

CONSTRUCTION PLANS

FOR THE CITY OF TRAVERSE CITY

2023 PAVEMENT PRESERVATION PROJECT

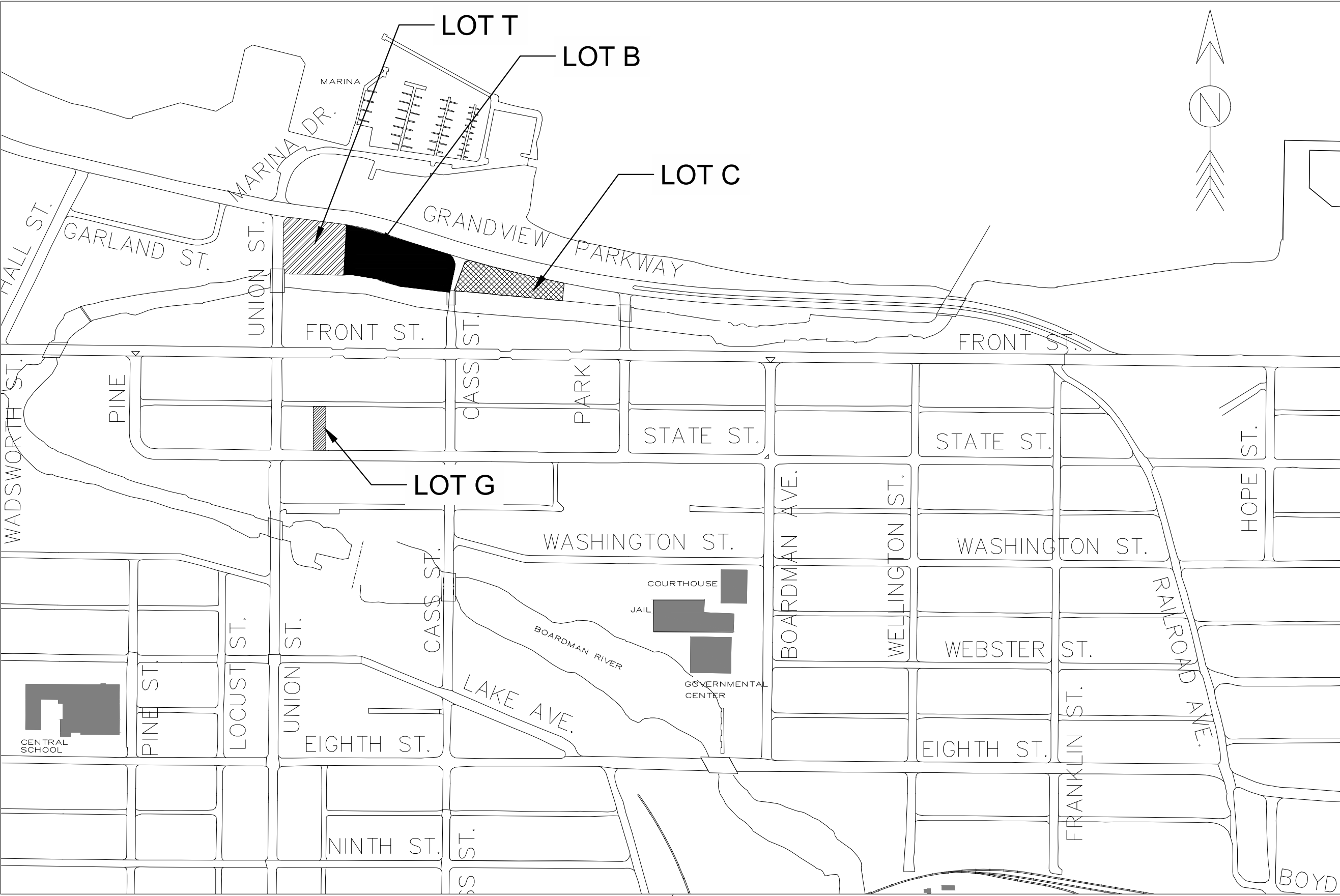
THE FOLLOWING ITEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MDOT STANDARD PLANS REFERENCED BELOW:

MDOT STANDARD PLANS - NOT PRINTED

- R-28-J SIDEWALK RAMP DETAILS
- R-29-I DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALKS
- R-30-G CONCRETE CURB & CONCRETE CURB & GUTTER
- R-83-C UTILITY TRENCHES
- R-96-E SOIL EROSION & SEDIMENTATION CONTROL MEASURES

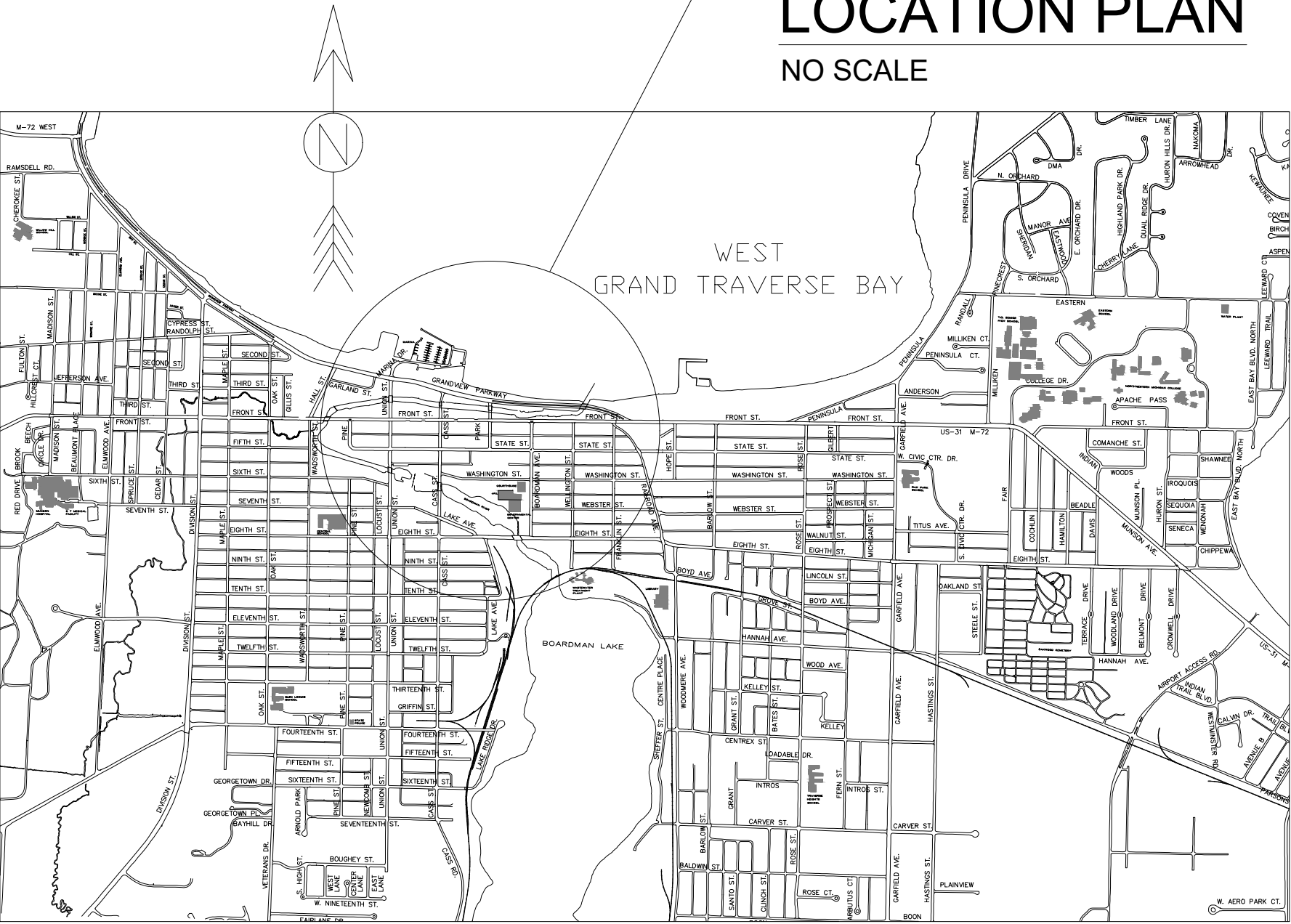
TRAFFIC & SAFETY STANDARD PLANS - NOT PRINTED

- WZD-100-A TEMPORARY GROUND DRIVEN SIGNS
- WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES
- PAVE-956-D PARKING AREA PAVEMENT MARKINGS



LOCATION PLAN
NO SCALE

GRAND TRAVERSE COUNTY
CITY OF TRAVERSE CITY
R11W, T27N



LOCAL UTILITIES

CITY OF TRAVERSE CITY ENGINEERING DEPARTMENT
ADDRESS: 400 BOARDMAN AVENUE, TRAVERSE CITY
CONTACT: TIMOTHY J. LODGE
TELEPHONE: (231) 922-4460

TRAVERSE CITY LIGHT AND POWER
ADDRESS: 1131 HASTINGS STREET, TRAVERSE CITY
ENGINEER: TONY CHARTRAND
TELEPHONE: (231) 922-4940 EXT. 258

TRAVERSE CITY SOIL EROSION & SEDIMENTATION CONTROL
ADDRESS: 400 BOARDMAN AVENUE, TRAVERSE CITY
CONTACT: JOHN MCWETHY
TELEPHONE: (231) 922-4467

CONSUMERS ENERGY COMPANY (C.P.)
ADDRESS: 821 HASTINGS ST., TRAVERSE CITY
AREA ENGINEER: BLAKE WILSON
TELEPHONE: 1-800-477-5050

AT&T
ADDRESS: 142 E. STATE STREET, TRAVERSE CITY
AREA ENGINEER: JEFFREY SHUSTER
TELEPHONE: (231) 941-2707

DTE ENERGY
ADDRESS: 609 BJORNSON RD., BIG RAPIDS, MI 49307
PROJECT COORDINATOR: LARRY BOURKE
TELEPHONE: (231) 349-2364
EMERGENCY LEAK RESPONSE: 1-800-947-5000

CITY OF TRAVERSE CITY DEPARTMENT OF MUNICIPAL UTILITIES
ADDRESS: 625 WOODMERE AVE., TRAVERSE CITY
CONTACT: ARTHUR KRUEGER
TELEPHONE: (231) 922-490 EXT. 109

TRAVERSE CITY SEWER AND WATER MAINTENANCE DEPARTMENT
ADDRESS: 507 HANNAH AVE., TRAVERSE CITY
CONTACT: JUSTIN ROY
TELEPHONE: (231) 922-4923

MICHIGAN DEPARTMENT OF TRANSPORTATION (M.D.O.T.)
TRAVERSE CITY TSC
ADDRESS: 2084 US-31 SOUTH, TRAVERSE CITY
ENGINEER: DAVE PAX
TELEPHONE: (231) 941-1986

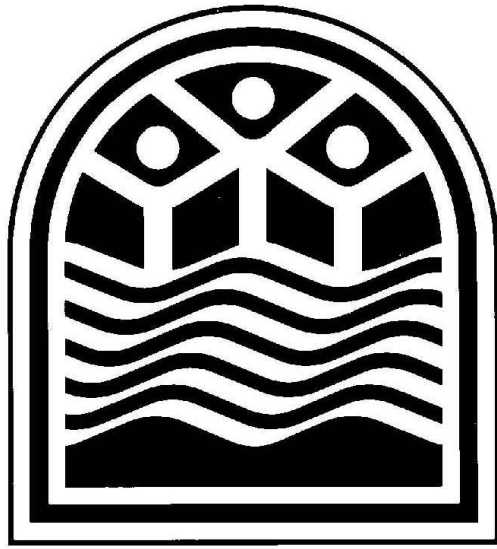
CHARTER COMMUNICATION
ADDRESS: 1392 TRADE CENTRE DR., TRAVERSE CITY
ENGINEER: DREW MARSH
TELEPHONE: (231) 932-8135

POLICE AGENCIES
EMERGENCY CALLS: 911
CITY OF TRAVERSE CITY: (231) 995-5150
MICHIGAN STATE POLICE: (231) 946-4646
GRAND TRAVERSE COUNTY SHERIFF: (231) 922-4500

FIRE DEPARTMENTS
EMERGENCY CALLS: 911
CITY OF TRAVERSE CITY: (231) 922-4930

AMBULANCE
EMERGENCY CALLS: 911

PLAN INDEX		
SHEET	DESCRIPTION	REV. DATE
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15	LOT G - SITE PLAN	12-19-22
16	LOT C - PAVEMENT REPAIR AND RESTRIPIING	12-19-22



CITY ENGINEER
TIMOTHY J. LODGE, P.E.

