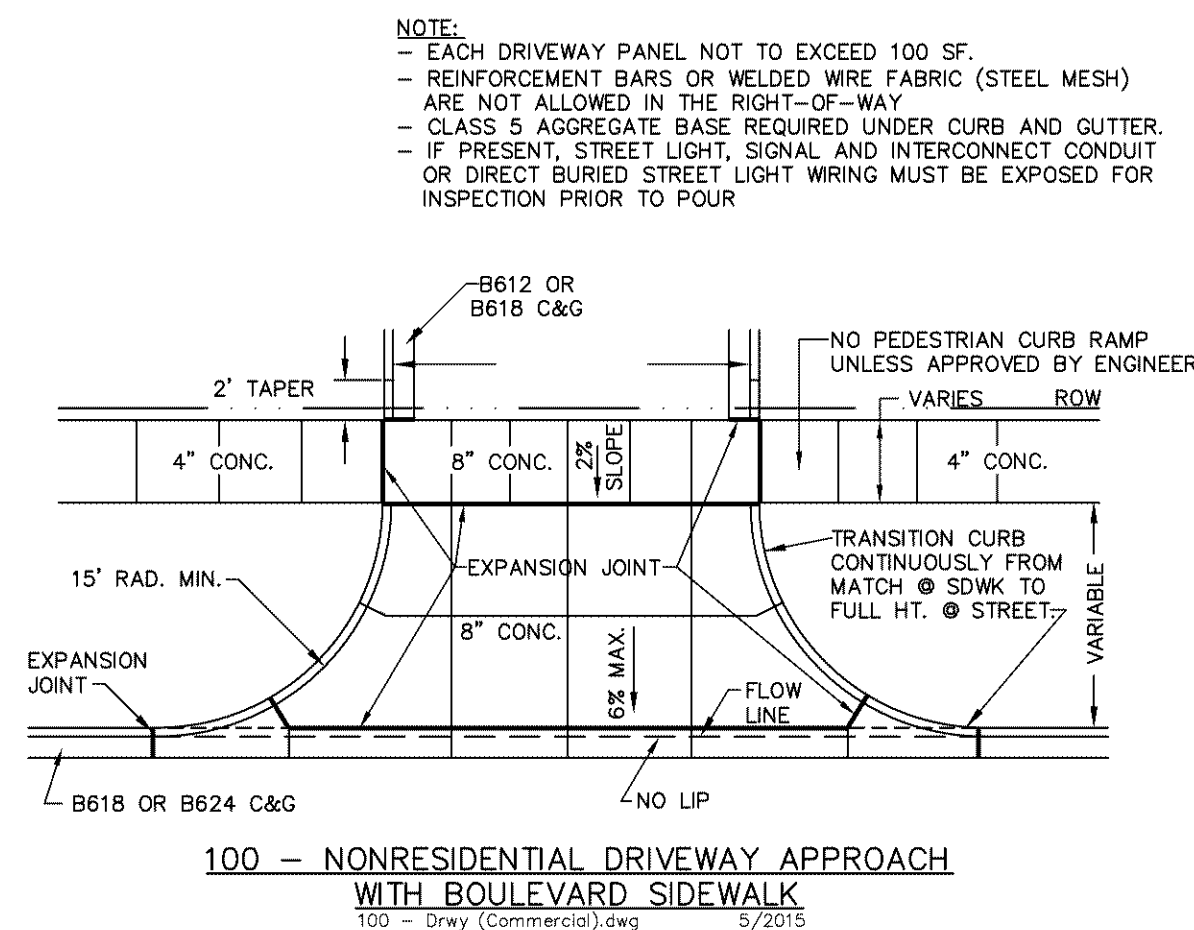


**SOUTH LOOP
WATERPARK**
BLOOMINGTON, MINNESOTA

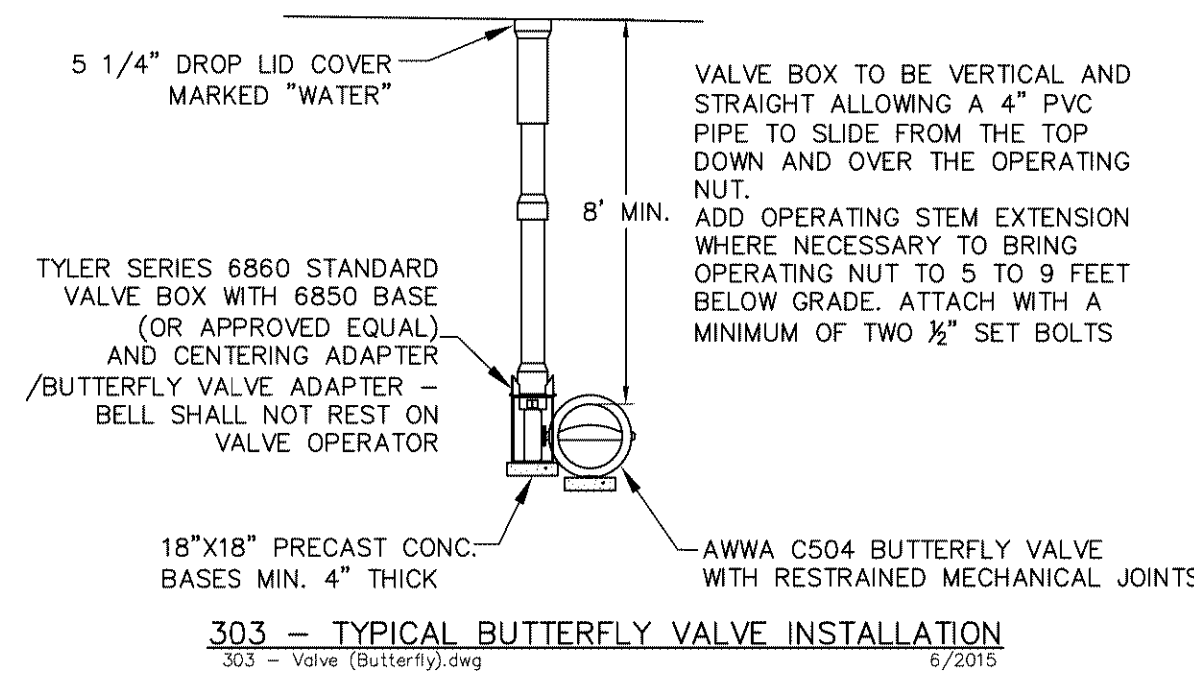
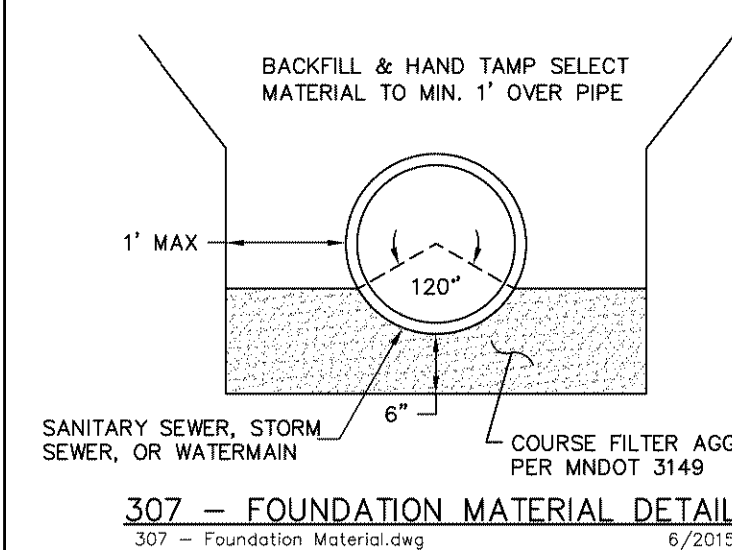
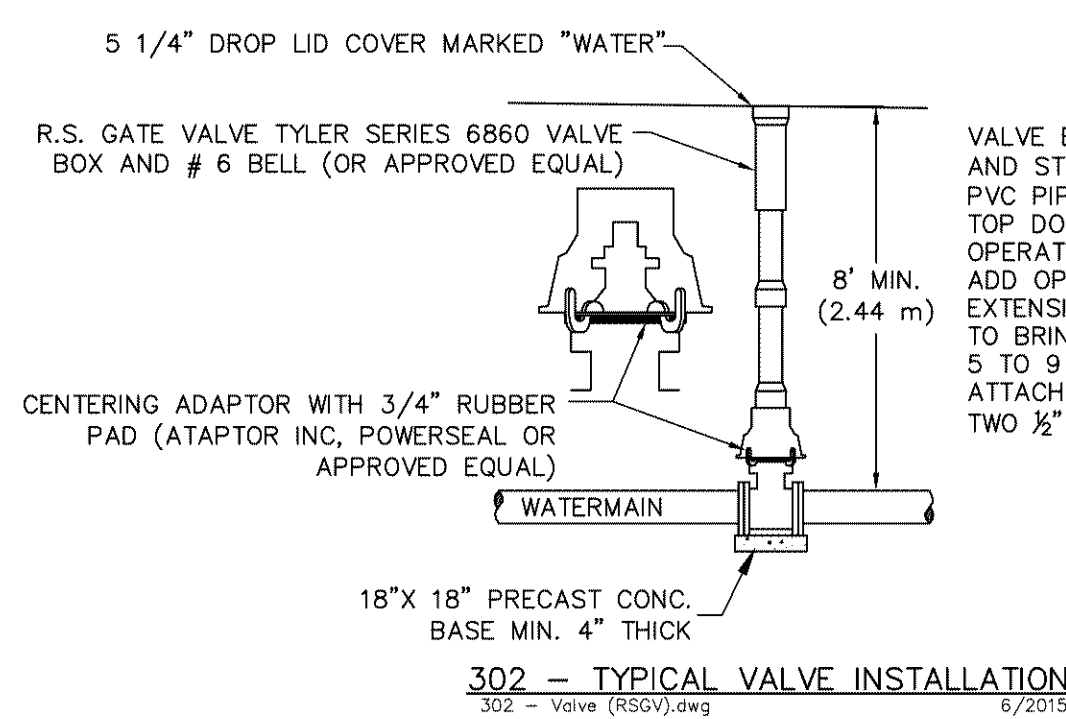
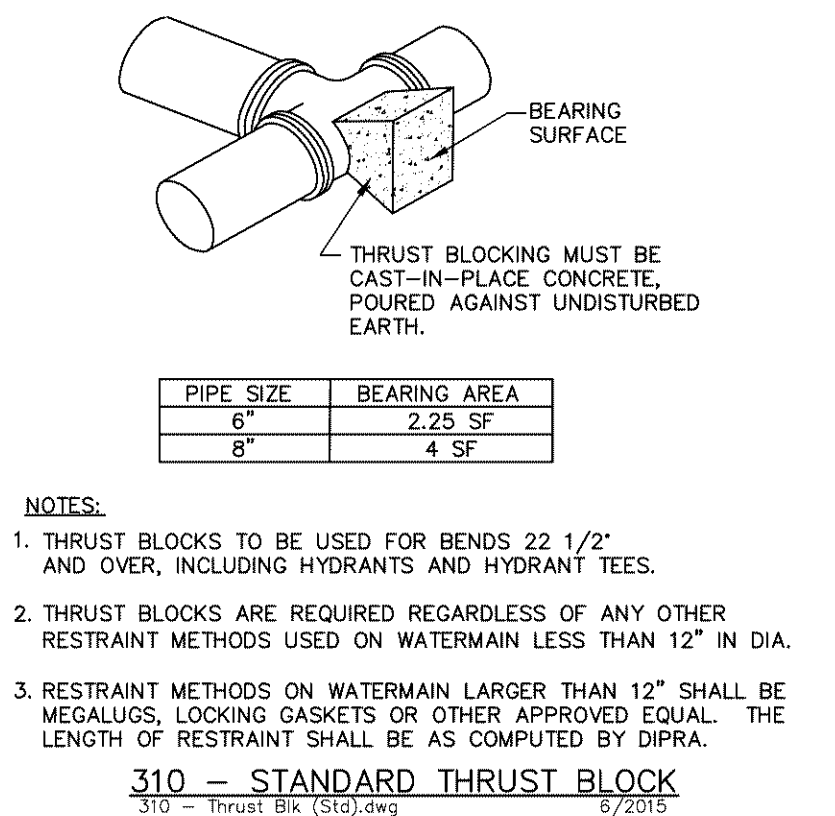