City of Traverse City



The City of Traverse City
Engineering Department
GOVERNMENTAL CENTER
400 Boardman Avenue
Traverse City, Michigan 49604

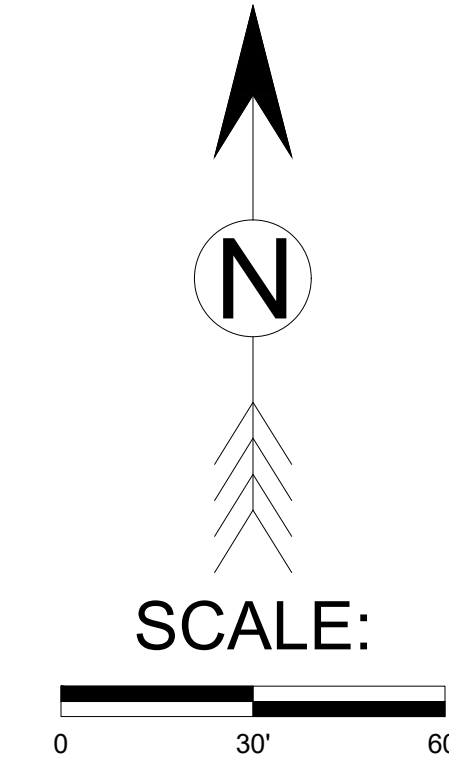
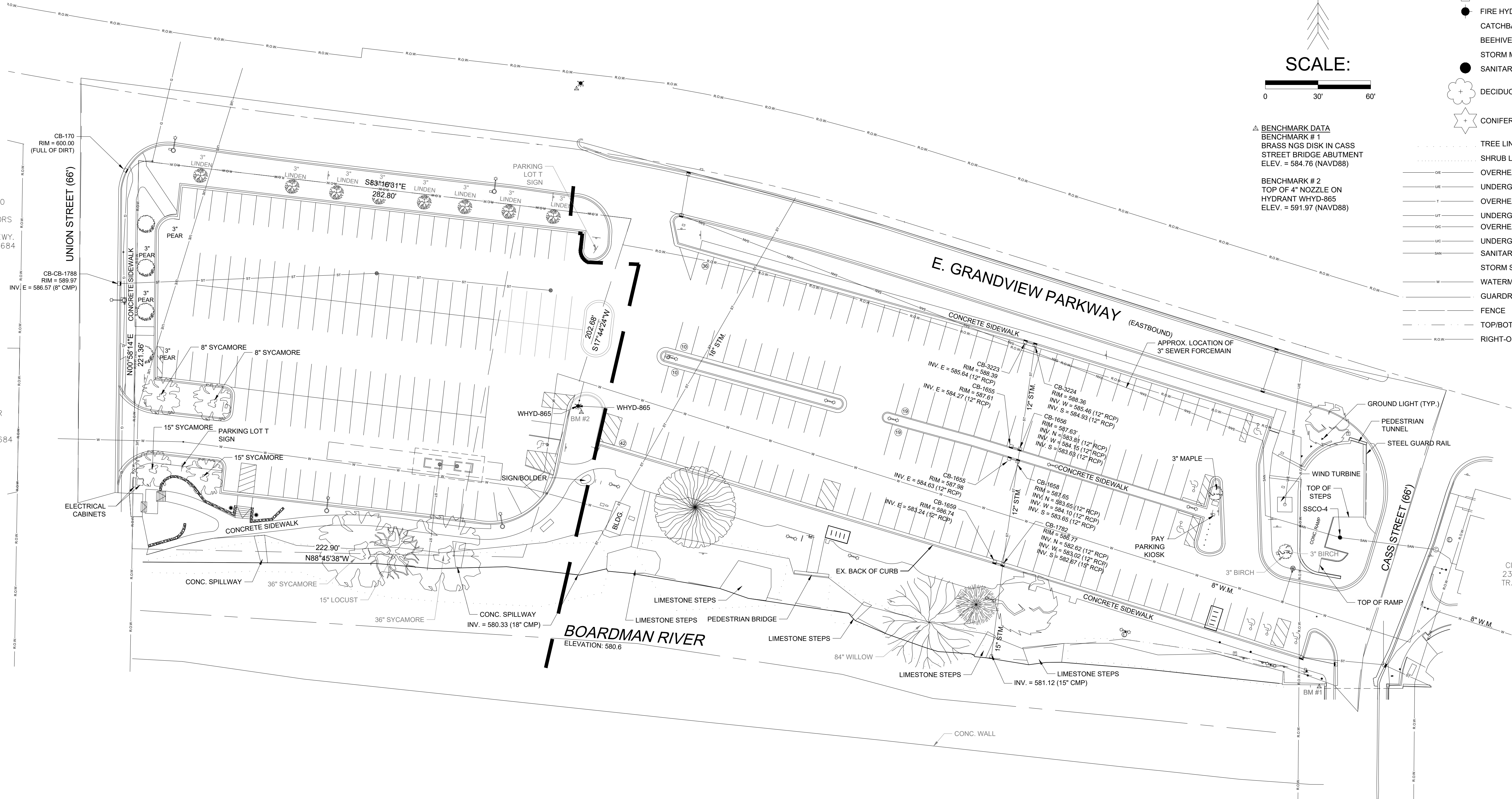
CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
COVER SHEET

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23
Date:	12/19/2022
Project No.:	2023-01
Drawn by:	TIG
Scale:	N.T.S.
Sheet No.:	1 OF 16

28-51-658-037-00
TRAVERSE CITY
CONVENTION & VISITORS
CENTER
101 W. GRANDVIEW PKWY.
TRAVERSE CITY, MI 49684

28-51-103-014-15
INNOVO BREAKWATER
APARTMENTS LLC
155 GARLAND ST.
TRAVERSE CITY, MI 49684

28-51-103-001-10
CITY OF TRAVERSE CITY
230 E. GRANDVIEW PKWY.
TRAVERSE CITY, MI 49684



△ BENCHMARK DATA
BENCHMARK # 1
BRASS NGS DISK IN CASS
STREET BRIDGE ABUTMENT
ELEV. = 584.76 (NAVD88)

BENCHMARK # 2
TOP OF 4" NOZZLE ON
HYDRANT WHYD-865
ELEV. = 591.97 (NAVD88)

- LEGEND**
- ✕ FOUND PROPERTY CORNER
 - △ BENCHMARK
 - SIGN
 - ⊕ GAS BOX
 - ⊕ UTILITY POLE
 - ⊕ GUY WIRE
 - ⊕ WATER VALVE
 - ⊕ PED LIGHT POLE
 - ⊕ ELECTRIC RISER
 - ⊕ TELEPHONE RISER/BOX
 - FIRE HYDRANT
 - CATCHBASIN
 - BEEHIVE GRATE CATCHBASIN
 - STORM MANHOLE
 - SANITARY MANHOLE
 - ⊕ DECIDUOUS TREE
 - ⊕ CONIFEROUS TREE
 - TREE LINE
 - SHRUB LINE
 - OE --- OVERHEAD ELECTRIC
 - UE --- UNDERGROUND ELECTRIC
 - Y --- OVERHEAD TELEPHONE
 - UT --- UNDERGROUND TELEPHONE
 - OC --- OVERHEAD CABLE TV
 - UC --- UNDERGROUND CABLE TV
 - SAN --- SANITARY SEWER
 - S --- STORM SEWER
 - W --- WATERMAIN
 - G --- GUARDRAIL
 - F --- FENCE
 - TOP/BOTTOM OF SLOPE
 - ROW --- RIGHT-OF-WAY

ALL UTILITIES AS SHOWN ARE APPROXIMATE
LOCATIONS DERIVED FROM GROUND
MEASUREMENTS AND AVAILABLE RECORDS. THEY
SHOULD NOT BE INTERPRETED TO BE EXACT
LOCATION NOR SHOULD IT BE ASSUMED THAT THEY
ARE THE ONLY UTILITIES IN THE AREA.



The City of Traverse City
Engineering Department
GOVERNMENTAL CENTER
400 Boardman Avenue
Traverse City, Michigan 49684

CITY OF TRAVERSE CITY 2023 PAVEMENT PRESERVATION PROJECT LOT T AND B - BOUNDARY / TOPOGRAPHIC SURVEY

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

Date:	12/19/2022
Project No.:	
Drawn by:	TIG
Scale:	1"=30'
Sheet No.:	2 OF 16

GENERAL NOTES

3. ALL ELEVATIONS ARE BASED ON NAVD83.
4. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS GOVERNING THE FURNISHING AND USE OF SAFEGUARDS, SAFETY DEVICES AND PROTECTION EQUIPMENT. THE CONTRACTOR SHALL TAKE ANY NECESSARY PRECAUTIONS TO PROTECT THE LIFE AND HEALTH OF EMPLOYEES AND THE PUBLIC IN THE PERFORMANCE OF THE WORK.
5. FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, 1974, THE CONTRACTOR SHALL DIAL, 1-800-482-7171, A MINIMUM OF THREE WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE ANY UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM.
6. SPECIAL CARE SHALL BE TAKEN IN EXCAVATING IN THE PROXIMITY OF ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL SECURE ASSISTANCE FROM THE APPROPRIATE UTILITY COMPANY IN LOCATING ITS LINES. THE CONTRACTOR SHALL ALSO PROVIDE SUPPORT FOR ANY UTILITY WITHIN THE EXCAVATION, PROVIDE PROPER COMPACTION UNDER ANY UNDERMINED UTILITY STRUCTURE, AND, IF NECESSARY, INSTALL TEMPORARY SHEETING OR USE A TRENCH BOX TO MINIMIZE THE EXCAVATION.
7. LOCATION OF EXISTING UTILITIES: EXISTING PUBLIC UTILITIES AND UNDERGROUND STRUCTURES, SUCH AS PIPE LINES, ELECTRIC CONDUITS, SEWERS AND WATER LINES, ARE SHOWN ON THE PLANS. THE INFORMATION SHOWN IS BELIEVED TO BE REASONABLY CORRECT AND COMPLETE. HOWEVER, THE CONTRACTOR'S RESPONSIBILITY IS NOT THE COMPLETENESS OF SUCH INFORMATION IS GUARANTEED. PRIOR TO THE START OF ANY OPERATIONS IN THE VICINITY OF UTILITIES, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AND REQUEST THAT THEY STAKE OUT THE LOCATIONS OF THE UTILITIES IN QUESTION.
8. EXISTING PROPERTY CORNERS ARE IDENTIFIED ON THE PLANS. IF A PROPERTY CORNER IS DISTURBED DURING CONSTRUCTION IT SHALL BE REPLACED AT THE CONTRACTORS EXPENSE BY A PROFESSIONAL LAND SURVEYOR.
9. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT TO ANY MAILBOXES DISTURBED DURING CONSTRUCTION AND SHALL NOT INTERFERE WITH MAIL SERVICE. ALL DISTURBED MAILBOXES SHALL BE PLACED IN ORIGINAL LOCATION AT AN ELEVATION DETERMINED BY THE POSTAL SERVICE.
10. LOCAL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
11. CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORT FOR UTILITY POLES AS NECESSARY.
12. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY.
13. DEWATERING AND BYPASS PUMPING OF EXISTING STORM SEWERS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE RESPECTIVE CONTRACT ITEMS AND WILL NOT BE MEASURED FOR ANY PAYMENT SEPARATELY
14. ANY OTHER WORK REQUIRED TO COMPLETE THE CONSTRUCTION SHOWN ON THE PLANS AND DESCRIBED ON THE SPECIFICATIONS THAT DOES NOT HAVE A SPECIFIC PAY ITEM SHALL BE INCIDENTAL TO ONE OF THE OTHER PAY ITEMS AND THE CONTRACTOR SHALL ARRANGE HIS BID PROPOSAL ACCORDINGLY.
15. CONTRACTOR SHALL PROVIDE DESIGN FABRICATION AND INSTALLATION REQUIRED FOR ALL PRECAST CONCRETE COMPONENTS. ALL STRUCTURES SHALL BE CAPABLE OF SUPPORTING H-20 LOADING.
16. THE ITEM FOR MACHINE GRADING, SPECIAL SHALL INCLUDE ALL REQUIRED EXCAVATION AND/OR EMBANKMENT TO DEVELOP OF THE PROPOSED CROSS SECTION AND ADDITIONAL ITEMS REFERENCED IN THE SPECIAL PROVISION, SEE PROPOSAL. THE ESTIMATED UNFACTORED EARTHWORK QUANTITIES PROVIDED HEREIN ARE FOR INFORMATION ONLY. NO UNIT PRICE ADJUSTMENTS OR CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED UNLESS THERE ARE CHANGED CONDITIONS OR WORK LIMITS AS DETERMINED BY THE ENGINEER. ALL REQUIRED EMBANKMENT SHALL BE CLASS II. GRADING FOR SIDEWALKS AND RAMPS TO MEET REQUIRED ADA SLOPES IS INCLUDED IN MACHINE GRADING, MODIFIED. PROTECTION OF EXISTING TREES NOT DESIGNATED FOR REMOVAL SHALL BE INCLUDED IN THE ITEM FOR MACHINE GRADING, SPECIAL.

LOT B
EXCAVATION, EARTH: 400 CYD
EMBANKMENT: 300 CYD

LOT G
EXCAVATION, EARTH: 10 CYD
EMBANKMENT: 5 CYD

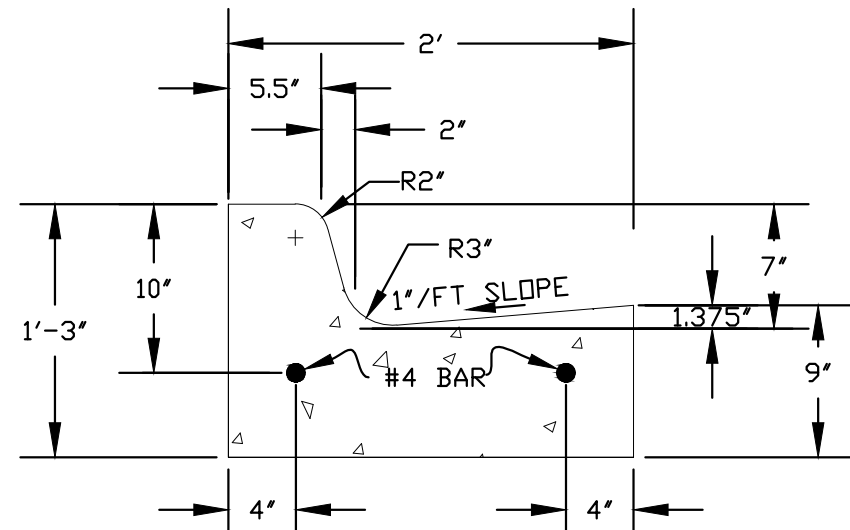
15. UTILITY TRENCH SIDE SLOPES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL ADJUST SLOPES BASED ON ACTUAL SOIL TYPES/CONDITIONS IN ACCORDANCE WITH MIOSHA RULES.

SOIL EROSION NOTES

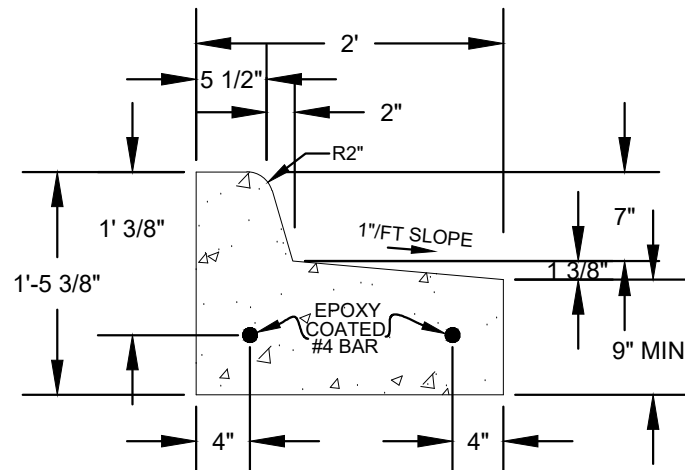
1. THE CONTRACTOR SHALL INSTALL TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES AS DIRECTED BY THE ENGINEER OR THE SOIL EROSION CONTROL OFFICER, AT NO ADDITIONAL COST TO THE PROJECT. CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES FROM ACCELERATED EROSION AND SEDIMENTATION RESULTING FROM PROJECT CONSTRUCTION.
2. ALL DISTURBED AREAS SHALL BE TOPSOILED, SEEDED, FERTILIZED AND MULCHED. MULCH BLANKET SHALL BE INSTALLED IN AREAS AS DESIGNATED AND SHALL BE INCIDENTAL TO OTHER ITEMS.
3. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH SEED/MULCH AS DIRECTED BY THE ENGINEER
4. THE CONTRACTOR SHALL REPAIR ALL WASHOUTS AND EROSION DURING THE GUARANTEE PERIOD OF ONE (1) YEAR AT NO ADDITIONAL COST TO THE CITY OF TRAVERSE CITY.
5. EXISTING STORM DRAINAGE DITCHES SHALL BE REBUILT IF FILLED IN OR REMOVED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE, AS REQUIRED, ALL DRAINAGE CULVERTS DAMAGED DURING CONSTRUCTION AND SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
6. CONTRACTOR SHALL REMOVE SILT FENCE WHEN THE PERMANENT CONTROLS ARE IN PLACE AND APPROVED, PER SECTION 208 OF THE MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

STORM SEWER NOTES

1. ALL STORM SEWER SHALL BE CL. IV REINFORCED CONCRETE PIPE, TRENCH DETAIL 81, UNLESS SPECIFICALLY STATED OTHERWISE.
2. DRAINAGE STRUCTURE AND SANITARY MANHOLE COVERS SHALL BE PAID AS SHOWN ON PLANS. MANHOLE CASTINGS SHALL HAVE STORM SEWER, SANITARY SEWER OR WATER CAST ON STRUCTURE COVER AS APPLICABLE.
3. PROPOSED STORM AND SANITARY MANHOLES SHALL BE 4 FEET IN DIAMETER UNLESS NOTED OTHERWISE.
4. ANY AND ALL SHORING, SHEETING, TRENCH BOX USE NECESSARY TO INSTALL ANY PAY ITEMS SHALL BE INCLUDED IN THAT RESPECTIVE PAY ITEM. THE USE OF TRENCH WIDTH CONTROL EQUIPMENT SHALL BE USED TO MAINTAIN THE PROJECT WITHIN THE LIMITS OR RIGHT OF WAY.



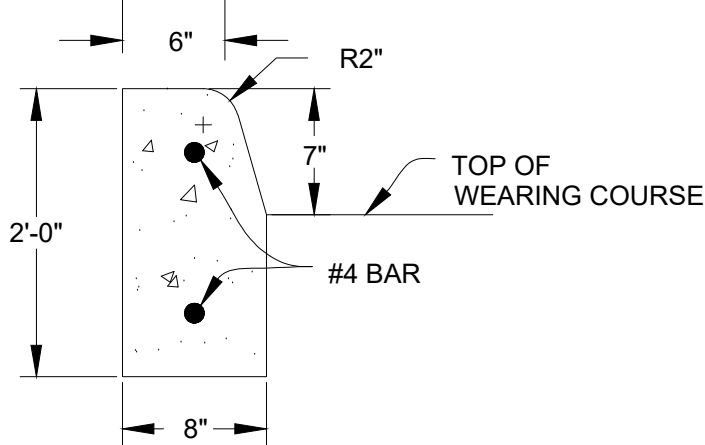
C4 CURB & GUTTER DETAIL
N.T.S.



C4 TIP-OUT CONCRETE CURB & GUTTER
N.T.S.

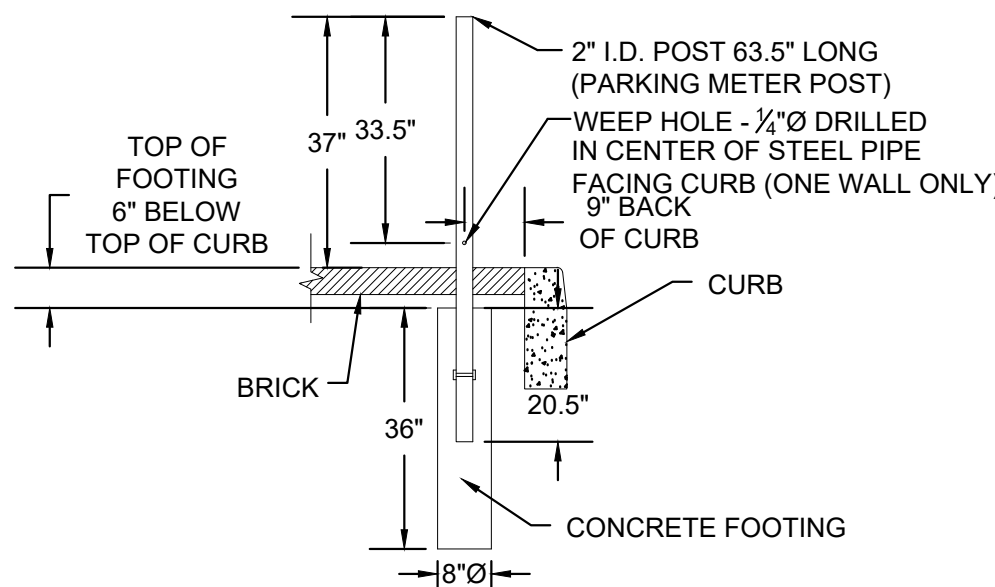
NOTES:

1. CONSTRUCT TIP-OUT CURB TO MAINTAIN VERTICAL BACK TO BACK WIDTHS FOR MEDIAN ISLANDS TO ALLOW FOR CONCRETE PAVEMENT INSTALLATION
2. CURB AND GUTTER, CONC, DET D2, MODIFIED AND CURB AND GUTTER, CONC, DET C4, MODIFIED INCLUDES BOTH STANDARD AND TIP OUT GUTTER FOR MEASURED AND PAYMENT PURPOSES.
3. CONTRACTOR MAY ELECT TO POUR CURB AT DEPTH GREATER THAN 9" INCLUDED IN THE ITEMS FOR CONCRETE CURB AND GUTTER, RESPECTIVE

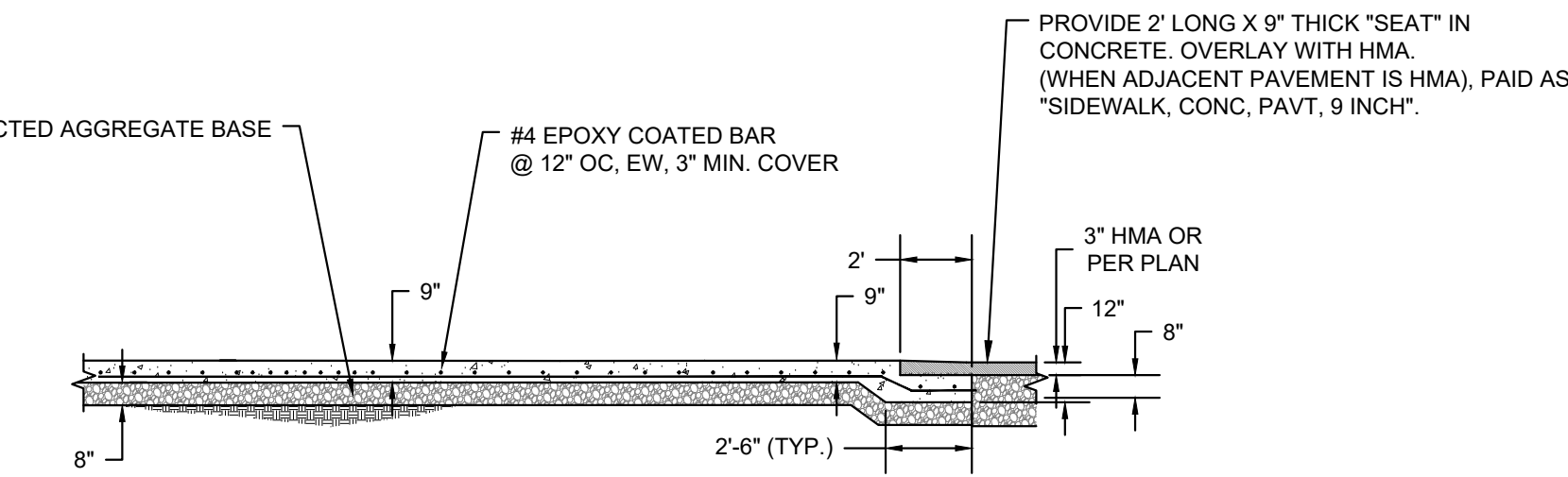


E4 CURB & GUTTER DETAIL

N.T.S.

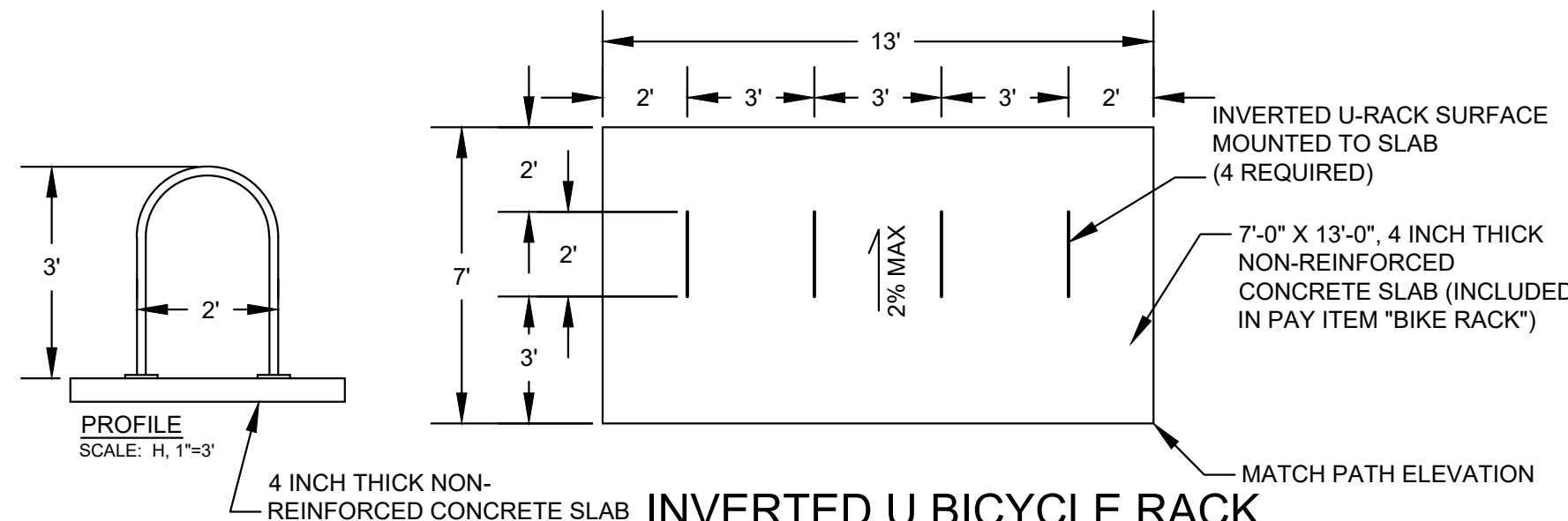


PARKING METER DETAIL
N.T.S.