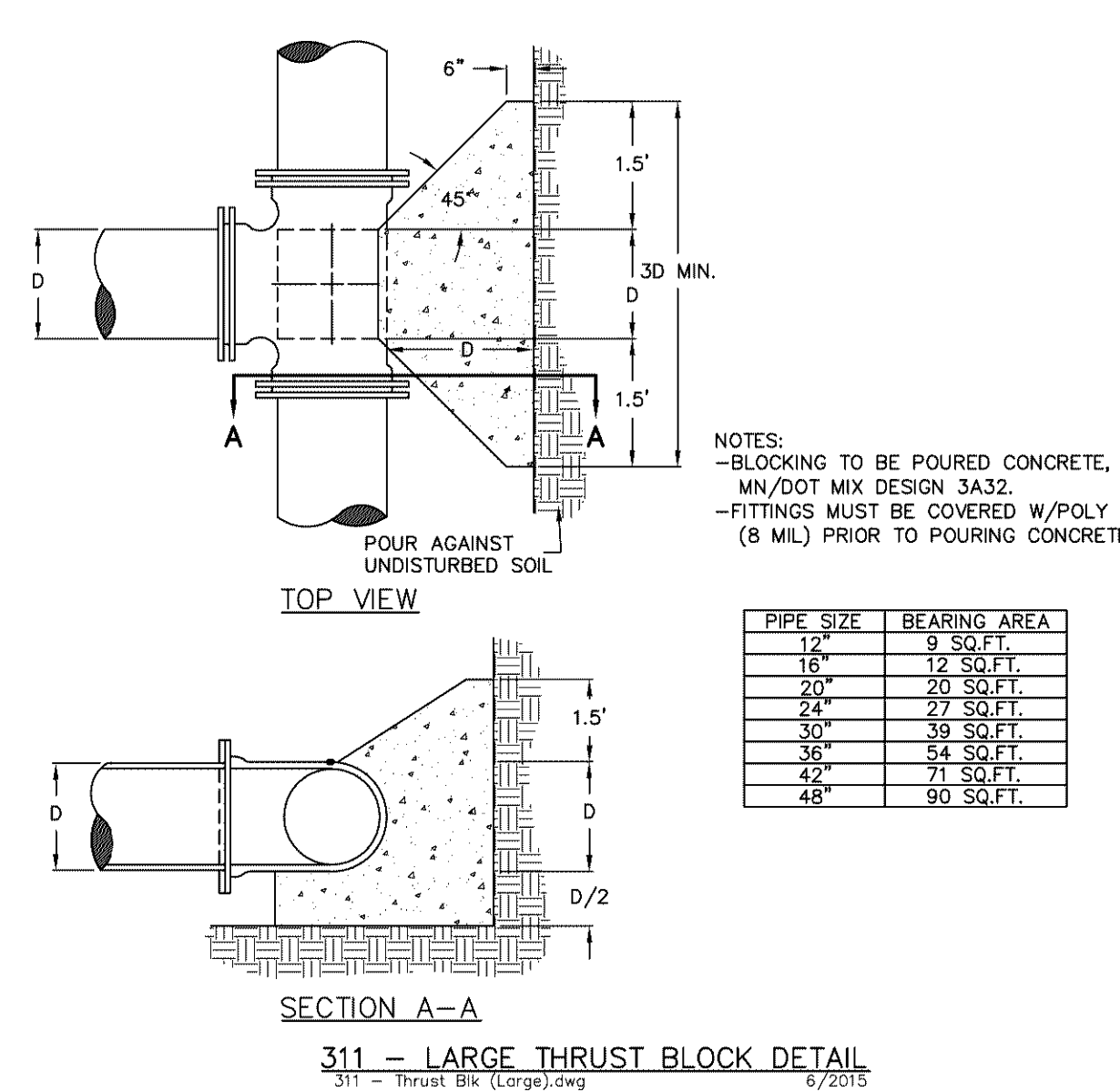
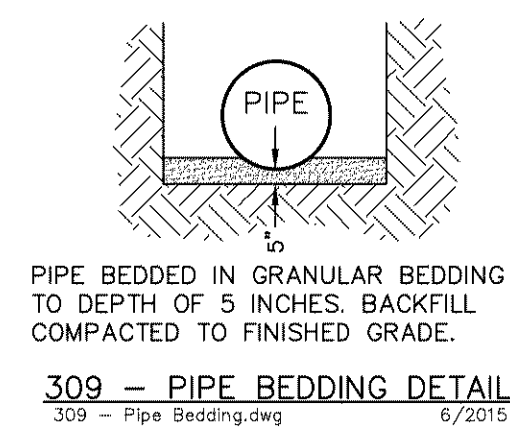
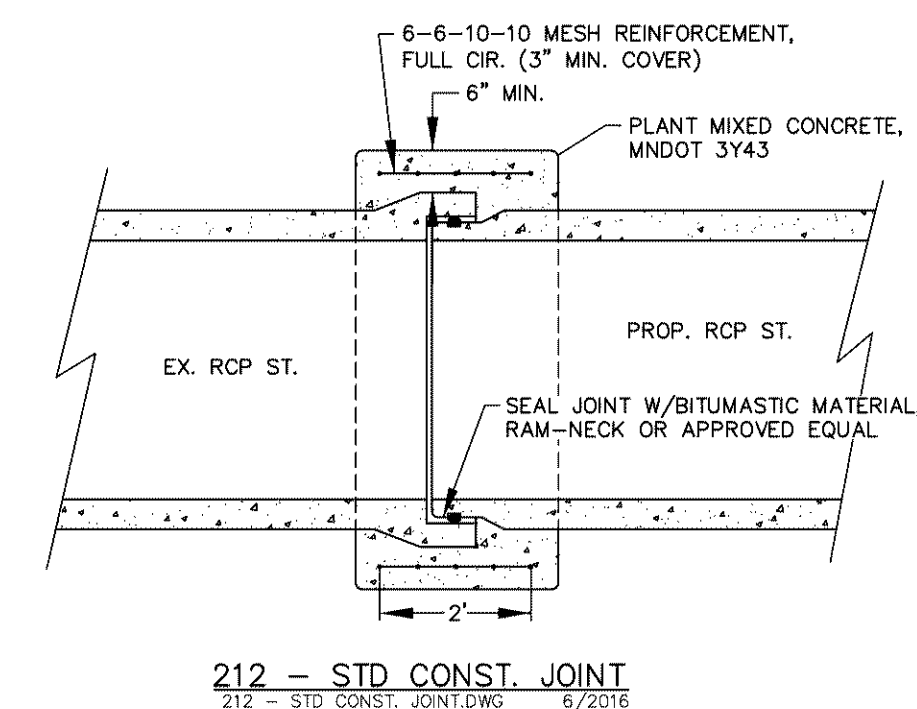
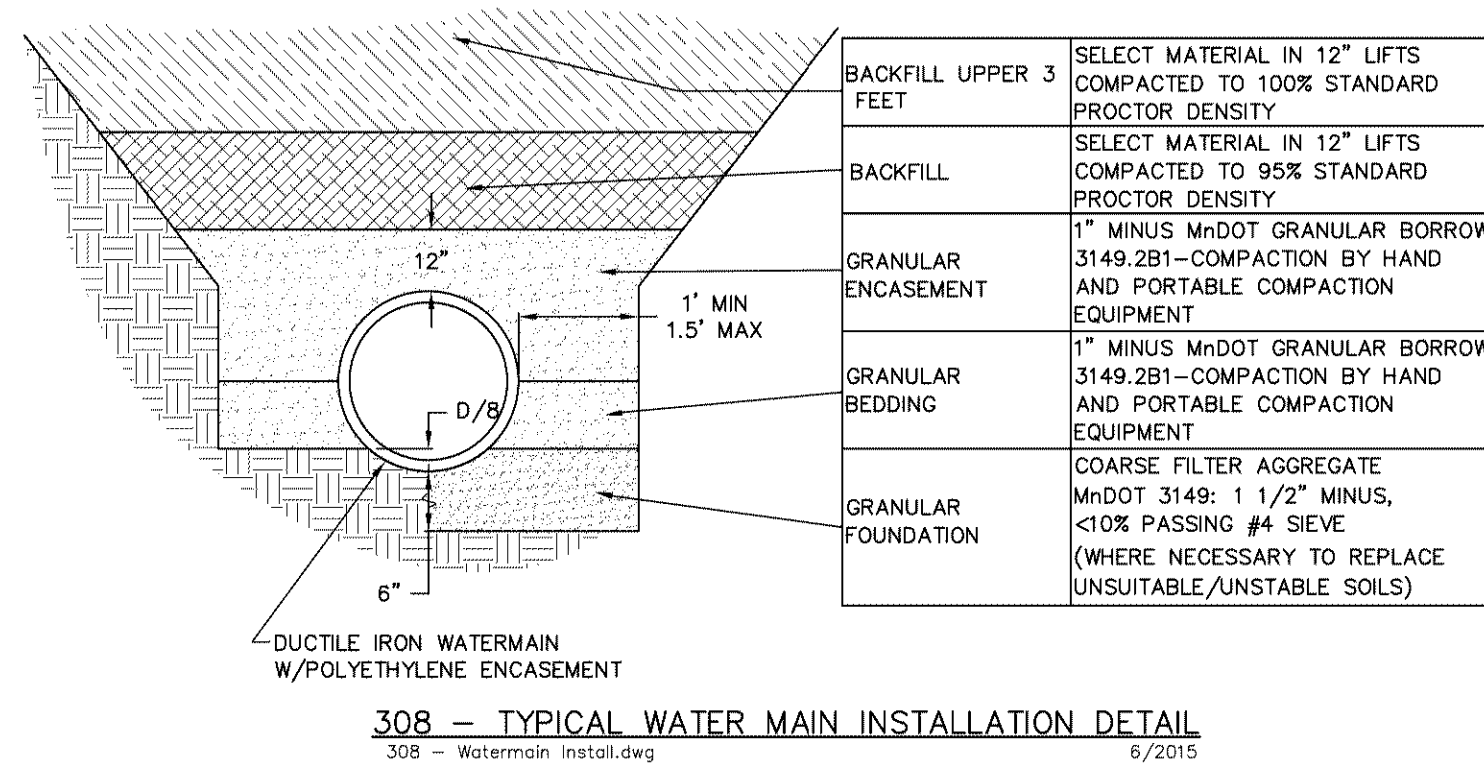
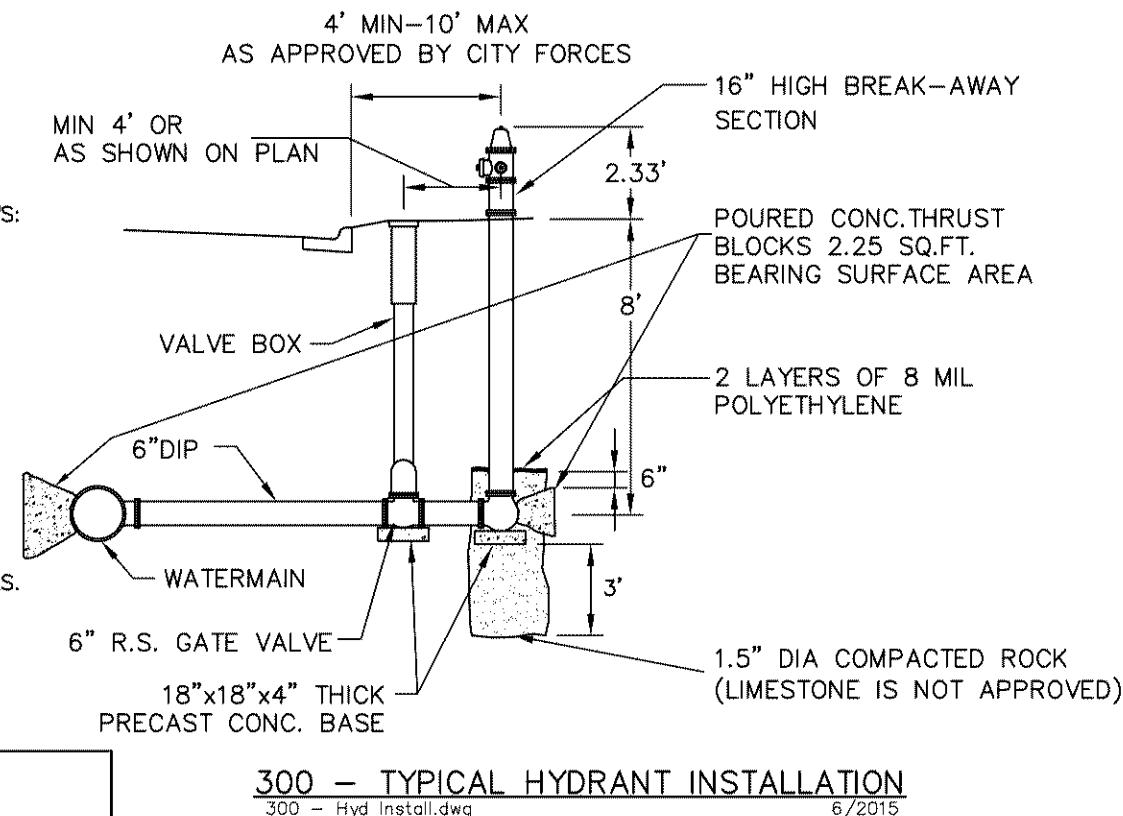
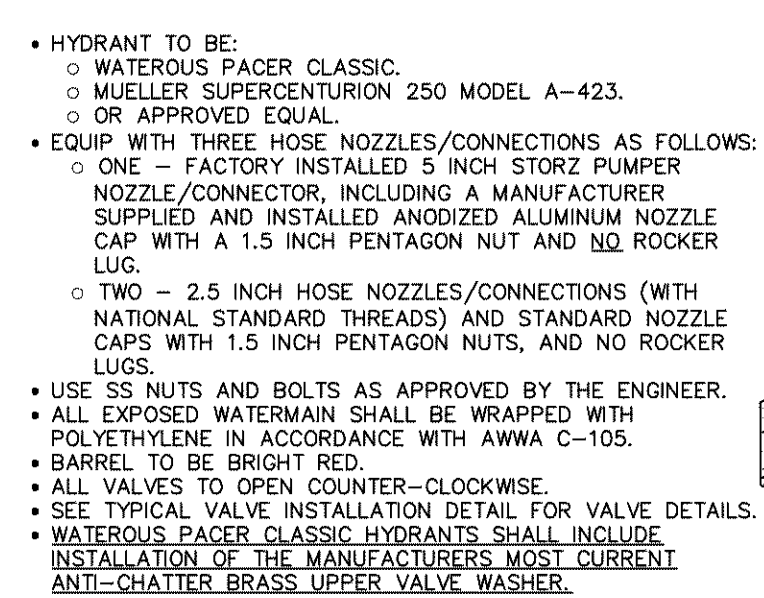