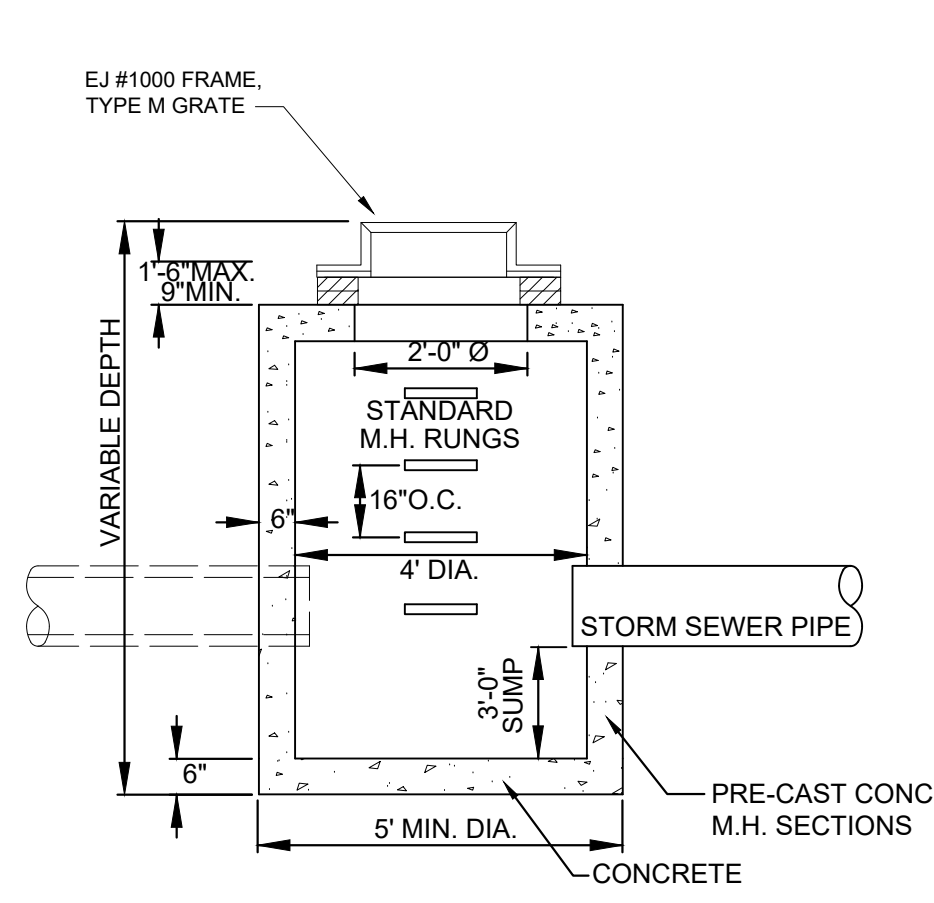


9" SIDEWALK WITH PAVEMENT SEAT DETAIL
N.T.S.

NOTE:
CONCRETE AND (4) BICYCLE RACKS INCLUDED IN PAY ITEM "BIKE RACK"

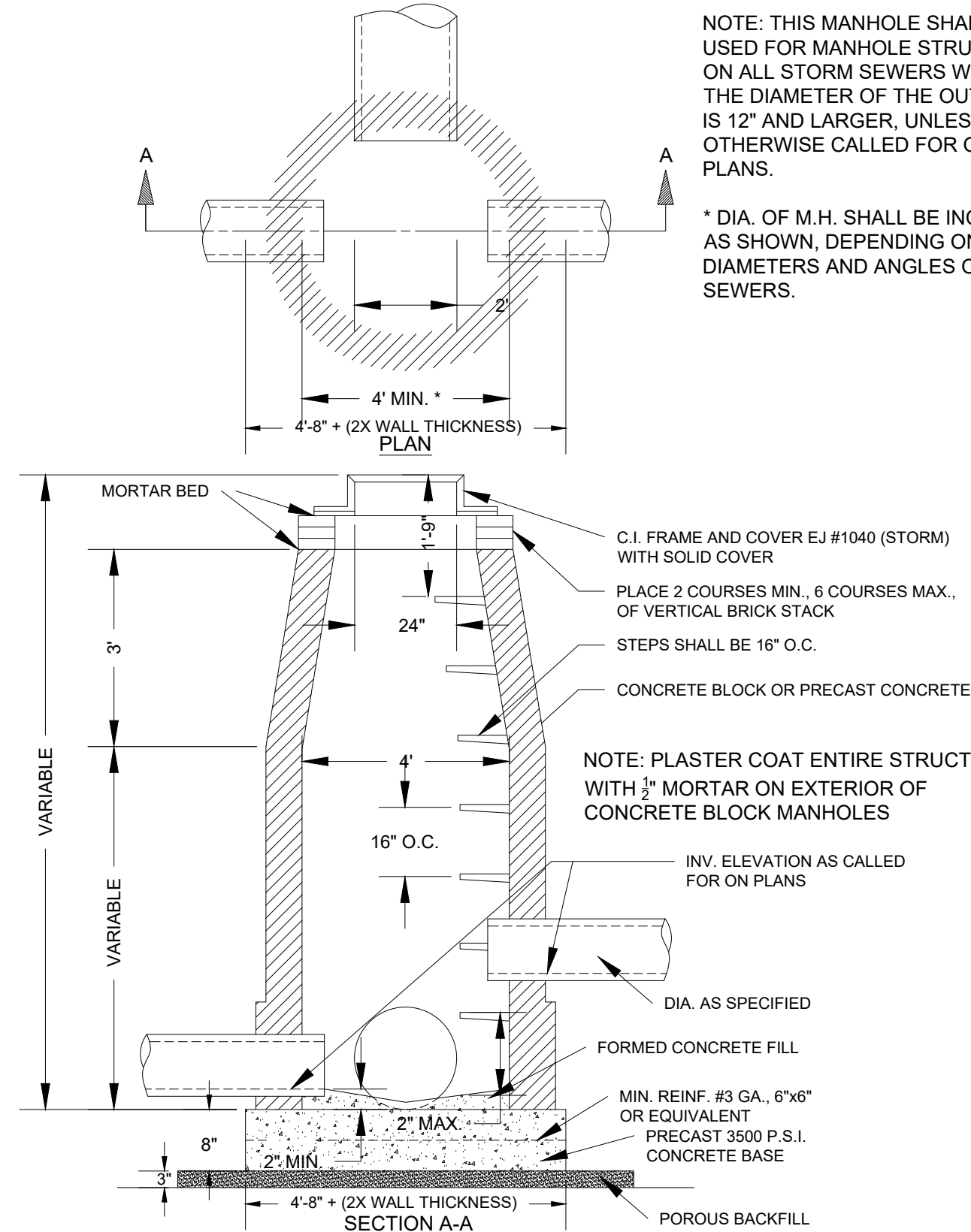


INVERTED U BICYCLE RACK



4 FT. DIA. CATCH BASIN W/ SUMP DETAIL
N.T.S.

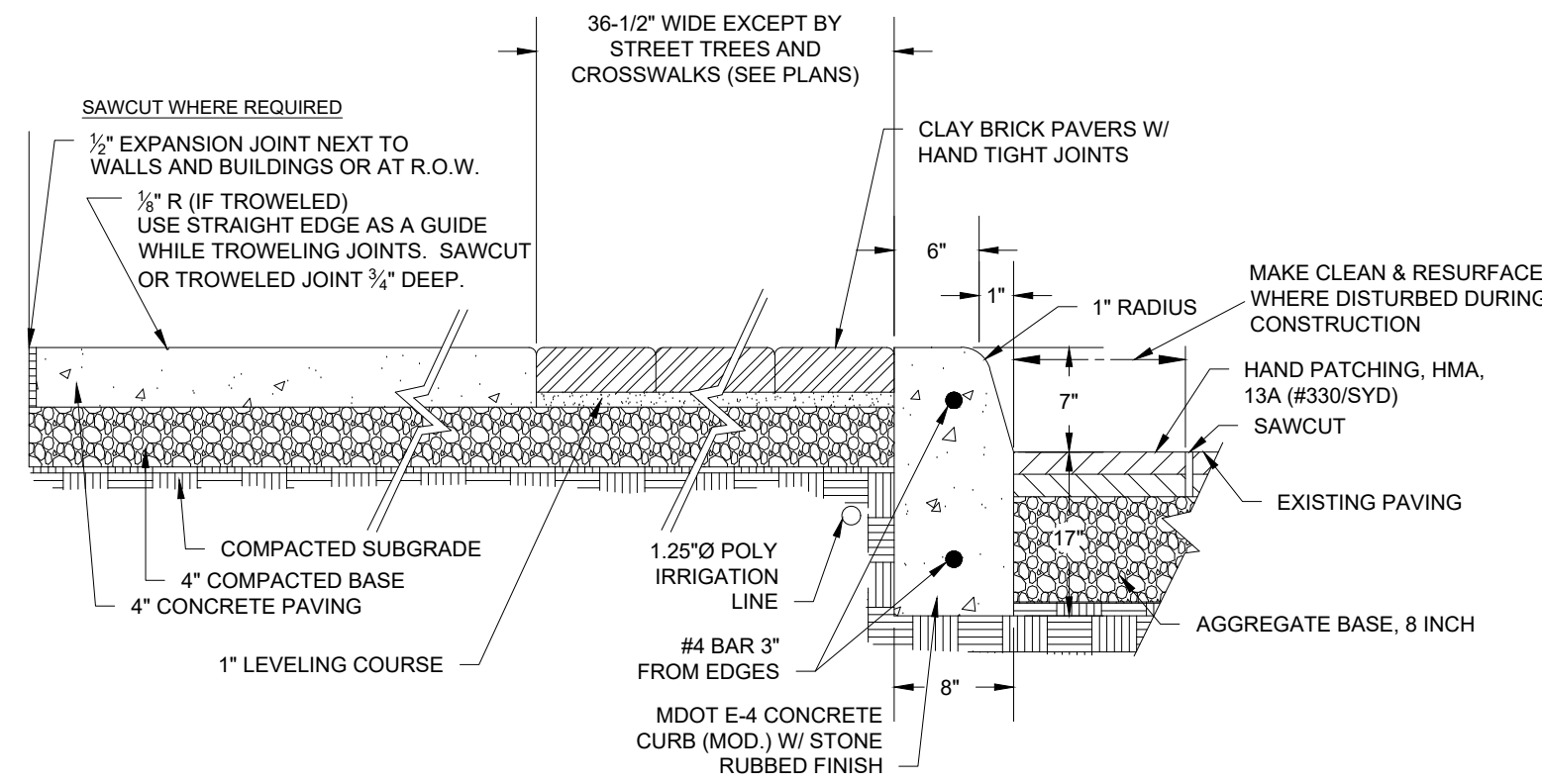
NOTE:
SEE PLAN FOR DRAINAGE STRUCTURES THAT REQUIRE SUMPS



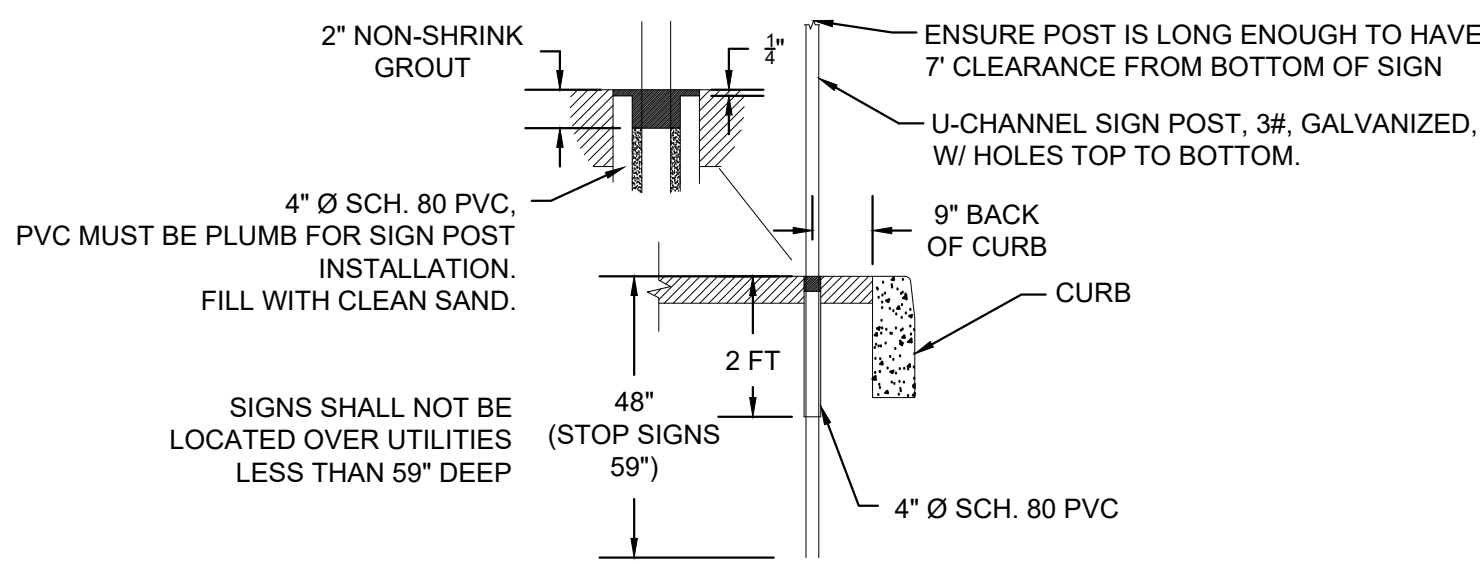
STANDARD STORM MANHOLE DETAIL
N.T.S.

NOTE: THIS MANHOLE SHALL BE USED FOR MANHOLE STRUCTURES ON ALL STORM SEWERS WHERE THE DIAMETER OF THE OUTLET PIPE IS 12" AND LARGER, UNLESS OTHERWISE CALLED FOR ON THE PLANS.

* DIA. OF M.H. SHALL BE INCREASED AS SHOWN, DEPENDING ON THE DIAMETERS AND ANGLES OF THE SEWERS.



CONCRETE: WALK, MODULAR PAVERS, & CURB
N.T.S.



TRAFFIC SIGN POST DETAIL
N.T.S.

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

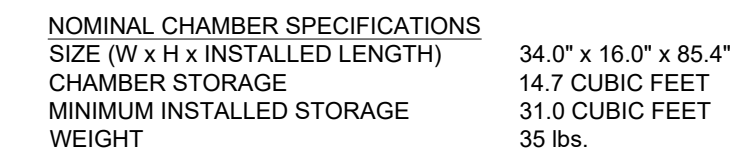
Date: 12/19/2022

Project No.:

Drawn by: TIG

Scale: N.T.S.

Sheet No. 3 OF 16



STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART#	STUB	A	B	C
SC310EPE06T	6"	9.60"	5.80"	N/A
SC310EPE06B	6"	9.60"	N/A	0.50"
SC310EPE08T	8"	11.90"	3.50"	N/A
SC310EPE08B	8"	11.90"	N/A	0.60"
SC310EPE10T	10"	12.70"	1.40"	N/A
SC310EPE10B	10"	12.70"	N/A	0.70"
*SC310EPE12B	12"	13.50"	N/A	0.90"

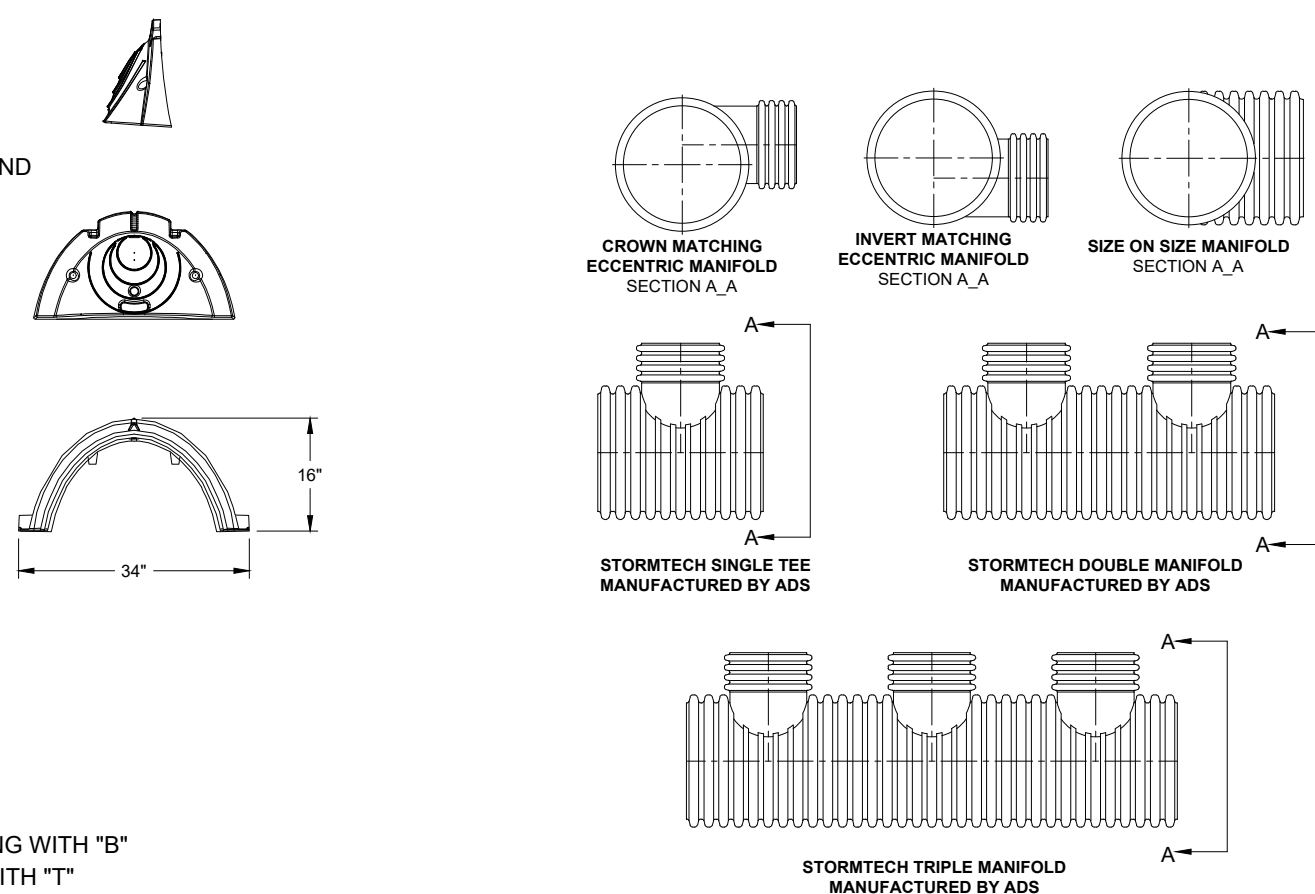
NOTE: ALL DIMENSIONS ARE NOMINAL

*FOR THE SC310EPE12B THE 12" STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25". BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

SC-310 TECHNICAL SPECIFICATIONS

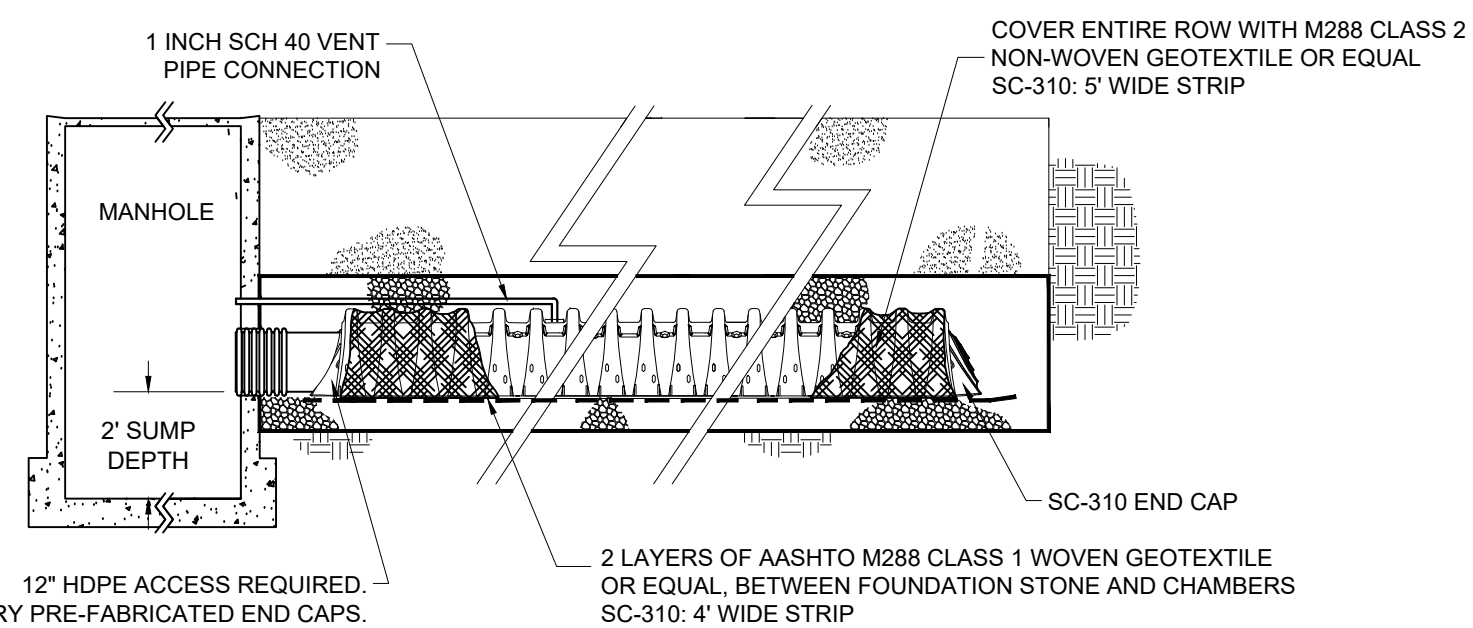
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AVAIL - STANDARD HEADERS AVAILABLE

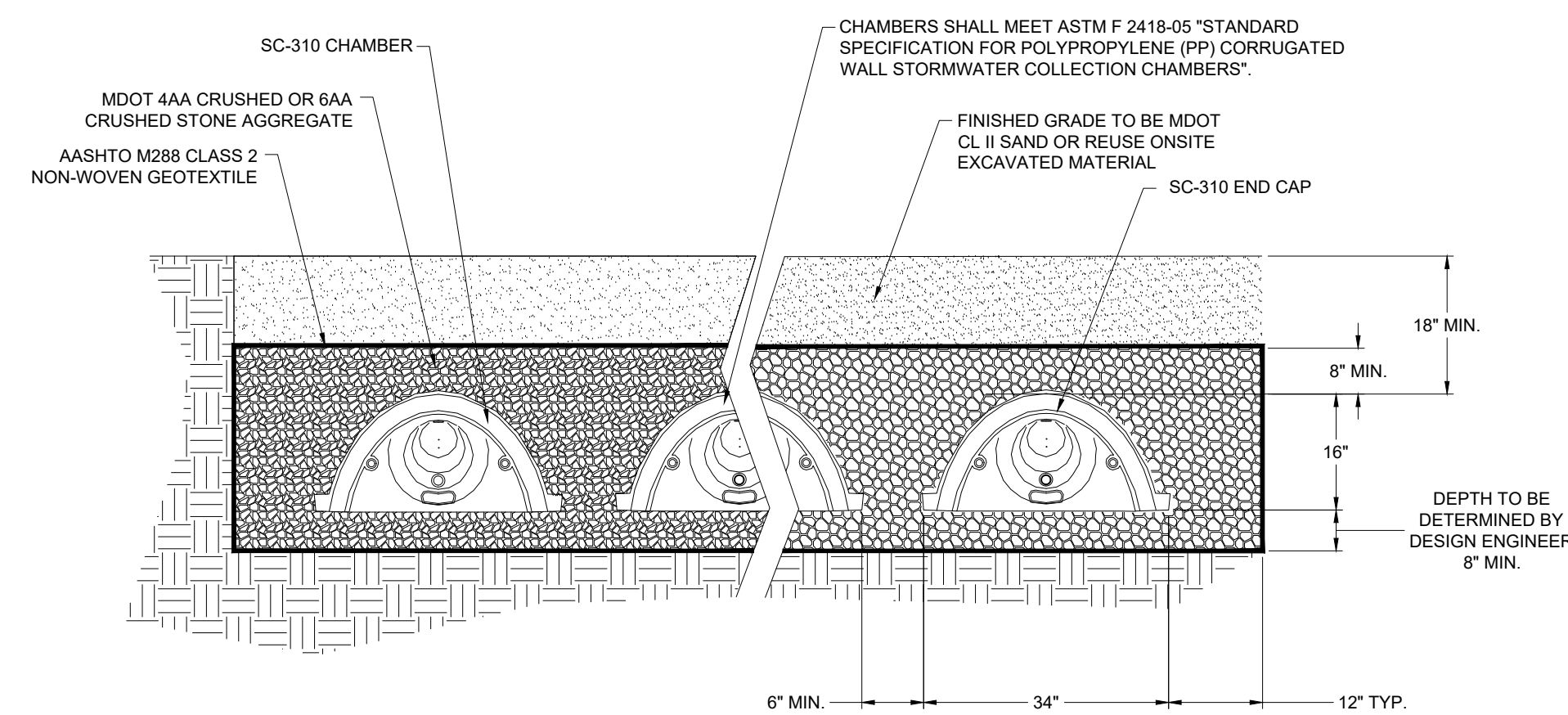
MANIFOLDS

N.T.S.