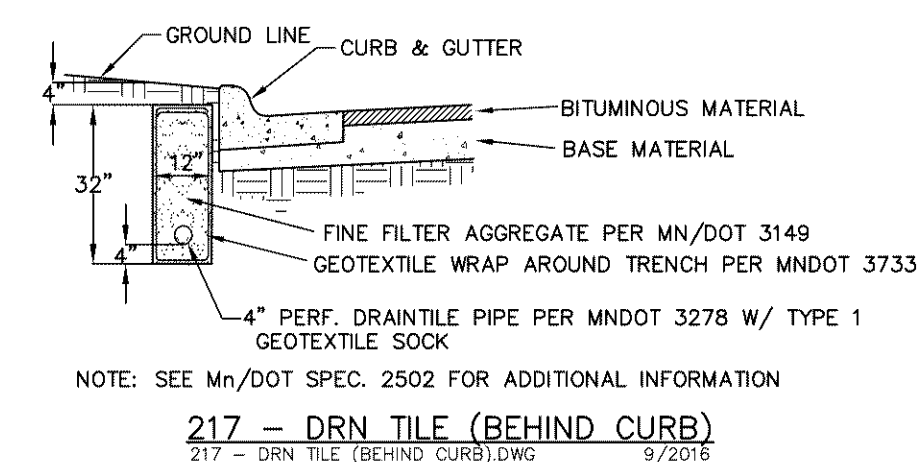
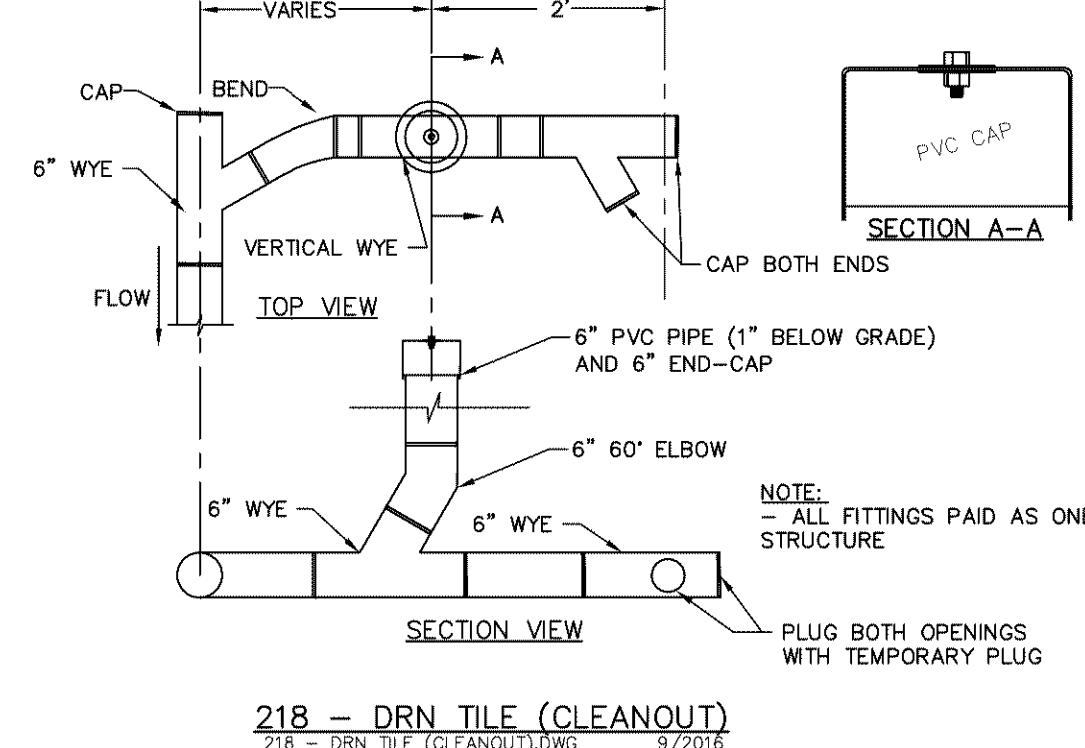
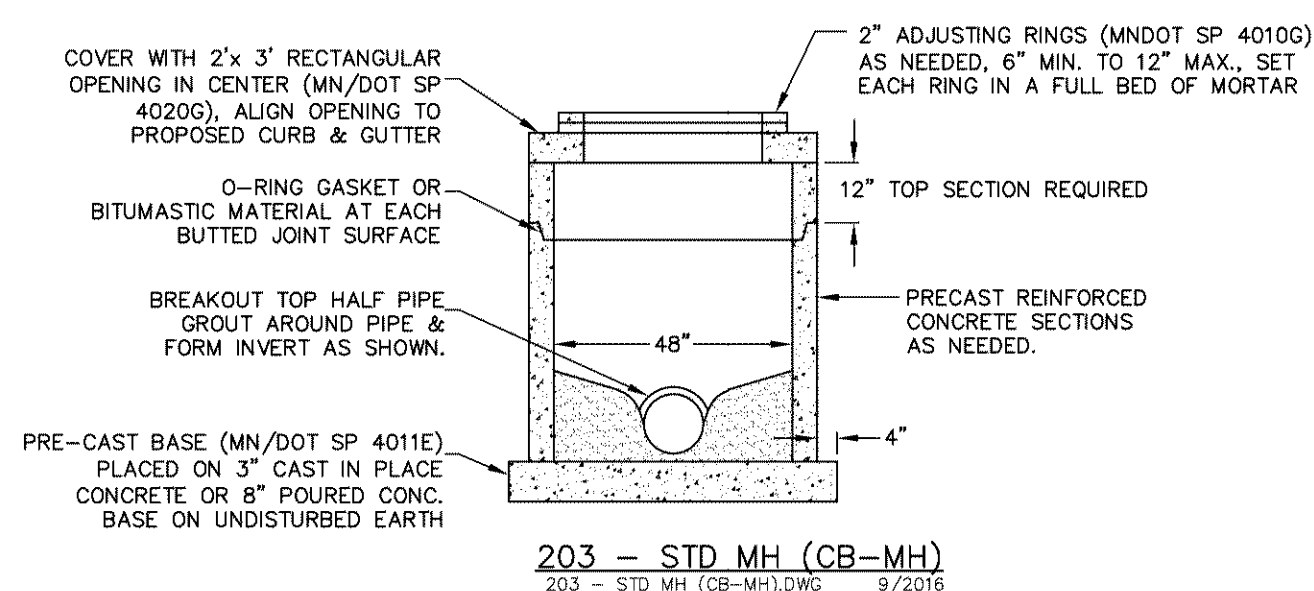
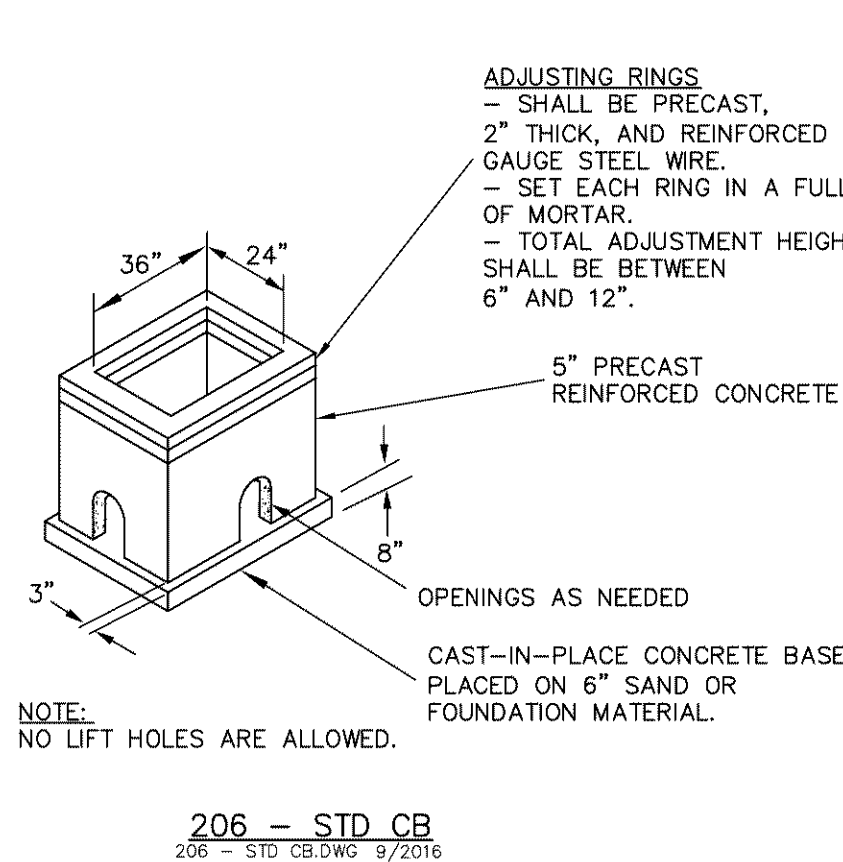
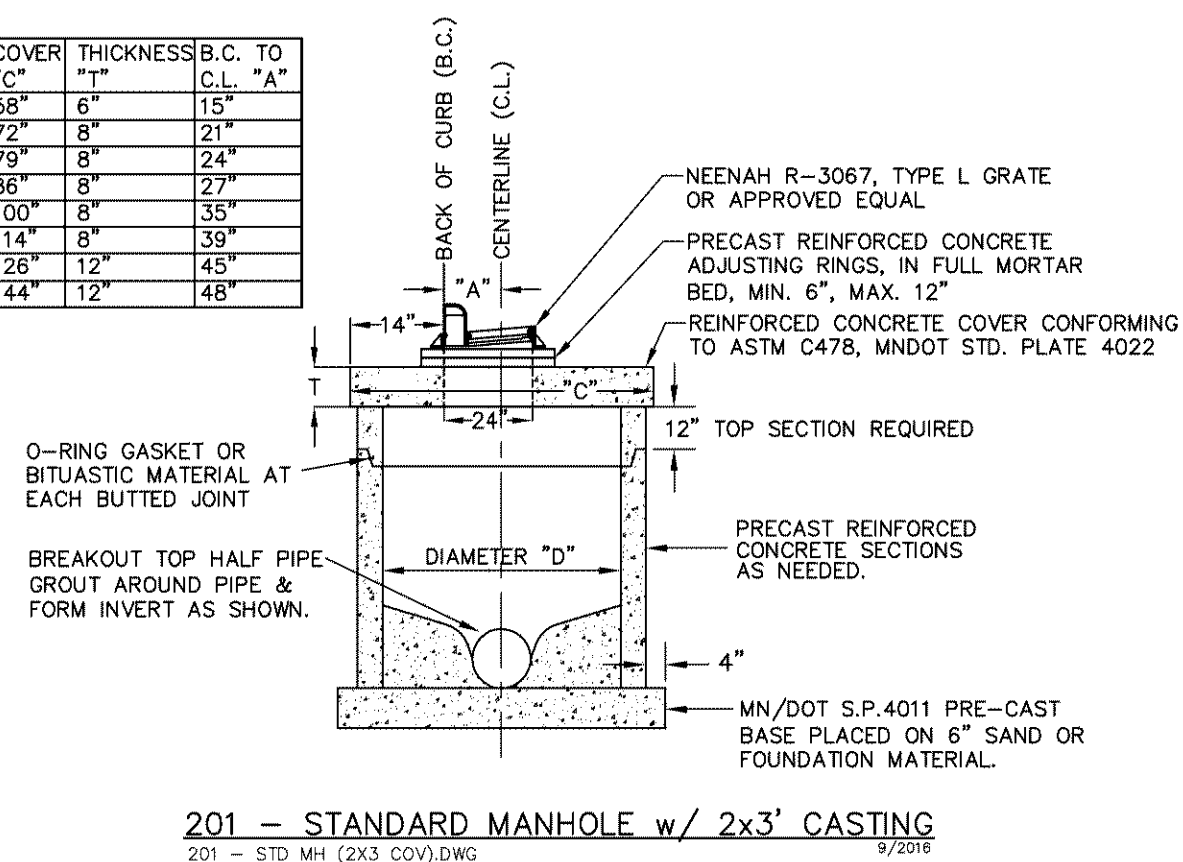
TYPICAL SECTIONS