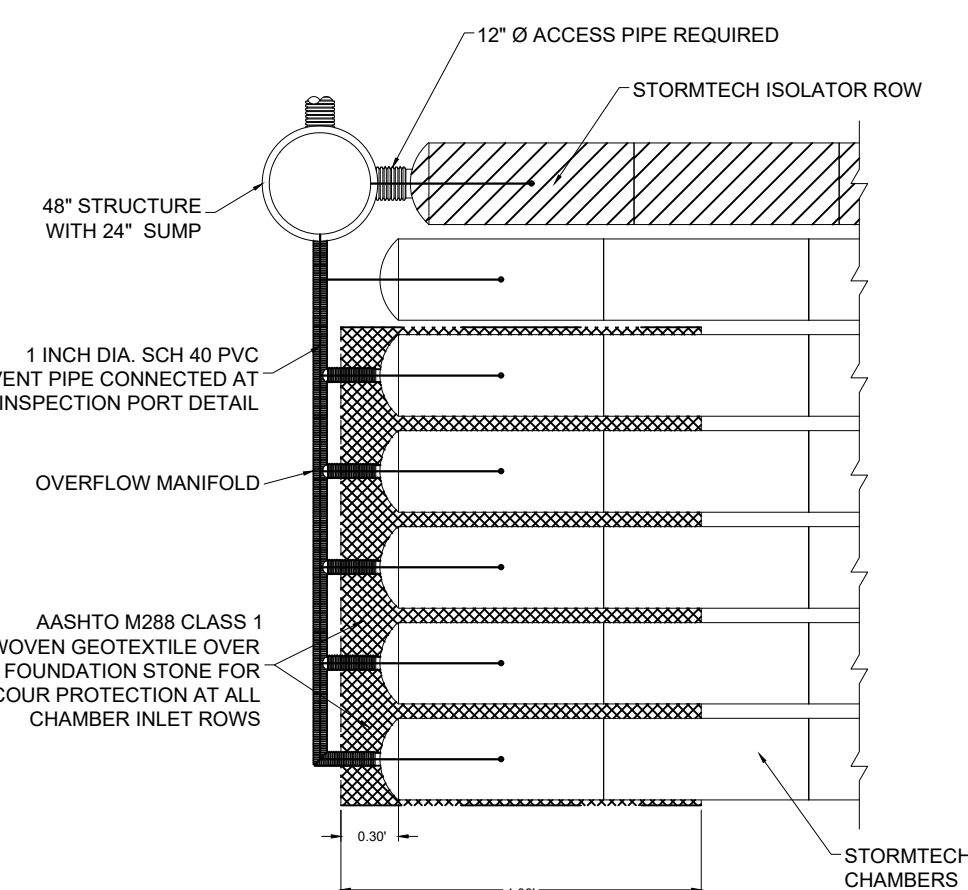
SC-310 ISOLATOR ROW DETAIL

N.T.S



SC-310 STANDARD CROSS SECTION DETAIL

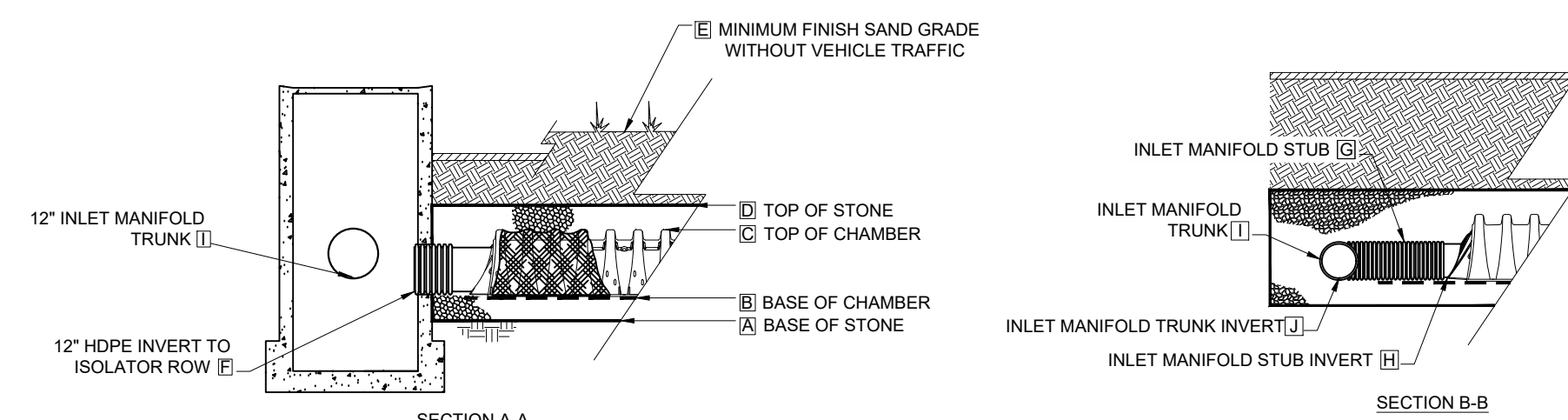
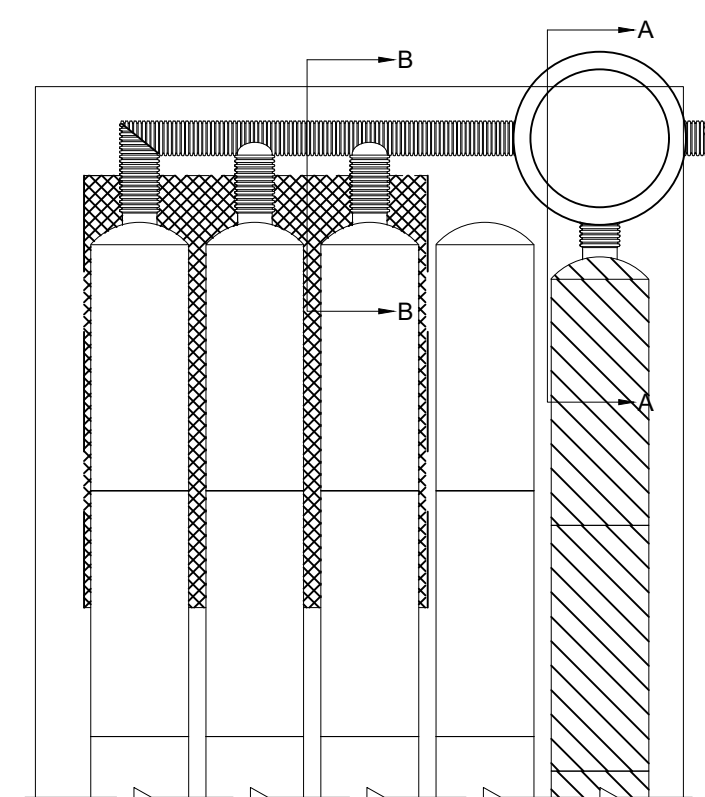
N.T.S.



SC-310 MANIFOLD DETAIL

N.T.S.

A	B	C	D	E	F	G	H	I	J
581.99	582.32	584.82	585.32	586.57	583.69	12 INCH	583.69	12 INCH	583.69



SC-310 ELEVATIONS

NTS.

CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
DETAIL STORMTECH SC-310 CHAMBER SYSTEM A1, A2, A3

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

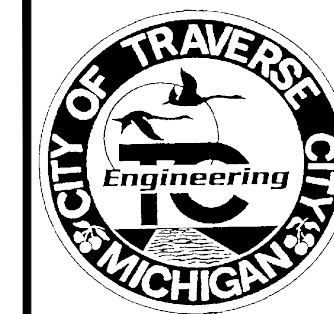
Date: 12/19/2022

Project No. _____

Drawn by:
TIG

Scale: N.T.S.

Sheet No.: 4 OF 16

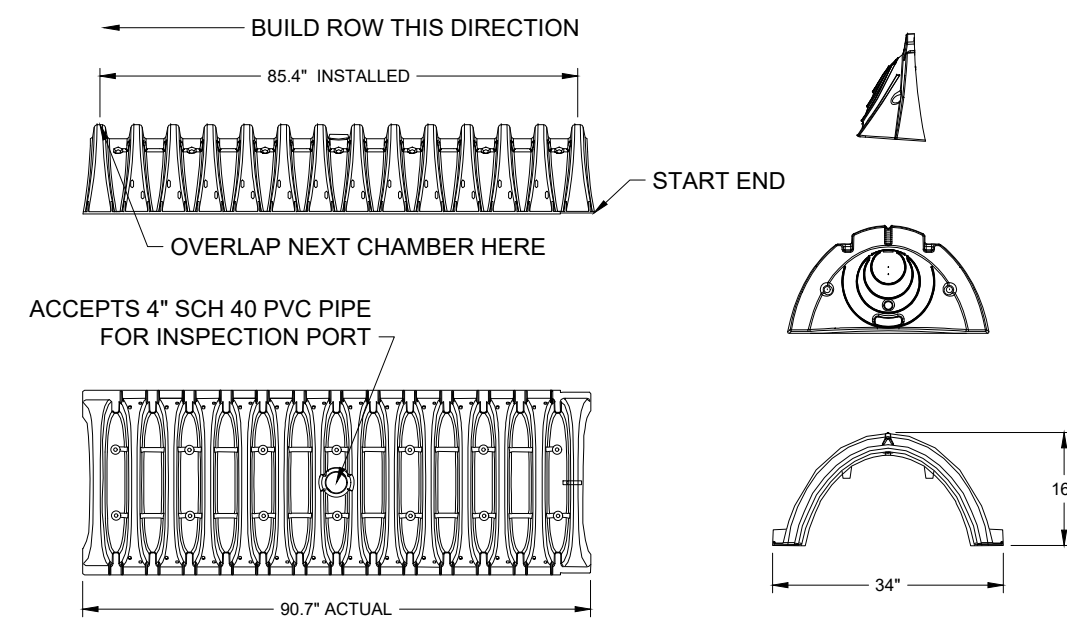


The City of Traverse City
Engineering Department
GOVERNMENTAL CENTER
400 Boardman Avenue
Traverse City, Michigan 49604

CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
DETAIL STORMTECH SC-310 CHAMBER SYSTEM B1, B2

Revision/Issue	Date
BID SET	2/21/23
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Date: 12/19/2022
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Sheet No.: 5 OF 16



NOMINAL CHAMBER SPECIFICATIONS
SIZE (W x H x INSTALLED LENGTH) 34.0" x 16.0" x 85.4"
CHAMBER STORAGE 14.7 CUBIC FEET
MINIMUM INSTALLED STORAGE 31.0 CUBIC FEET
WEIGHT 35 lbs.

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

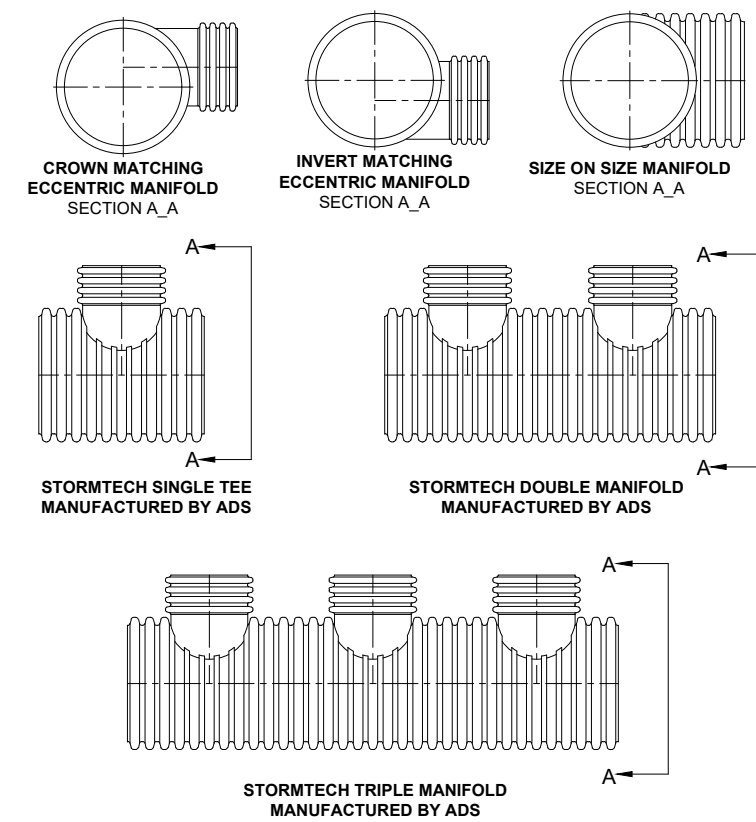
PART#	STUB	A	B	C
SC310EPE08T	8"	9.60"	5.80"	N/A
SC310EPE08B	8"	9.60"	N/A	0.50"
SC310EPE08T	8"	11.90"	3.50"	N/A
SC310EPE08B	8"	11.90"	N/A	0.60"
SC310EPE10T	10"	12.70"	1.40"	N/A
SC310EPE10B	10"	12.70"	N/A	0.70"
SC310EPE12B	12"	13.50"	N/A	0.90"

NOTE: ALL DIMENSIONS ARE NOMINAL

*FOR THE SC310EPE12B THE 12" STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25". BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

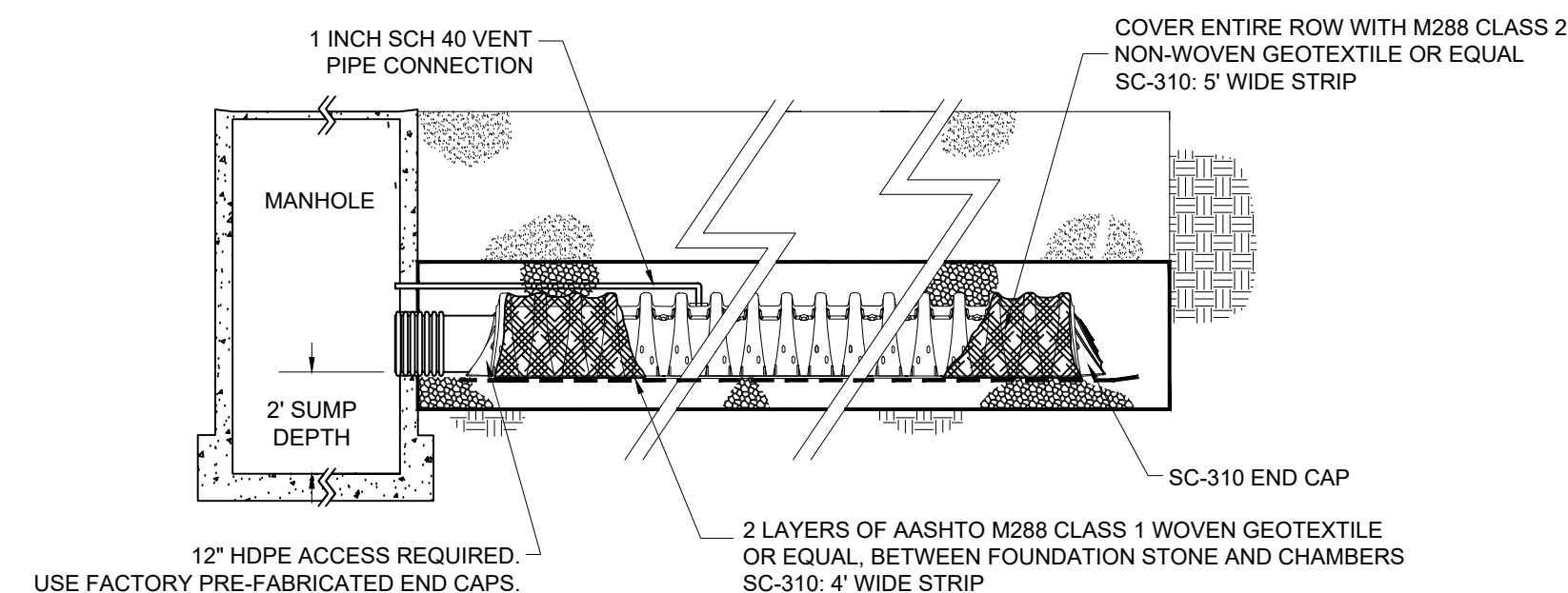
ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

SC-310 TECHNICAL SPECIFICATIONS
N.T.S.