FILE NO.
151051

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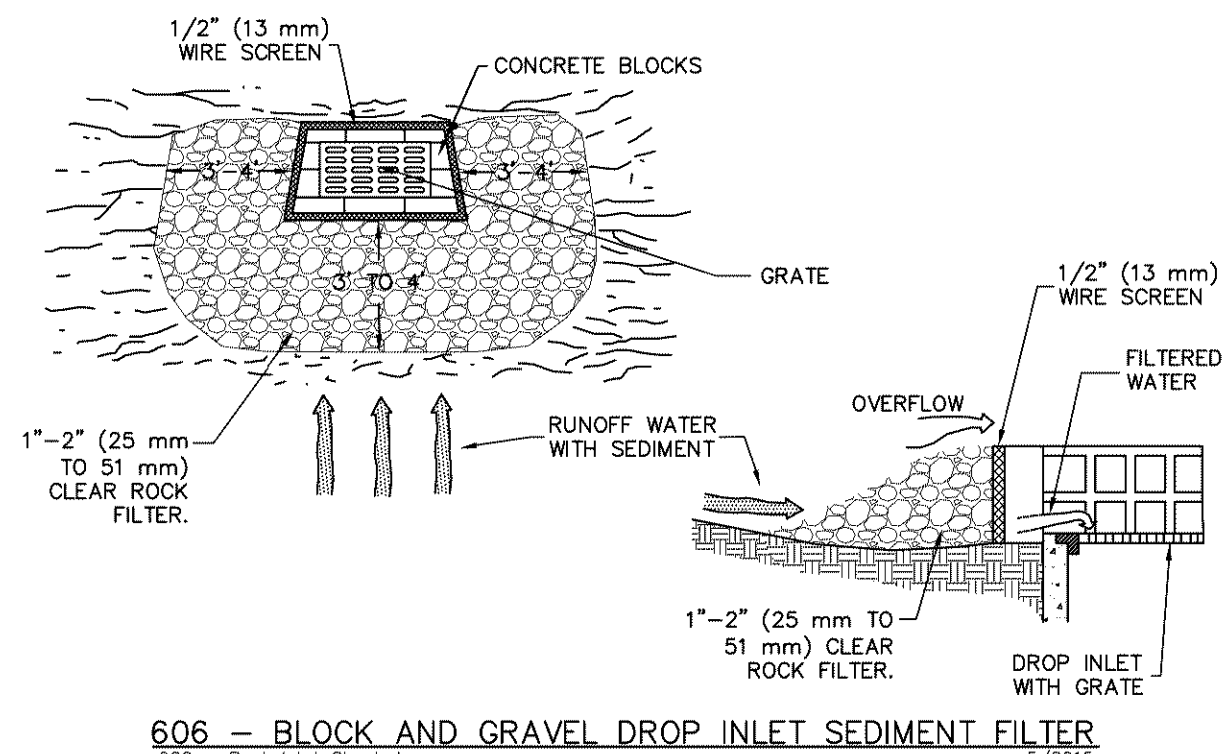
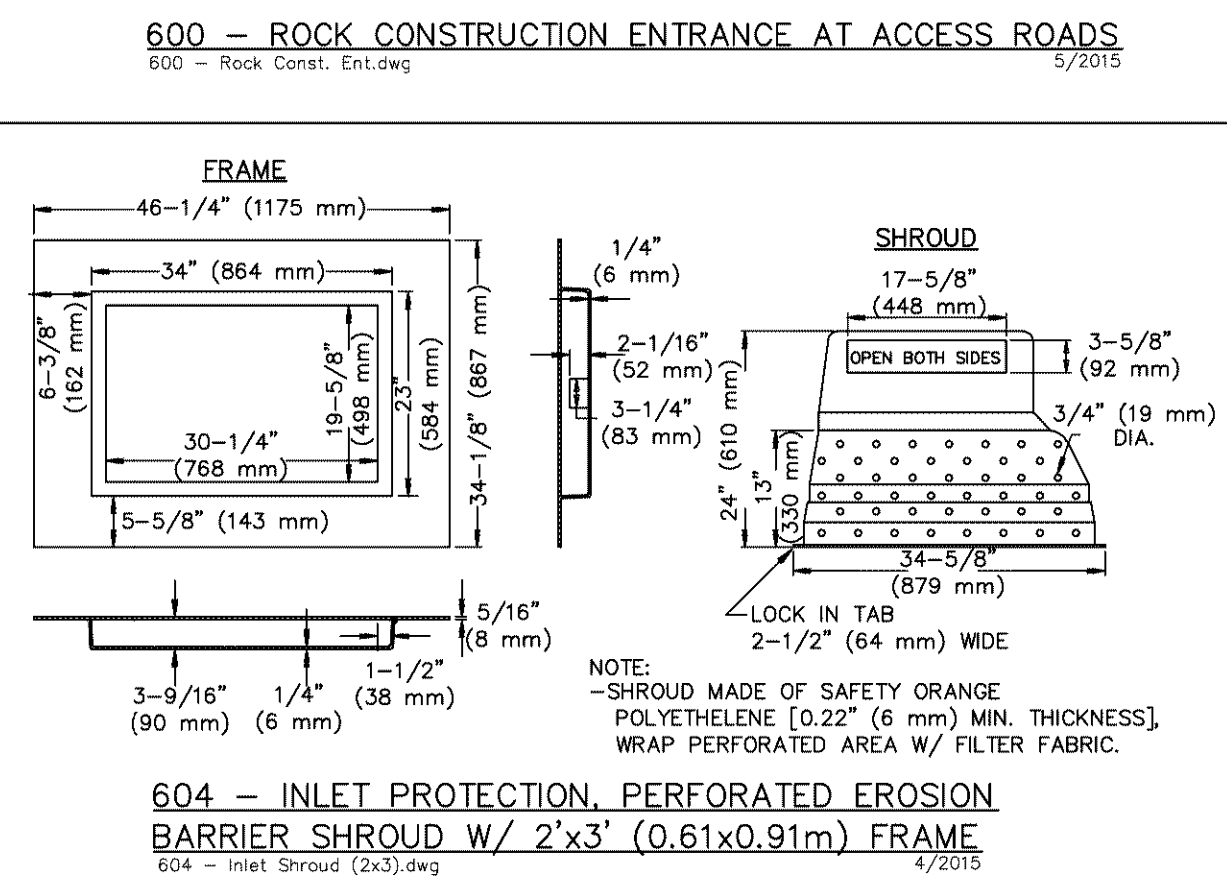
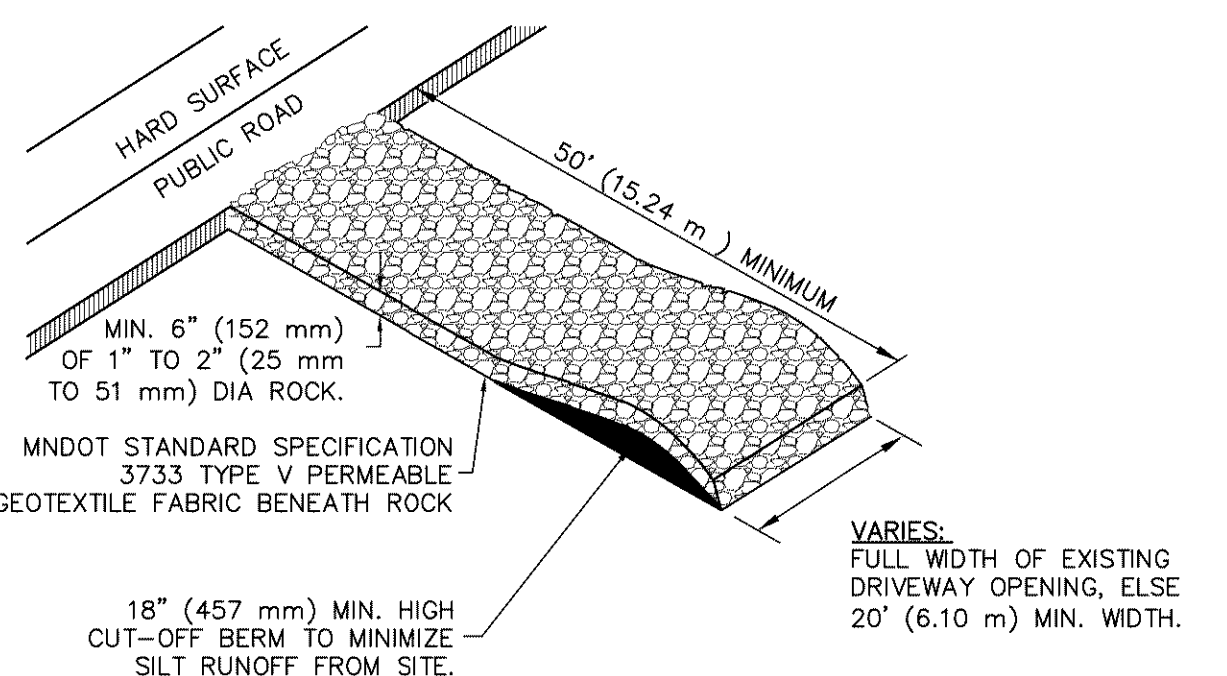
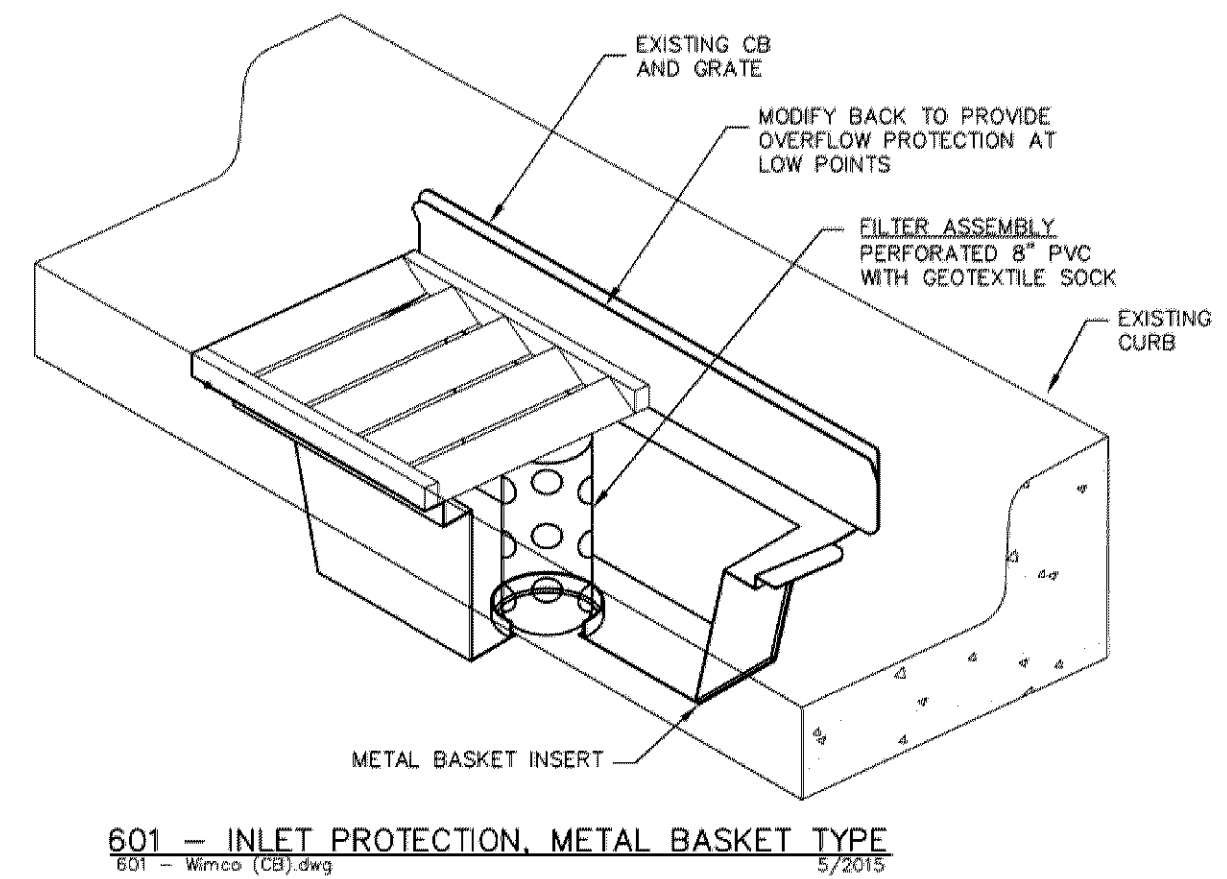
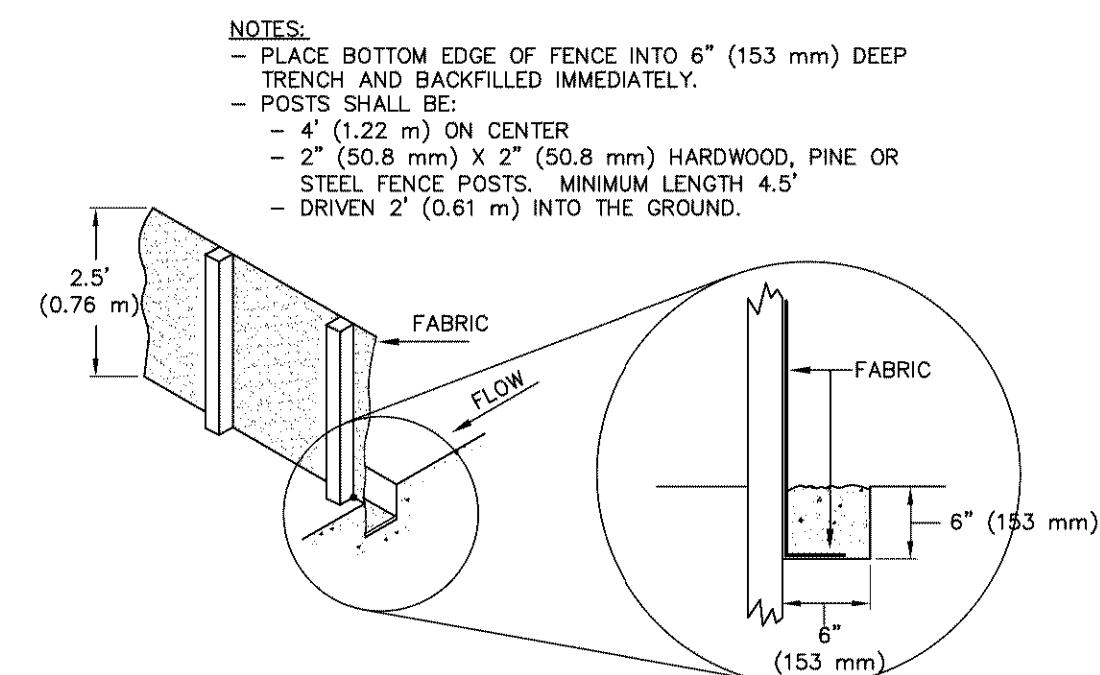