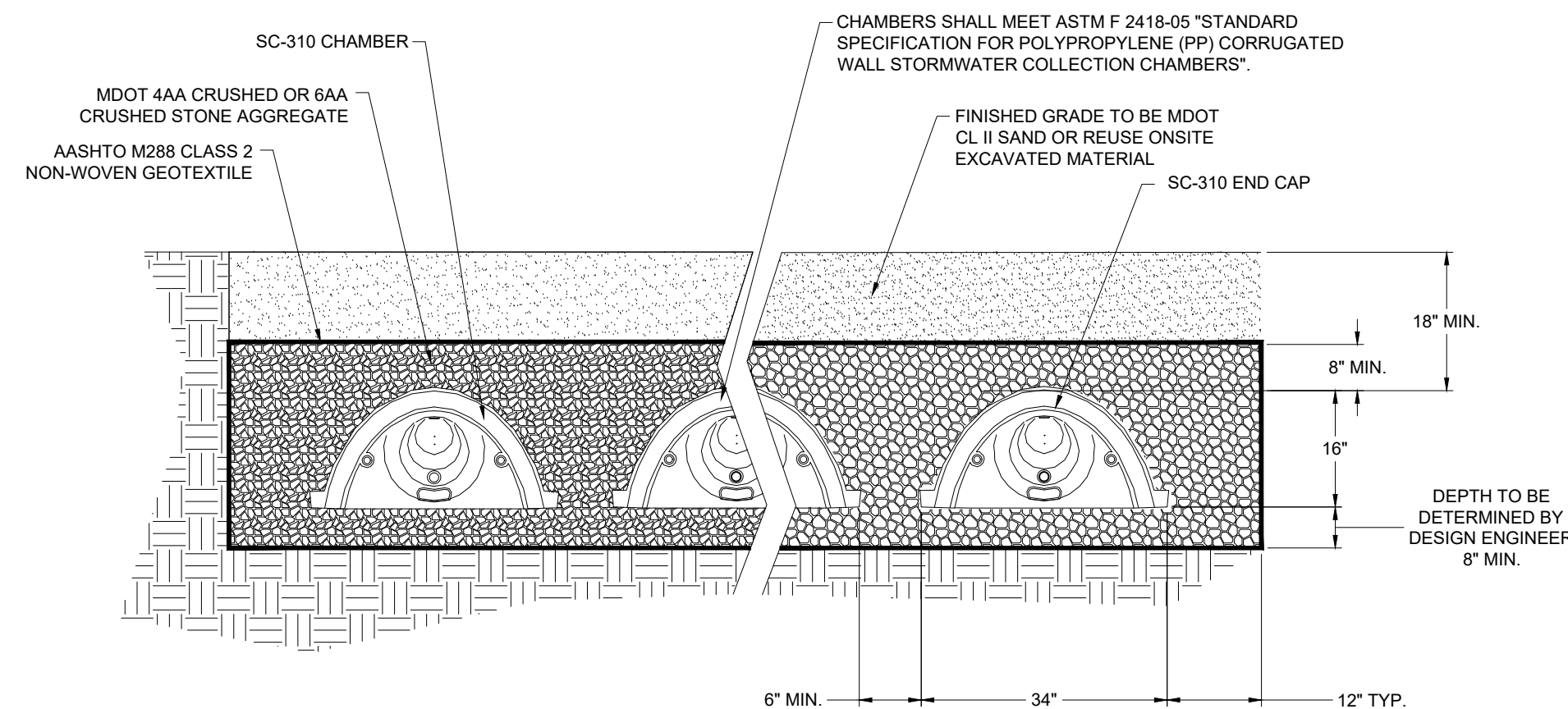


STUB SIZE	HEADER PIPE SIZES
12"	AVAIL AVAIL AVAIL AVAIL AVAIL
10"	AVAIL AVAIL AVAIL AVAIL AVAIL
8"	AVAIL AVAIL AVAIL AVAIL AVAIL

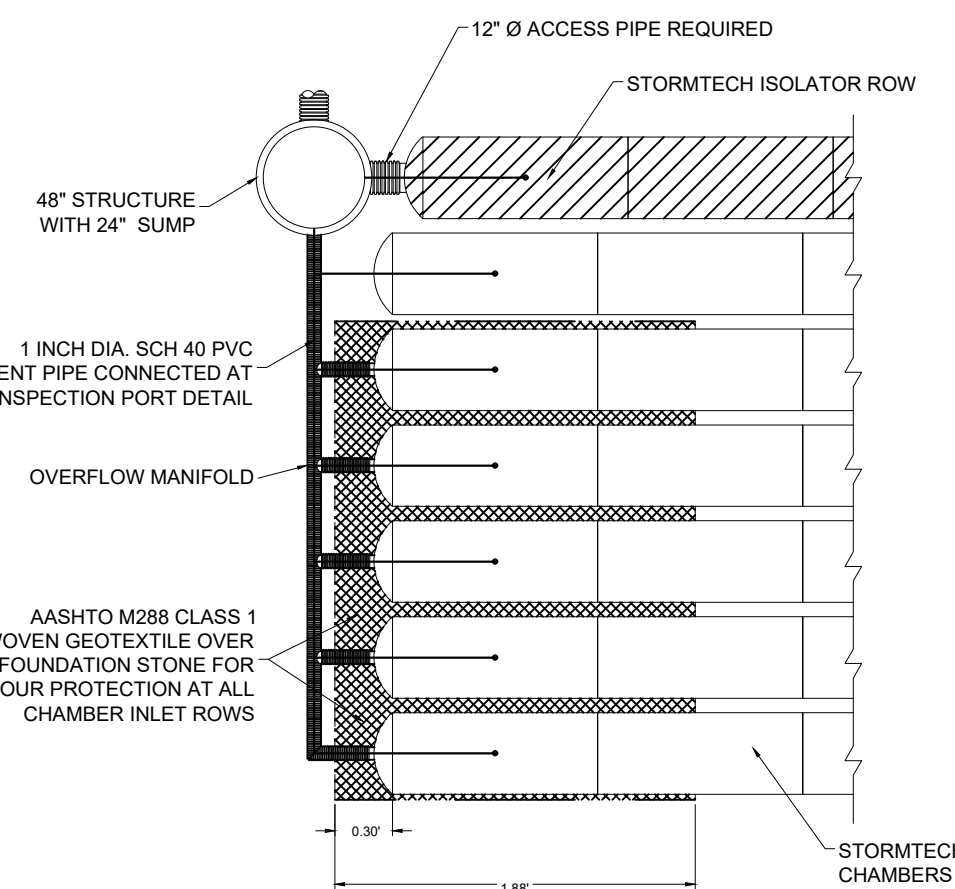
MANIFOLDS
N.T.S.



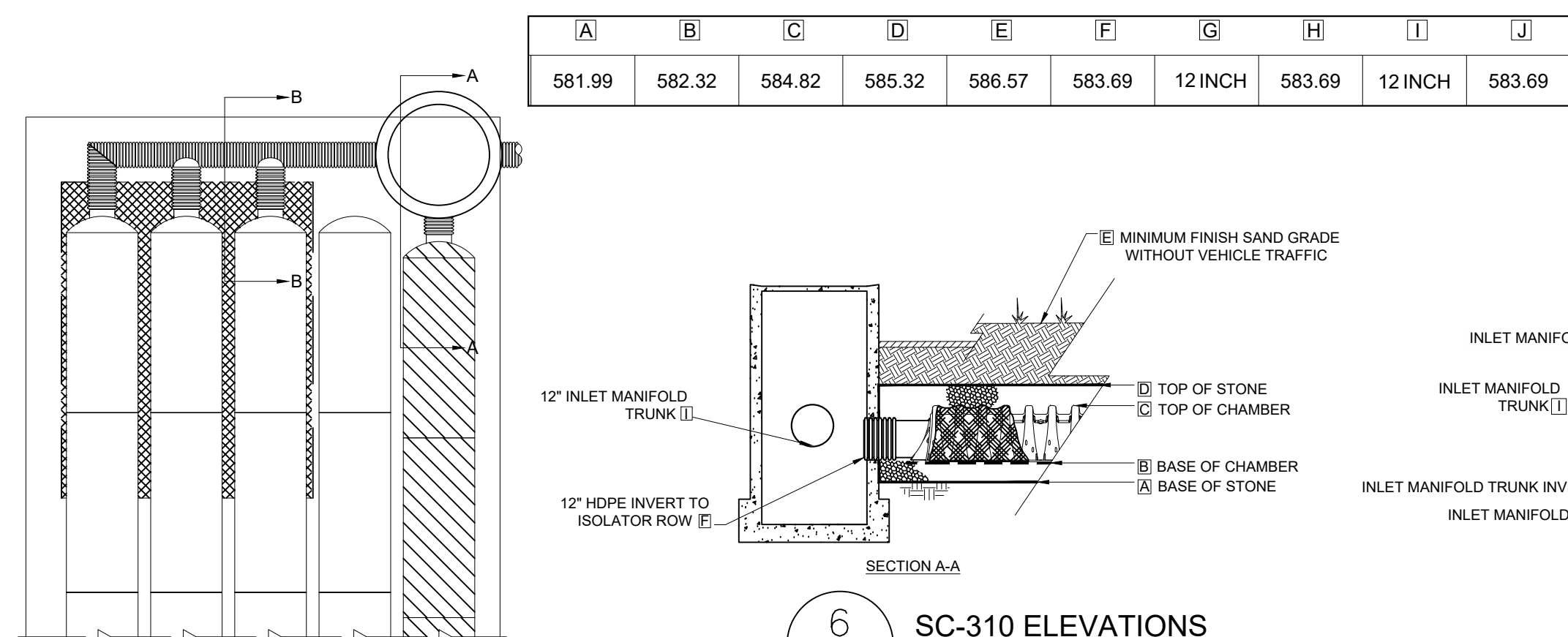
SC-310 ISOLATOR ROW DETAIL
N.T.S.



SC-310 STANDARD CROSS SECTION DETAIL
N.T.S.



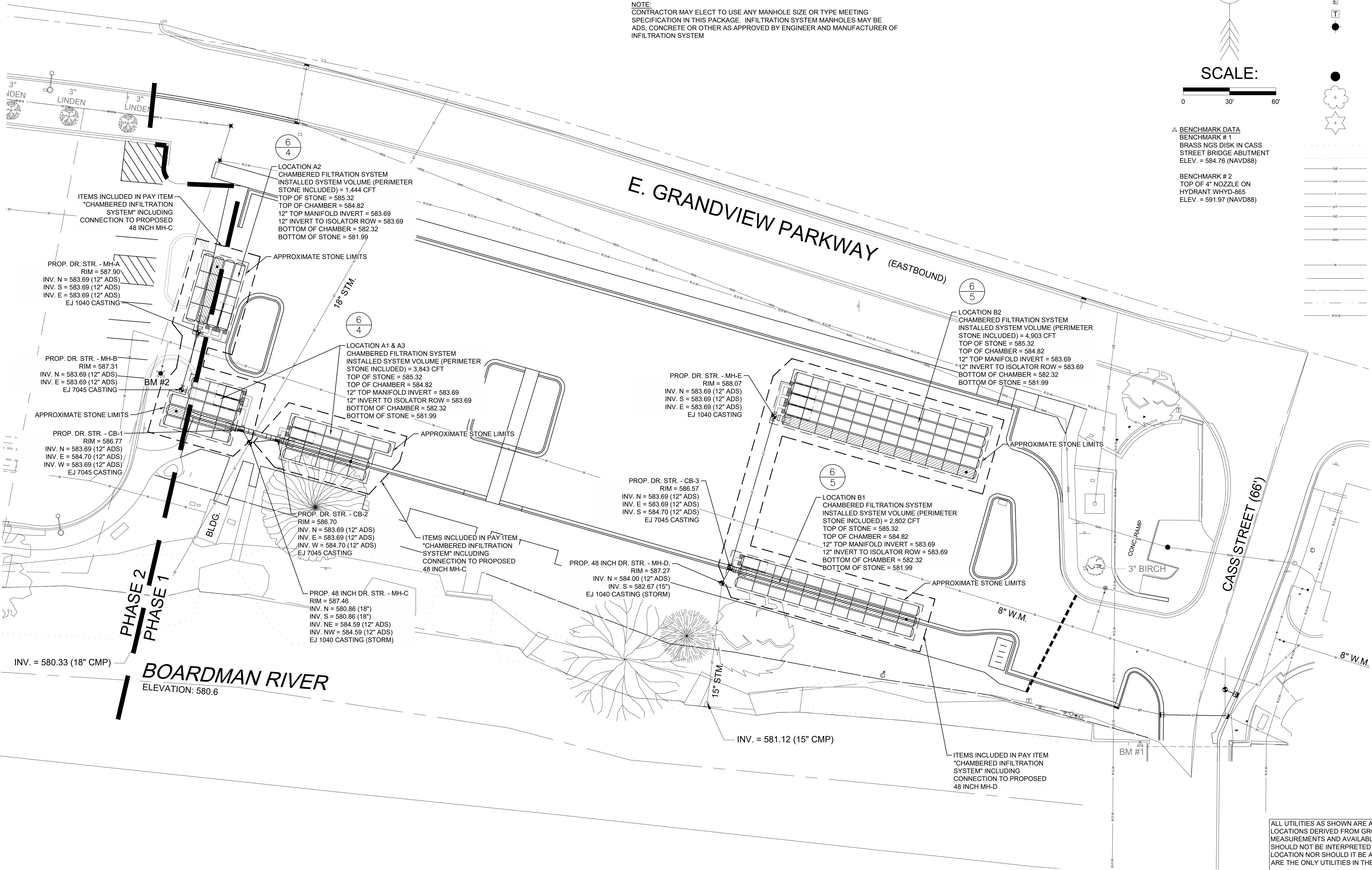
SC-310 MANIFOLD DETAIL
N.T.S.