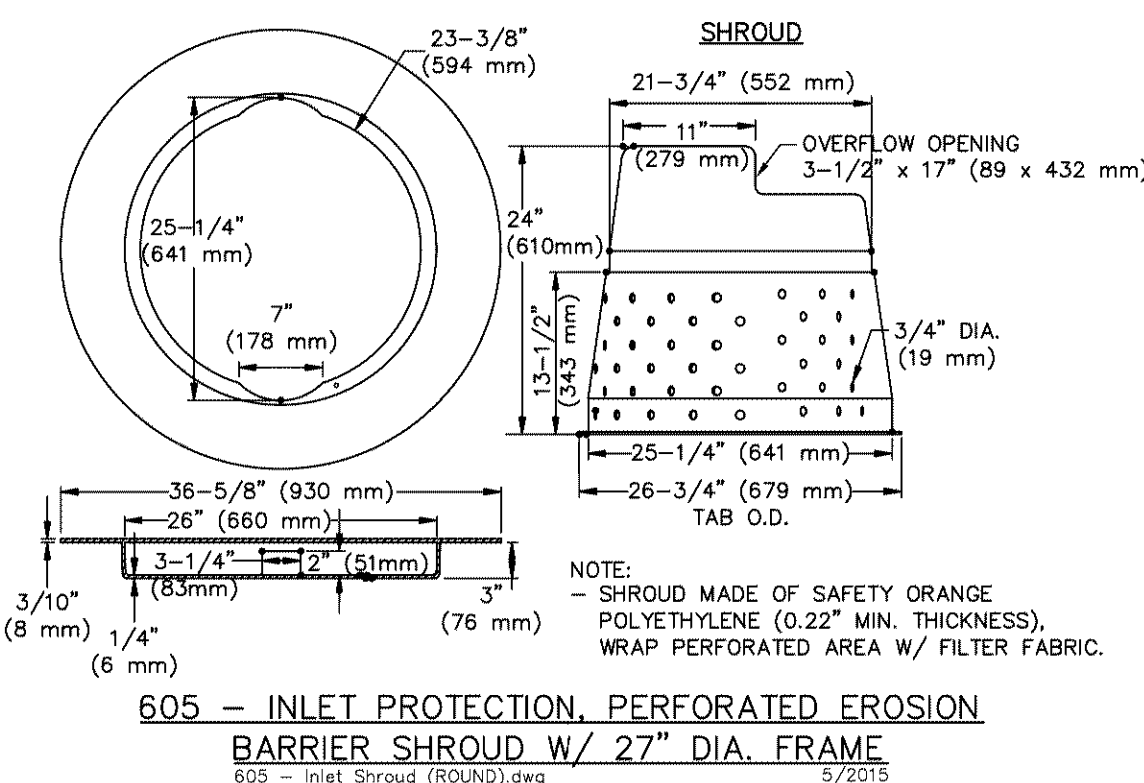
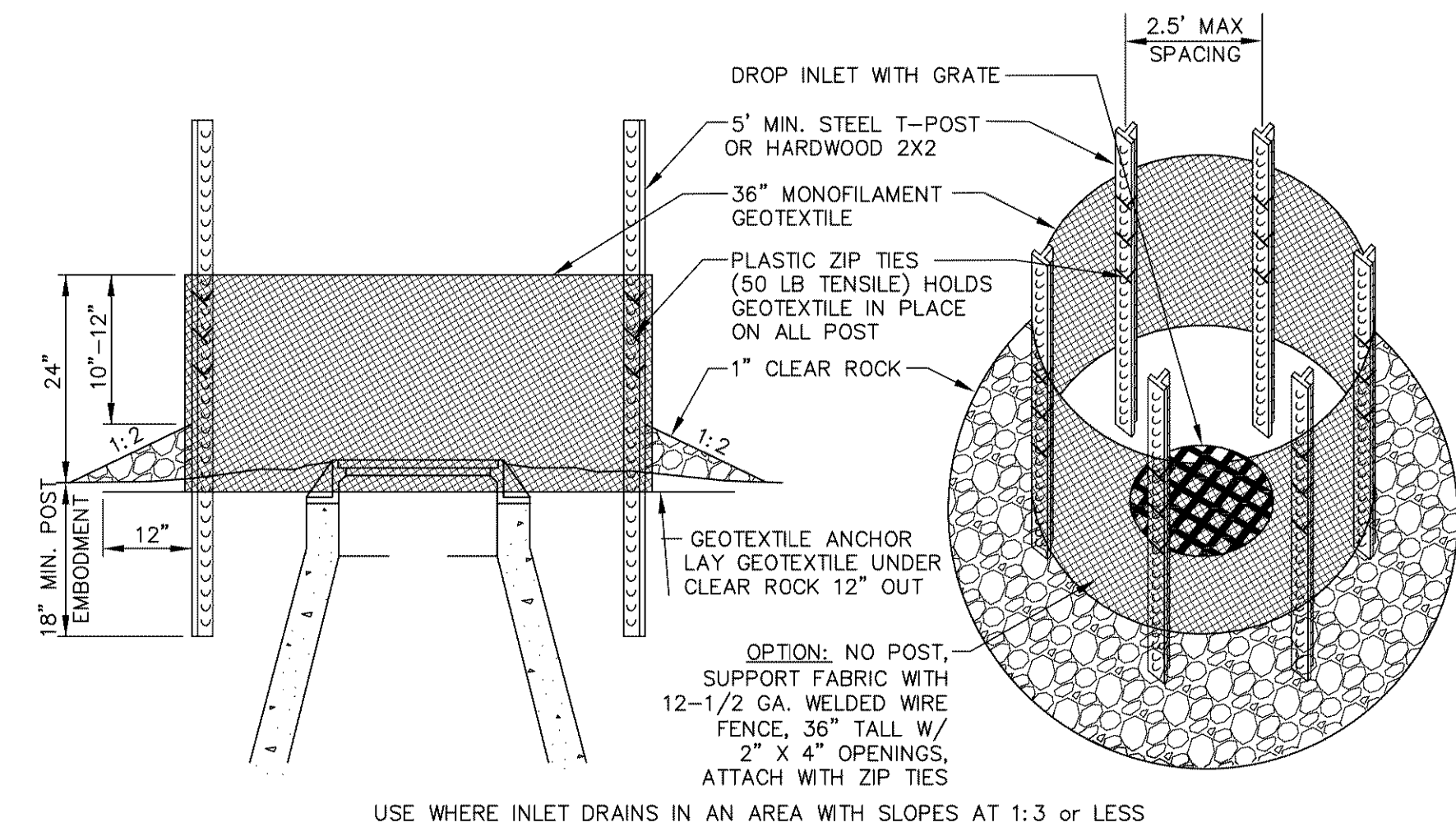
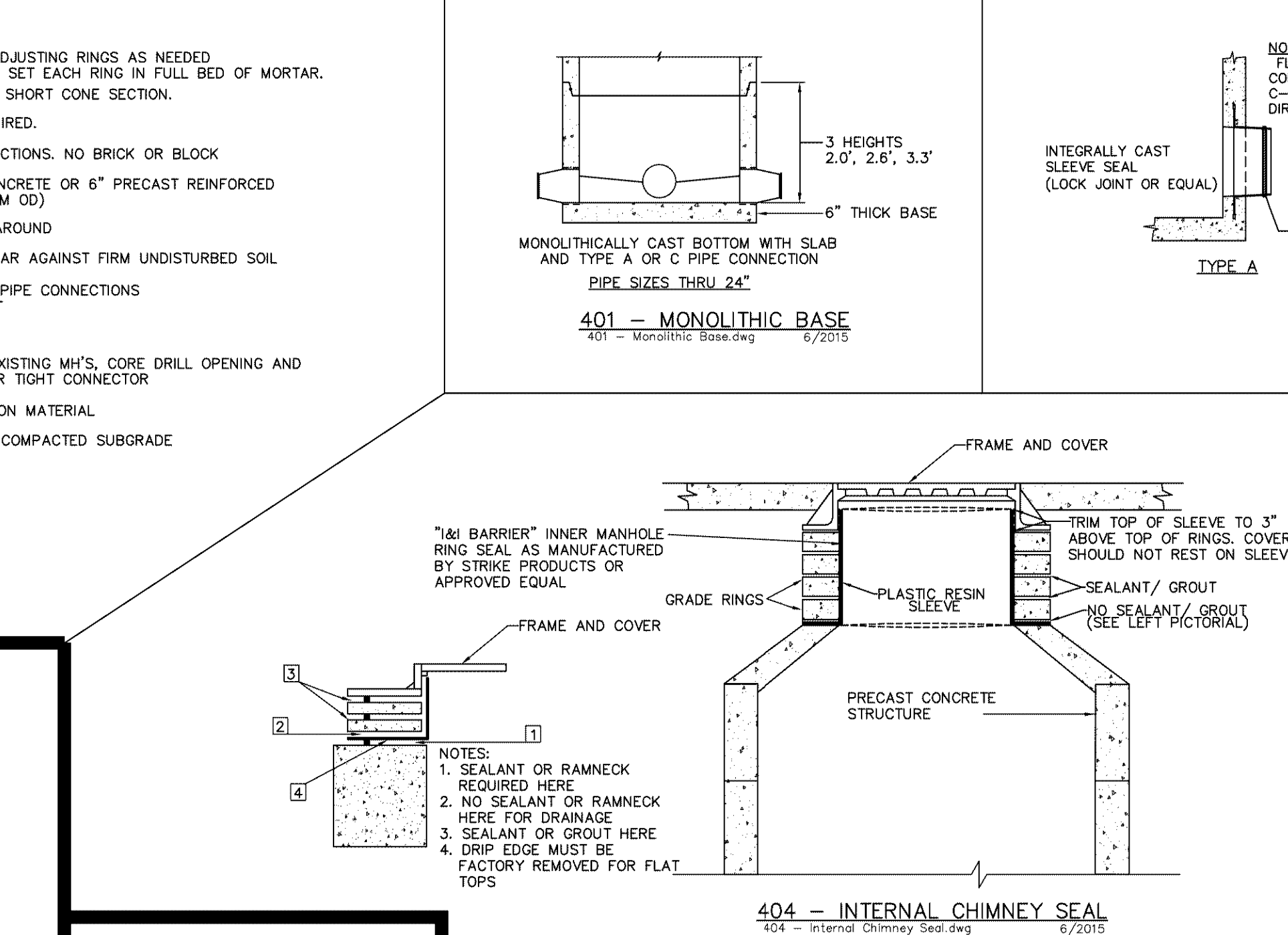
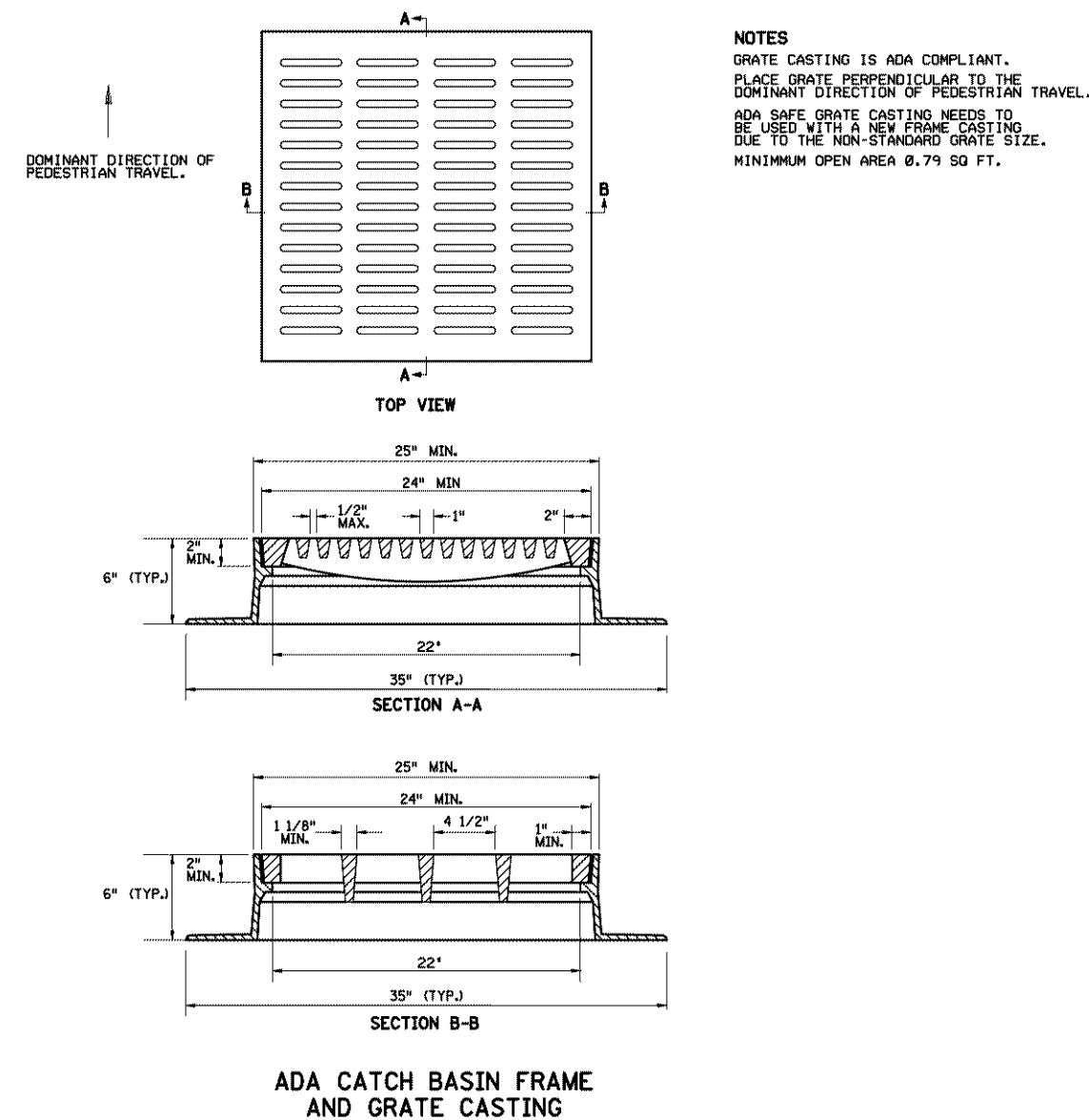
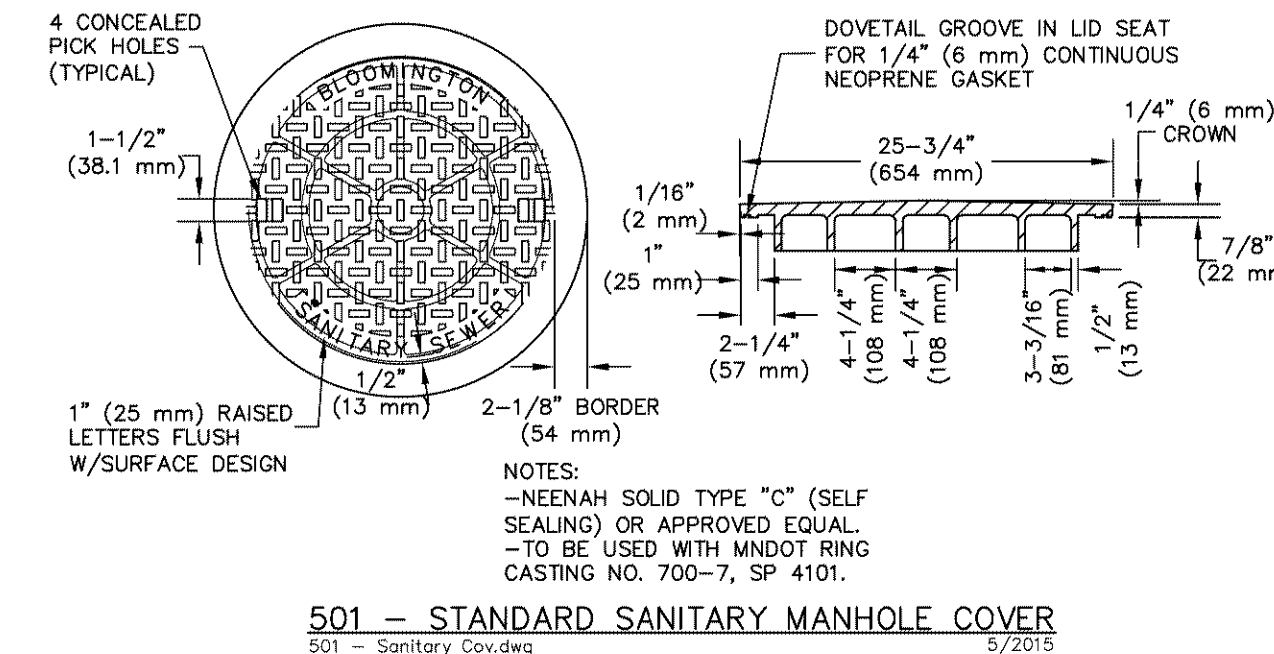
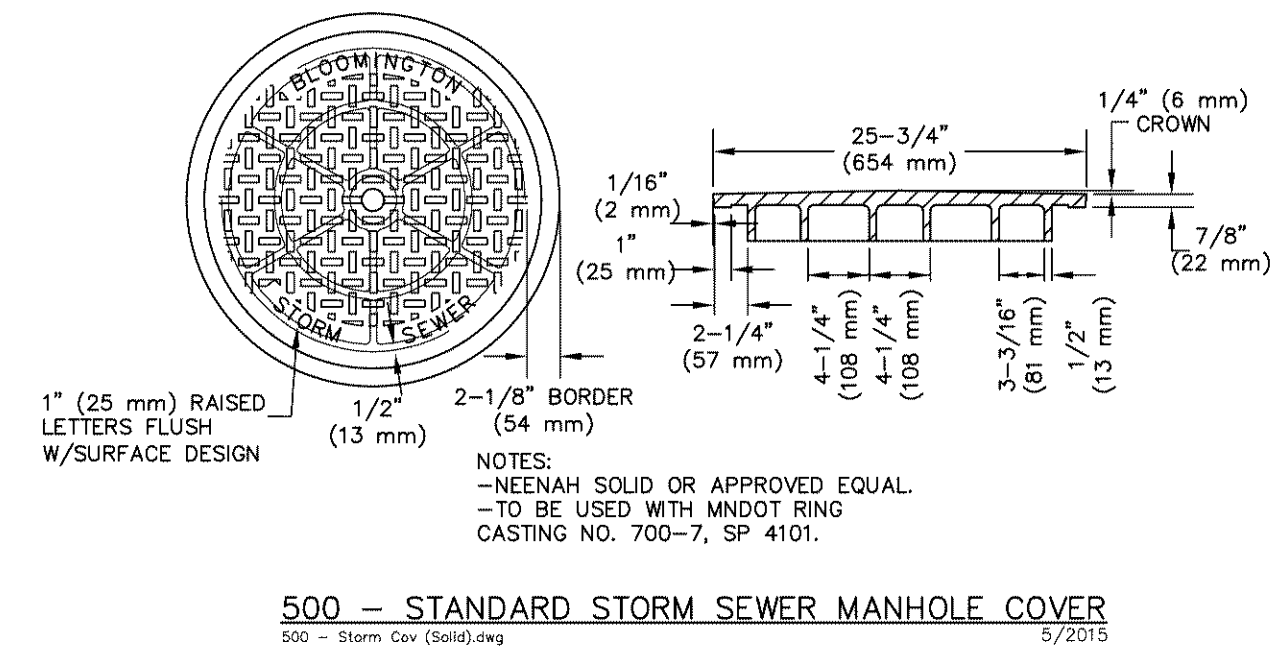
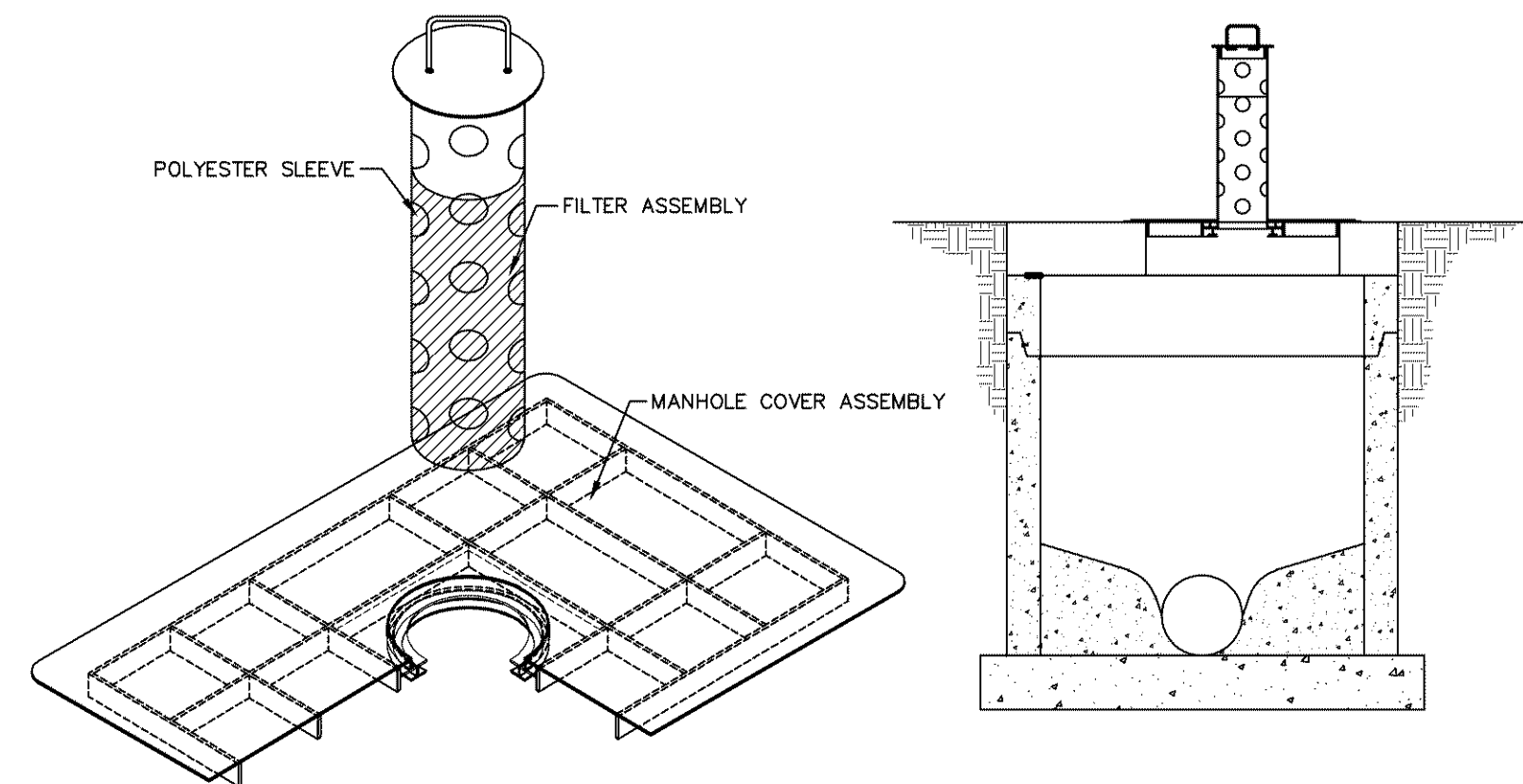
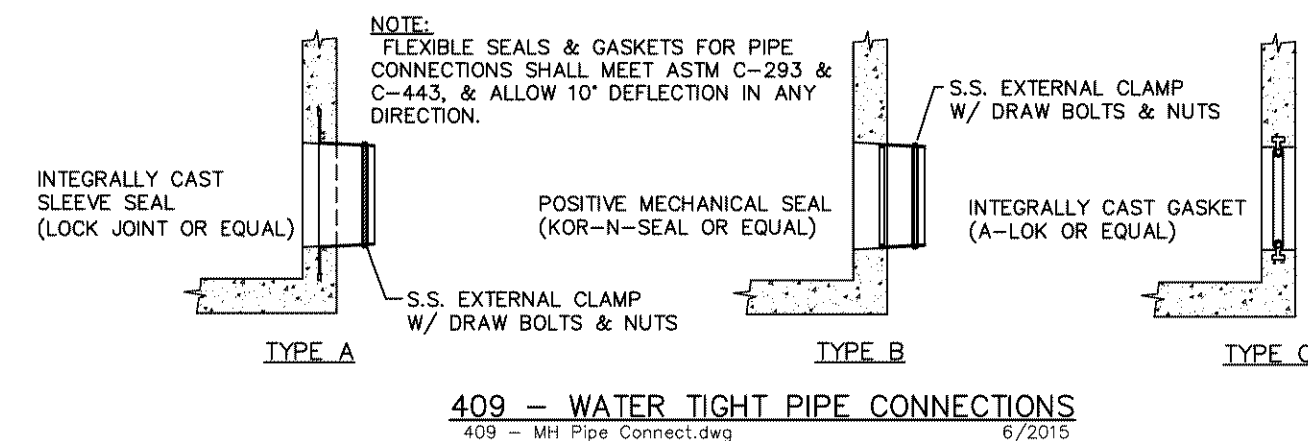
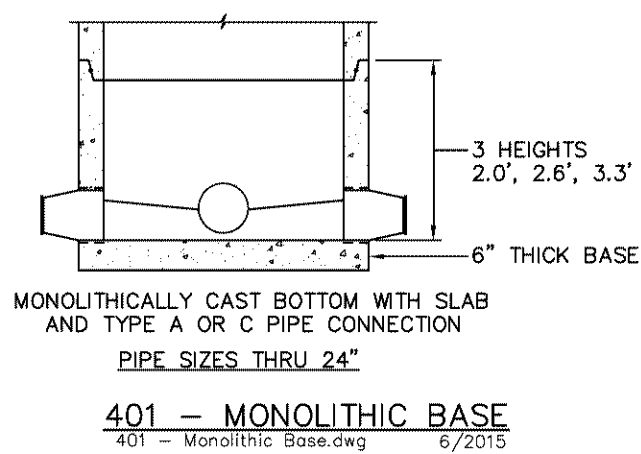
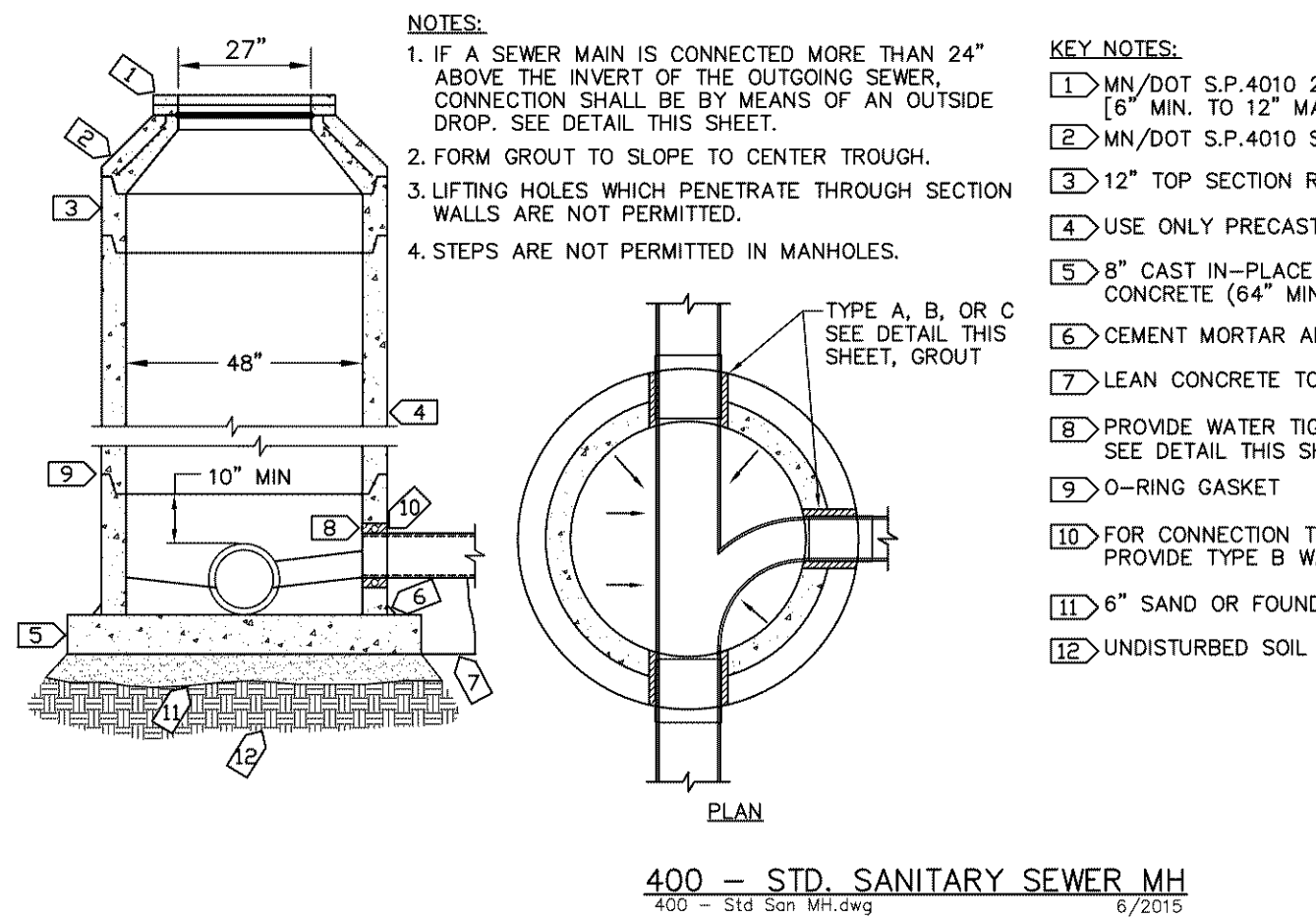
DIA. "D"	COVER "C"	THICKNESS "T"	B.C. TO C.L. "A"
48"	58"	6"	15"
60"	72"	8"	21"
66"	79"	8"	24"
72"	86"	8"	27"
84"	100"	8"	35"
96"	114"	8"	39"
108"	126"	12"	45"
120"	144"	12"	48"



STREET DETAILS

STORM SEWER DETAILS

WATER MAIN DETAILS



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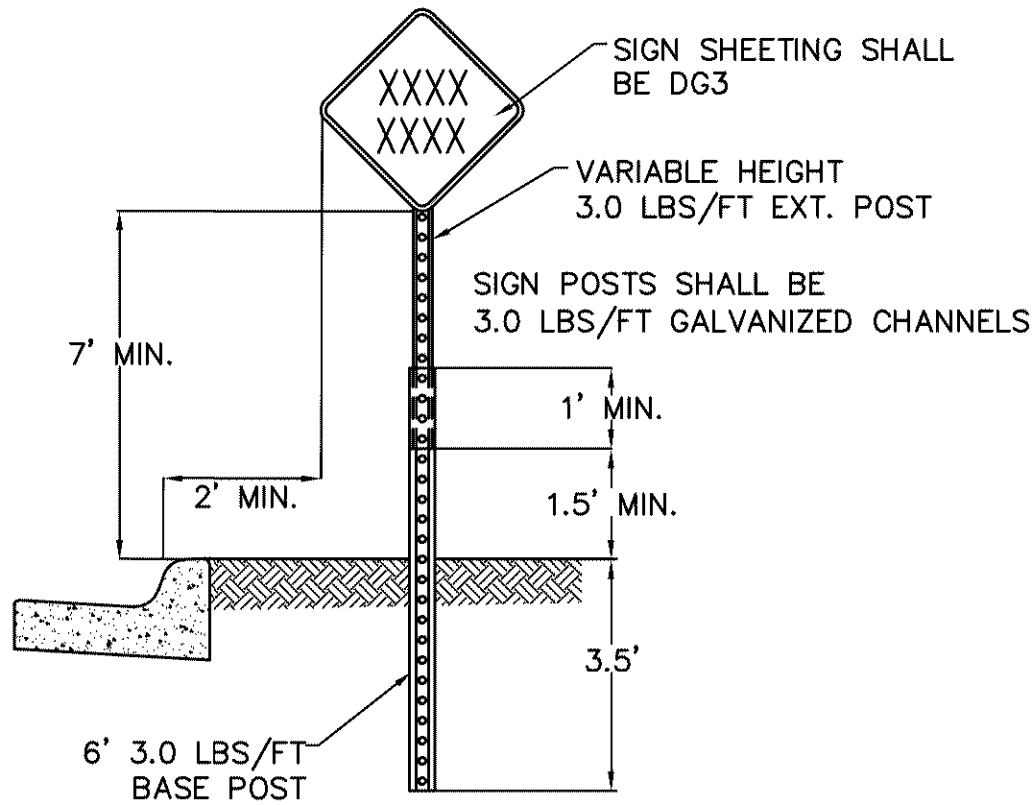
RYAN
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**SOUTH LOOP
WATERPARK**
BLOOMINGTON, MINNESOTA

DETAILS

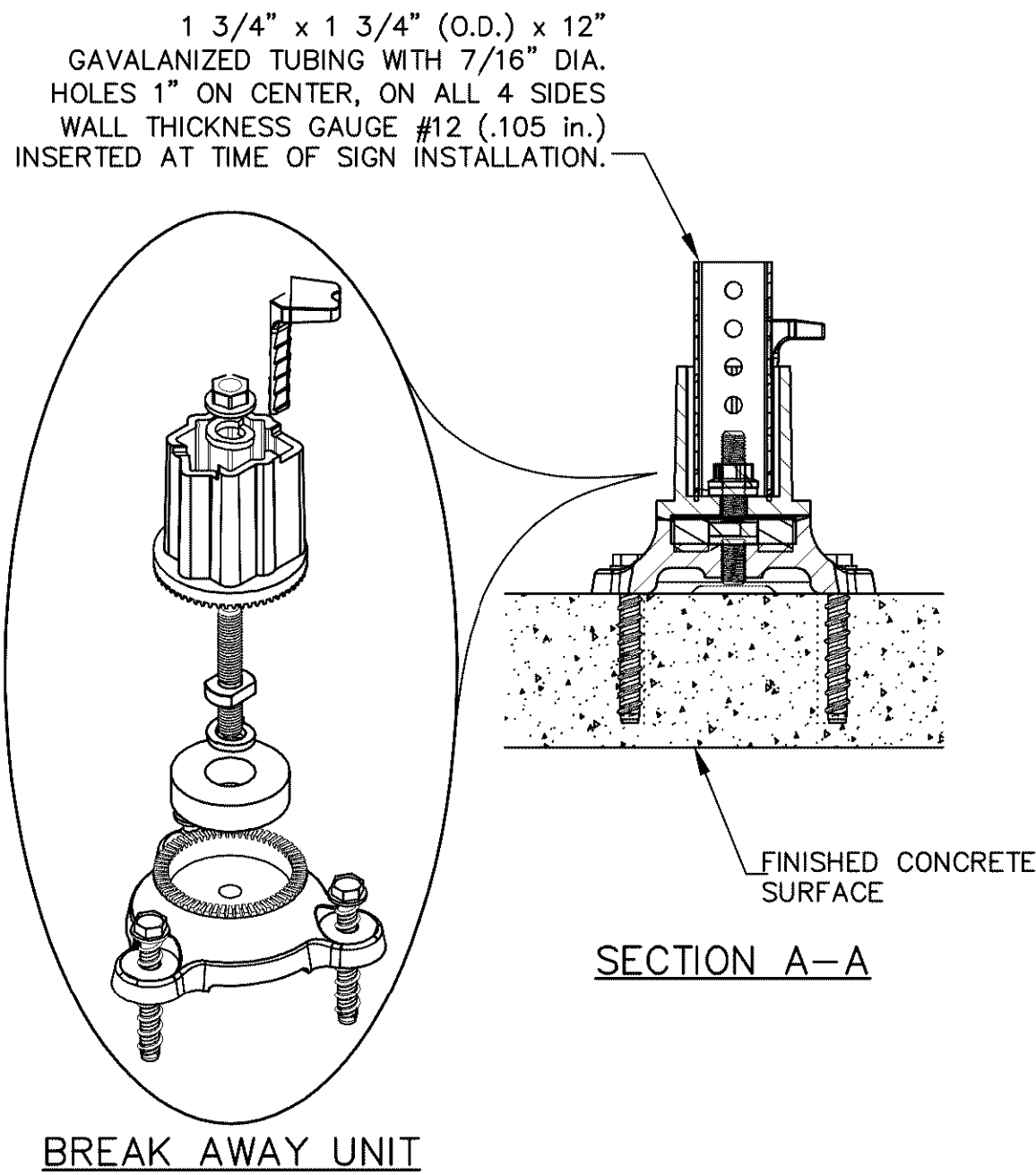
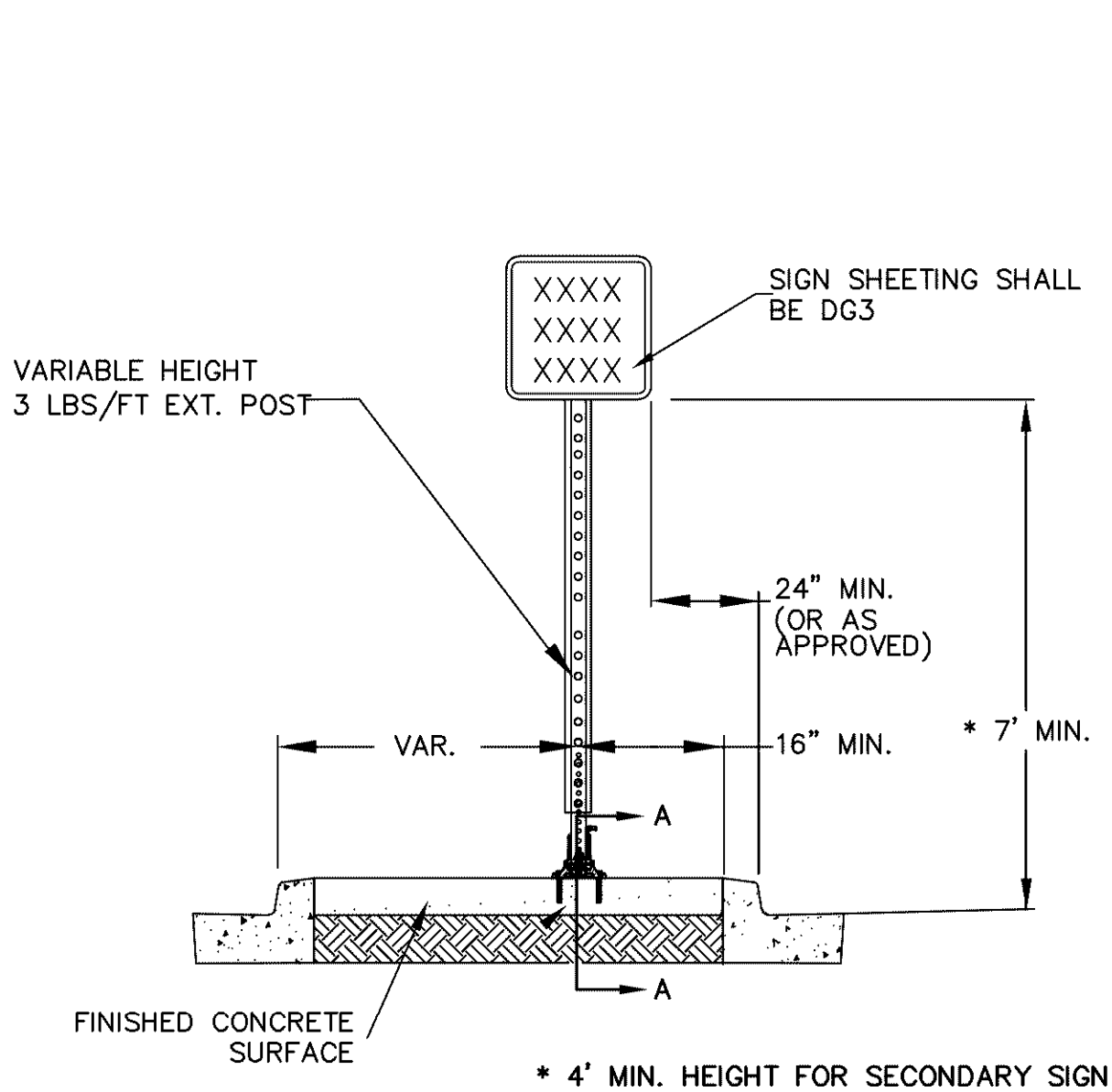
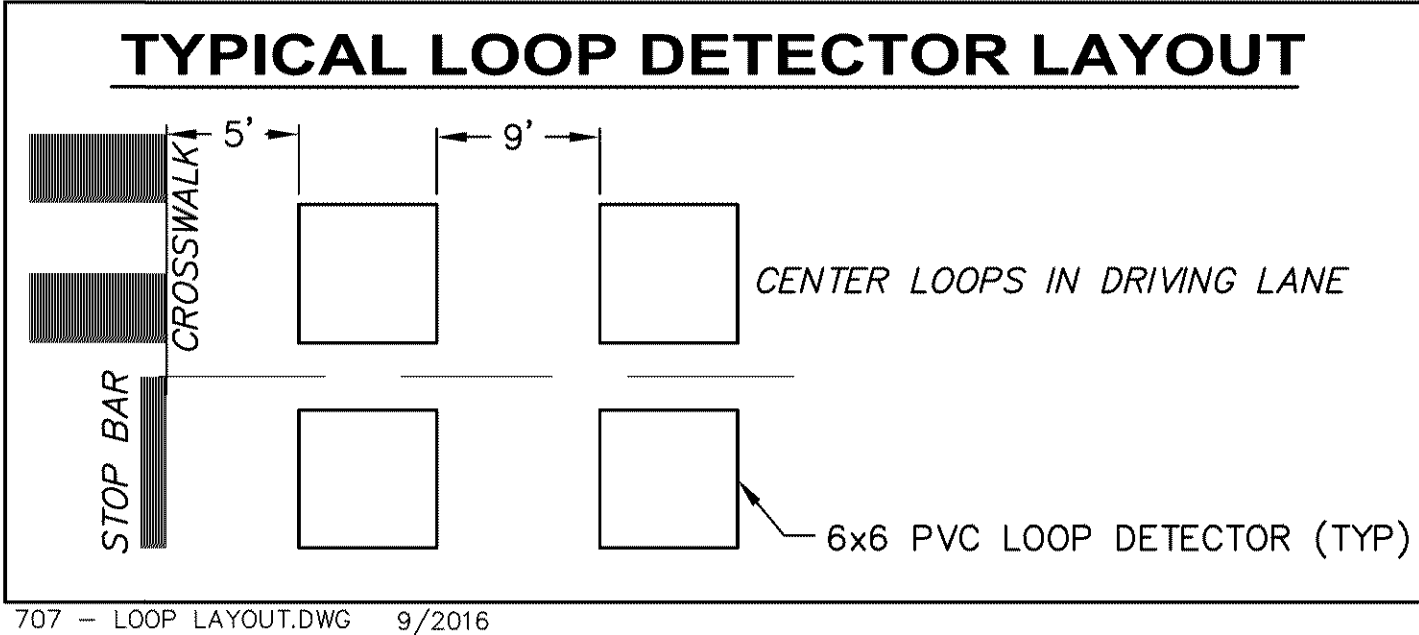
FILE NO.
151051

$$\frac{7}{72}$$



NOTE:
ALL TRAFFIC CONTROL DEVICES, INSTALLATION AND SIGNING SHALL CONFORM TO THE LATEST VERSION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).

701 — SIGN (GROUND MOUNTED)
701 — SIGN (GROUND MOUNTED).DWG 9/2016



NOTES:
1. ALL TRAFFIC CONTROL DEVICES, INSTALLATION AND SIGNING SHALL CONFORM TO THE LATEST VERSION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
2. ALL PRODUCTS SHALL CONFORM WITH THE LATEST MNDOT APPROVED PRODUCTS LIST
3. NO SUBSTITUTIONS MAY BE MADE ITEMS SHOWN IN THIS DETAIL WITHOUT THE EXPRESS AUTHORIZATION OF THE PROJECT ENGINEER

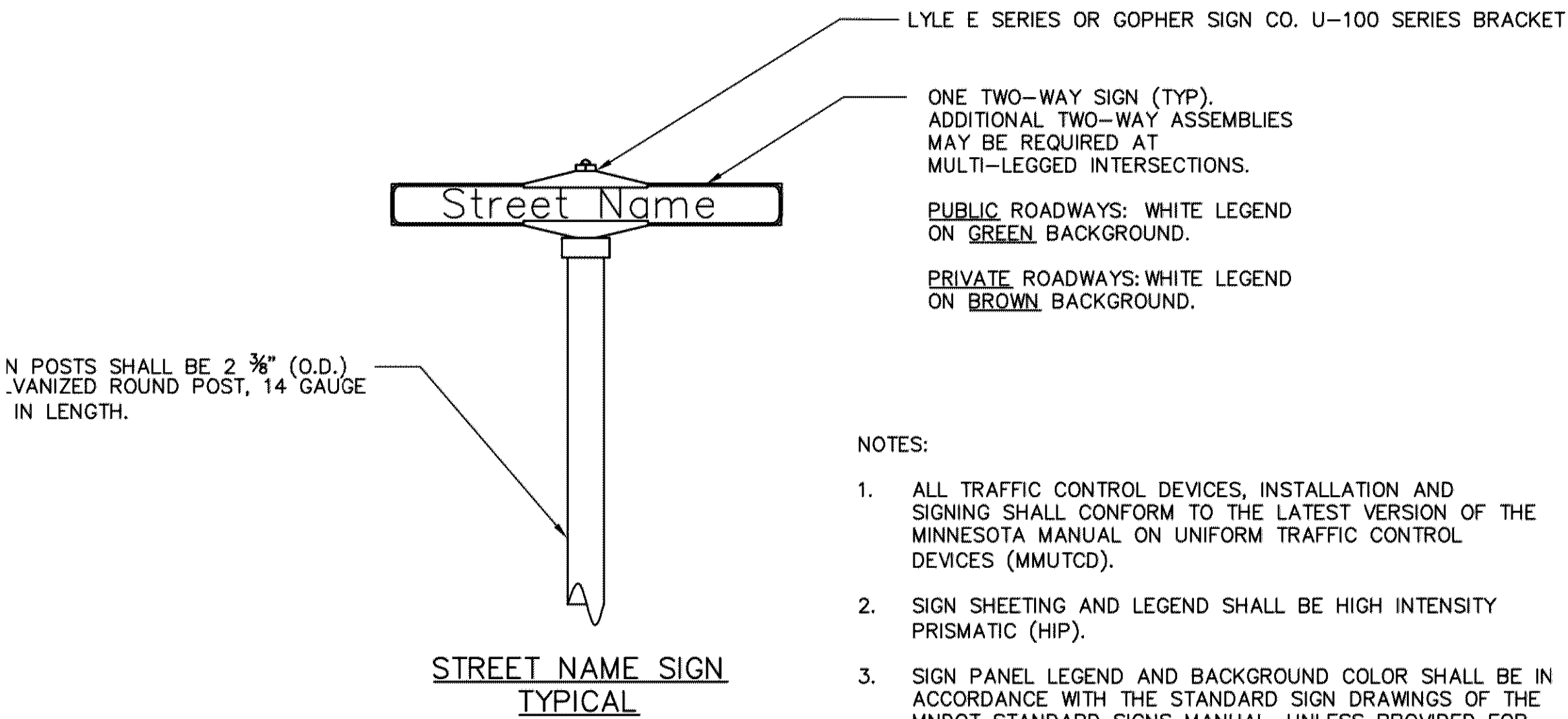
BREAK AWAY MOUNTING UNIT NOTES:
1. GENERAL REQUIREMENTS:
1.1. SURFACE MOUNTED UNIT SHALL BE ATTACHED WITH NO LESS THAN 3 TITAN HD ANCHORS WITH A MINIMUM DIAMETER OF 1/2" AND A MINIMUM LENGTH OF 4". THE MINIMUM EMBEDDED DEPTH SHALL BE 3-5/8". THE ALLOWABLE TENSION LOAD SHALL BE 2270lbs WHEN INSTALLED IN NORMAL WEIGHT, 3000psi CONCRETE.
1.2. UNITS SHALL BE INSTALLED PLUMB (SURFACE UNITS CAN BE SHIMMED TO A MAXIMUM HEIGHT OF 1/2").
1.3. UNIT SHALL ALLOW FOR 360° INDEXING TO ALLOW FOR PROPER SIGN ORIENTATION AFTER INSTALLATION.
1.4. UNIT SHALL HAVE A STUB HEIGHT OF 4" MAXIMUM AFTER BREAK AWAY.
1.5. UNIT SHALL UTILIZE A SHEAR BOLT AS ITS MEANS OF BREAKING AWAY.
1.6. UNIT SHALL UTILIZE A LOCKING WEDGE OR SHIM TO ELIMINATE ALL TOLERANCE BETWEEN MOUNTING UNIT AND TELESAR POST
1.7. UNIT SHALL CONFORM WITH THE MNDOT APPROVED PRODUCTS LIST
2. UNIT SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS

PAYMENT: FURNISH AND INSTALLATION OF BREAK AWAY UNIT IS CONSIDERED INCIDENTAL TO "INSTALL SIGN" OR "SIGN PANEL TYPE C"; NO DIRECT PAYMENT THEREOF WILL BE MADE.

700 — SIGN (CONC. MOUNTED)
700 — SIGN (CONC. MOUNTED).DWG 3/2018



NOTES:
1. LETTERING SHALL BE UPPER AND LOWER CASE.
2. INITIAL UPPER-CASE LETTERING SHALL BE:
4" ON 6" BLANK (LOCAL 2-LANE STREETS 30 MPH OR LESS)
6" ON 9" BLANK (LOCAL 2-LANE STREETS >30 MPH & MULTI-LANE)
REFER TO MMUTCD FOR POSTED SPEEDS ABOVE 40 MPH.
3. LETTERING SHALL BE A 'C' FONT.
4. CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
5. BORDER SHALL BE 0.5" WITH NO MARGIN.



NOTES:
1. ALL TRAFFIC CONTROL DEVICES, INSTALLATION AND SIGNING SHALL CONFORM TO THE LATEST VERSION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
2. SIGN SHEETING AND LEGEND SHALL BE HIGH INTENSITY PRISMATIC (HIP).
3. SIGN PANEL LEGEND AND BACKGROUND COLOR SHALL BE IN ACCORDANCE WITH THE STANDARD SIGN DRAWINGS OF THE MNDOT STANDARD SIGNS MANUAL, UNLESS PROVIDED FOR OTHERWISE IN THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL SIGNAL DEVICES.
4. MOUNTING HEIGHT: MINIMUM 7' FROM FINISHED GROUND TO BOTTOM OF SIGN.

703 — SIGN GROUND MOUNT STREET NAME
703 — SIGN_GROUND_MOUNT_STREET_NAME.DWG 9/2016

TRAFFIC DETAILS

DRAWN BY: CS					
DESIGNER: JG					
CHECKED BY: JG					
DESIGN TEAM	NO.	BY	DATE		REVISIONS

SEH
PHONE: 952.912.2600
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PRELIMINARY
Date: _____ Lic. No. _____

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SOUTH LOOP WATERPARK
BLOOMINGTON, MINNESOTA

DETAILS

FILE NO. 151051
8
72

Save: 10/1/2019 5:50 PM cswaney Plot: 10/2/2019 10:50 AM P:\KQIM\Moac\01510515-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\DETAILS.dwg

DRAWN BY: _____ CS					
DESIGNER: _____ JG					
CHECKED BY: _____ JG					
DESIGN TEAM	NO.	BY	DATE	REVISIONS	



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**SOUTH LOOP
WATERPARK**
BLOOMINGTON, MINNESOTA


DETAILS

FILE NO.
151051

9
72

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DESIGNER: _____ JG				
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**SOUTH LOOP
WATERPARK**
BLOOMINGTON, MINNESOTA

DETAILS

FILE NO.
151051

10
72

Save: 10/1/2019 5:50 PM cswaney Plot: 10/2/2019 10:51 AM P:\KQIM\Moac\01510515-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\DETAILS.dwg

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DESIGNER: _____	JG				
CHECKED BY: _____	JG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS	



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**SOUTH LOOP
WATERPARK**
BLOOMINGTON, MINNESOTA

DETAILS

FILE NO.
151051

11
72

Save: 10/1/2019 5:50 PM cswaney Plot: 10/2/2019 10:51 AM P:\KQIM\Moac\01510515-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\DETAILS.dwg

DRAWN BY: _____	CS				
DESIGNER: _____	JG				
CHECKED BY: _____	JG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS	



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**SOUTH LOOP
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BLOOMINGTON, MINNESOTA


DETAILS

FILE NO.
151051

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DRAWN BY: _____ CS				
DESIGNER: _____ JG				
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**SOUTH LOOP
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BLOOMINGTON, MINNESOTA

DETAILS

FILE NO.
151051

13
72

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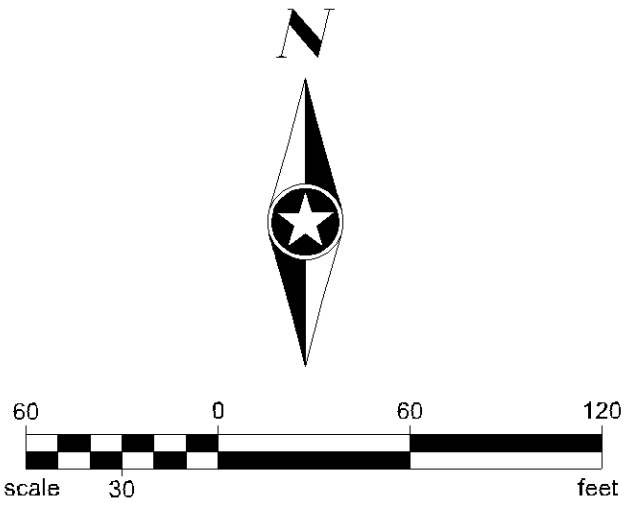
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**SOUTH LOOP
WATERPARK**
BLOOMINGTON, MINNESOTA

DETAILS

FILE NO.
151051

14
72



ALIGNMENT TABULATION - RING ROAD									
POINT ID	POINT	STATION	DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING	BEARING
L1		140+00.00				881.73	124703.4957	536230.3907	S 90° 00' 00" E
C1		148+81.73	045° 00' 00"	115.00	47.83	90.32	124703.4948	536912.1159	
L2		147+72.05				152.83	124669.8120	536993.4330	S 45° 00' 00" E
C2		149+24.87	075° 00' 00"	115.00	88.24	150.53	124551.7476	537101.4875	
L3		150+75.41				122.38	124422.9305	537119.7732	S 30° 00' 00" W
C3		151+97.78	030° 05' 57"	115.00	30.92	60.41	124316.9490	537058.5851	
L4		152+58.20				309.32	124259.2502	537043.1784	S 00° 05' 57" E

ALIGNMENT TABULATION - RAMP ROAD									
POINT ID	POINT	STATION	DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING	BEARING
L5		180+00.00				182.05	124486.7578	537005.1079	S 67° 13' 36" E
C4		181+82.05	022° 46' 24"	115.00	23.16	45.71	124416.2875	537172.9689	
L6		182+27.76				522.24	124407.3225	537127.4838	N 90° 00' 00" E

ALIGNMENT TABULATION - THUNDERBIRD ROAD									
POINT ID	POINT	STATION	DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING	BEARING
L7		160+00.00				515.66	124647.0421	536545.4992	N 00° 00' 00" E

SURFACE PARKING COUNTS		
PARKING	*EXISTING	PROPOSED
LOT 1	80	148
LOT 2	671	760
LOT 3 (EXISTING)	N/A	N/A
LOT 4	93	104
LOT 5	537	**4,425
LOT 6	469	301
LOT 7	219	NA
TOTAL	2,069	2,738

*SEE SHEET 2
**DENOTES PARKING RAMP

Why is Lot 3, the "Porkchop," listed as NA in the surface parking tabulation? Is it not available for overflow parking?

NO.	BY	DATE	REVISIONS

This opens awkwardly from 2 lanes to 5. May need to modify depending upon recommendations from traffic study



PHONE: 952.912.2600
10901 RED CIRCLE DRIVE
SUITE 300
MINNETONKA, MN 55343
www.sehinc.com

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

PRELIMINARY

Date: _____ Lic. No. _____

www.ryancompanies.com

**SOUTH LOOP
WATERPARK**
BLOOMINGTON, MINNESOTA

ALIGNMENT AND GENERAL LAYOUT PLAN

FILE NO.
151051