SC-310 ELEVATIONS
N.T.S.

ESTIMATES QUANTITIES THIS SHEET - PHASE 1		
ITEM DESCRIPTION	UNIT	QUANTITY
CHAMBERED INFILTRATION SYSTEM	LSUM	1
DR STRUCTURE, 48 INCH, EJ1040 CASTING (STORM)	EA	2

NOTE:
CONTRACTOR MAY ELECT TO USE ANY MANHOLE SIZE OR TYPE MEETING SPECIFICATION IN THIS PACKAGE. INFILTRATION SYSTEM MANHOLES MAY BE ADS, CONCRETE OR OTHER AS APPROVED BY ENGINEER AND MANUFACTURER OF INFILTRATION SYSTEM



- LEGEND**
- FOUND PROPERTY CORNER
 - BENCHMARK
 - SIGN
 - GAS BOX
 - UTILITY POLE
 - GUY WIRE
 - WATER VALVE
 - PED LIGHT POLE
 - ELECTRIC RISER
 - TELEPHONE RISER/BOX
 - FIRE HYDRANT
 - CATCHBASIN
 - BEEHIVE GRATE CATCHBASIN
 - STORM MANHOLE
 - SANITARY MANHOLE
 - DECIDUOUS TREE
 - CONIFEROUS TREE

SCALE:
0 30' 60'

BENCHMARK DATA
BENCHMARK # 1
BRASS NGS DISK IN CASS
STREET BRIDGE ABUTMENT
ELEV. = 584.76 (NAVD88)
BENCHMARK # 2
TOP OF 4" NOZZLE ON
HYDRANT WHYD-865
ELEV. = 591.97 (NAVD88)

- TREE LINE
- SHRUB LINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- OVERHEAD TELEPHONE
- UNDERGROUND TELEPHONE
- OVERHEAD CABLE TV
- UNDERGROUND CABLE TV
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- GUARDRAIL
- FENCE
- TOP/BOTTOM OF SLOPE
- RIGHT-OF-WAY

CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
STORM PLAN DETAILS

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23
Date: 12/19/2022	
Project No.:	
Drawn by: TIG	
Scale: 1"=30'	
Sheet No.:	
6 OF 16	

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM GROUND MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.



LOT B PHASE 1 - QUANTITY DESCRIPTION THIS SHEET			
ITEM DESCRIPTION	UNIT	QUANTITY	
MOBILIZATION / TRAFFIC CONTROL - LOT B	LSUM	1	
PAVT. REM. SPECIAL	SYD	6,011	
SIDEWALK, REM	SYD	1,062	
FOUR AND COUNTER, REM	FT	1,740	
LIGHT POLE CONCRETE FOOTING, REMOVED	EA	11	
REMOVE/SALVAGE EX. PAY PARKING KIOSK	EA	3	
EROSION CONTROL, INLET PROTECTION, FABRIC DROP	EA	8	
EROSION CONTROL, SILT FENCE	FT	445	
DR STRUCTURE, REM	EA	3	
SEWER, REM, LESS THAN 24 INCH	FT	150	
HANDHOLE, REM	EA	22	

PROJECT INTENDED SCHEDULE:
PROPOSED CONSTRUCTION SCHEDULE TO BE MAY 2023 THROUGH JUNE 2023. ALL
TOPSOIL, SEED, FERTILIZER, AND MULCH TO BE INSTALLED PRIOR TO COMPLETION.

MAY 1 INSTALL SESC MEASURES ON CATCH BASINS WITHIN PROJECT

MAY 2-5 ASPHALT, CONCRETE CURB AND SIDEWALKS REMOVAL

MAY 8-12 INSTALL STORM SEWER

MAY 15-19 CONCRETE CURB AND GUTTER, SIDEWALK, AND DRIVES

MAY 22-26 GRAVEL AND FINE GRADING

MAY 29-MAY 31 PAVING

JUNE 1-3 TOPSOIL, SEEDING, FERTILIZER, AND MULCH, REMOVE SESC MEASURES

Date:	12/19/2022
Project No.:	
Drawn by:	TIG
Scale:	1"=30'
Sheet No.:	7 OF 16

28-51-658-037-00
TRAVERSE CITY
CONVENTION & VISITORS
CENTER
101 W. GRANDVIEW PKWY.
TRAVERSE CITY, MI 49684

28-51-103-014-15
INNOVO BREAKWATER
APARTMENTS LLC
155 GARLAND ST.
TRAVERSE CITY, MI 49684

28-51-103-001-10
CITY OF TRAVERSE CITY
230 E. GRANDVIEW PKWY.
TRAVERSE CITY, MI 49684

ESTIMATES QUANTITIES THIS SHEET - PHASE 1		
ITEM DESCRIPTION	UNIT	QUANTITY
AGGREGATE BASE, 8 INCH	SYD	3,800
CURB AND GUTTER, CONC. DET C4	FT	820
DETECTABLE WARNING SURFACE, CAST IRON	FT	6
HMA, 4EL TOP (165 #/SYD)	TON	350
HMA, 4EL LEVELING (165 #/SYD)	TON	350
PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS, 4 INCH, (WHITE)	FT	1,940
PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS, 4 INCH, (BLUE)	FT	460
PAVT MRKG, WATERBORNE, ACCESSIBLE SYM	EA	4
SIDEWALK, CONC, 6 INCH	SFT	7,700
SIDEWALK, CONC, 9 INCH	SFT	370
MACHINE GRADING, SPECIAL	SYD	7,350

PARKING SPACE COUNT LOT B

EXISTING PARKING - 136
PROPOSED PARKING - 100 (TOTAL)
ACCESSIBLE PARKING - 5 (TOTAL)
VAN ACCESSIBLE PARKING - 1 (REQUIRED)
VAN ACCESSIBLE PARKING - 6 (PROVIDED)

LANDSCAPE PLAN

1 DECIDUOUS TREE FOR EVERY 10 PARKING SPACES (REQUIRED)

PROPOSED PARKING - 100 (TOTAL)
PROPOSED TREES - 10 (PROVIDED)

INTERNAL LANDSCAPING

PARKING AREA - 40,271 SF x 8% = 3,222 SF (REQUIRED)
INTERNAL LANDSCAPING - 3,355 SF (PROVIDED)

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LOCATION NOR SHOULD IT BE ASSUMED THAT THEY
ARE THE ONLY UTILITIES IN THE AREA.

HATCH LEGEND

- PROPOSED SIDEWALK, CONC, 4 INCH
- PROPOSED SIDEWALK, CONC, 6 INCH
- SIDEWALK, CONC, 9 INCH
- PROPOSED HMA
- PROPOSED LAWN AREA

LEGEND

- FOUND PROPERTY CORNER
- BENCHMARK
- SIGN
- GAS BOX
- UTILITY POLE
- GUY WIRE
- WATER VALVE
- PED LIGHT POLE
- ELECTRIC RISER
- TELEPHONE RISER/BOX
- FIRE HYDRANT
- CATCHBASIN
- BEEHIVE GRATE CATCHBASIN
- STORM MANHOLE
- SANITARY MANHOLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- SHRUB LINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- OVERHEAD TELEPHONE
- UNDERGROUND TELEPHONE
- OVERHEAD CABLE TV
- UNDERGROUND CABLE TV
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- GUARDRAIL
- FENCE
- TOP/BOTTOM OF SLOPE
- RIGHT-OF-WAY

CITY OF TRAVERSE CITY 2023 PAVEMENT PRESERVATION PROJECT LOT B - SITE PLAN - PHASE 1

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

Date:	12/19/2022
Project No.:	
Drawn by:	TIG
Scale:	1"=30'
Sheet No.:	8 OF 16

28-51-658-037-00
TRAVERSE CITY
CONVENTION & VISITORS
CENTER
101 W. GRANDVIEW PKWY.
TRAVERSE CITY, MI 49684

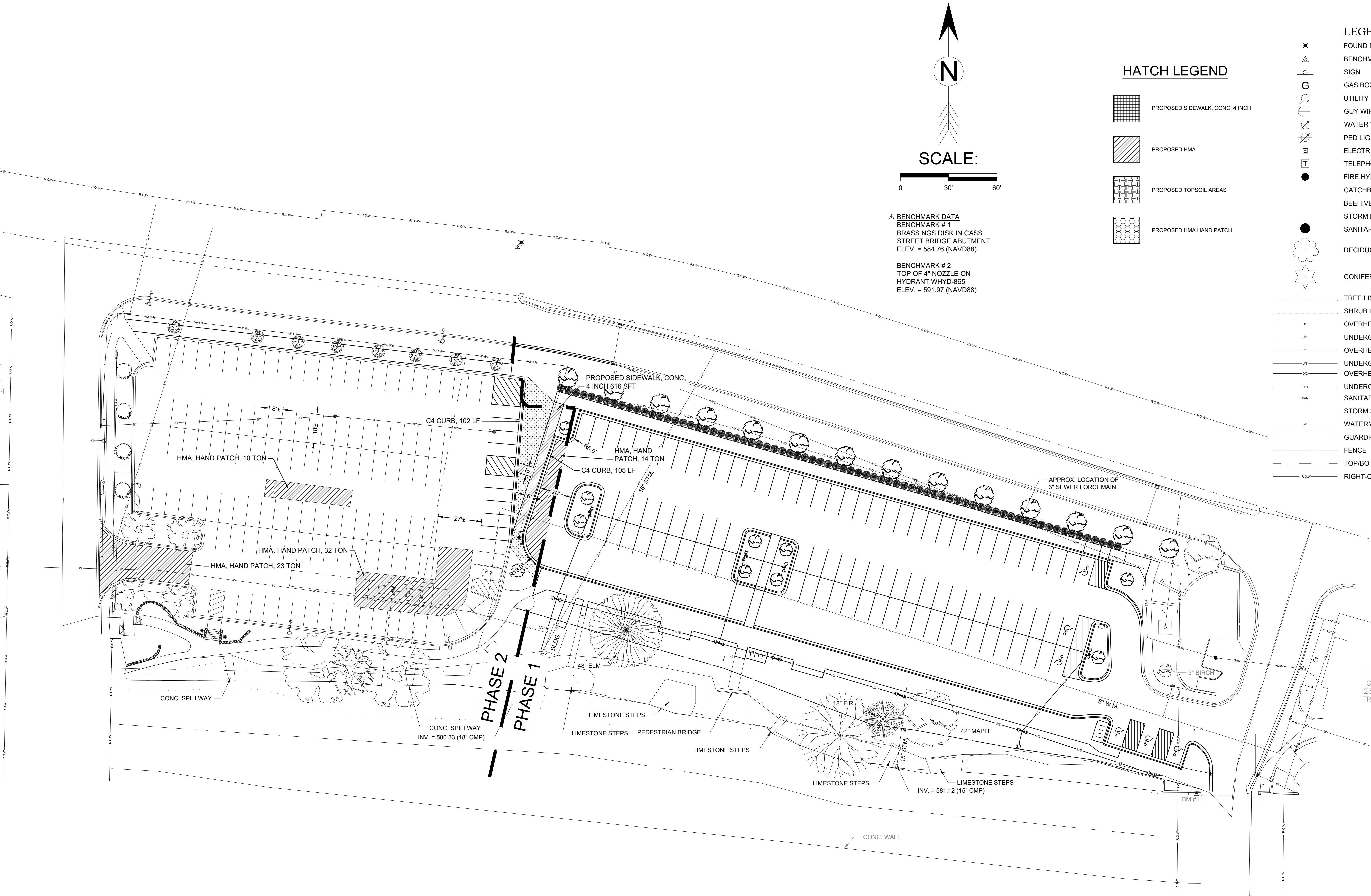
28-51-103-014-15
INNOVO BREAKWATER
APARTMENTS LLC
155 GARLAND ST.
TRAVERSE CITY, MI 49684

28-51-103-001-10
CITY OF TRAVERSE CITY
230 E. GRANDVIEW PKWY.
TRAVERSE CITY, MI 49684

CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
LOT B - SITE PLAN - PHASE 2

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

Date:	12/19/2022
Project No.:	
Drawn by:	TIG
Scale:	1"=30'
Sheet No.:	9 OF 16



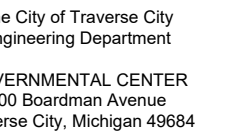
LOT T ESTIMATES QUANTITIES THIS SHEET - PHASE 2		
ITEM DESCRIPTION	UNIT	QUANTITY
HMA HAND PATCH (300 #/SYD)	TON	80
PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS, 4 INCH, (WHITE)	FT	3,400
PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS, 4 INCH, (BLUE)	FT	480
PAVT MRKG, WATERBORNE, ACCESSIBLE SYM	EA	3

LOT B ESTIMATES QUANTITIES THIS SHEET - PHASE 2		
ITEM DESCRIPTION	UNIT	QUANTITY
HMA HAND PATCH (300 #/SYD)	TON	14
CURB AND GUTTER, CONC, DET C4	FT	210
SIDEWALK, CONC, 4 INCH	SFT	616
MACHINE GRADING, SPECIAL	SYD	271

PARKING SPACE COUNT LOT T

EXISTING PARKING - 140
PROPOSED PARKING - 136 (TOTAL)
ACCESSIBLE PARKING - 3 (TOTAL)
VAN ACCESSIBLE PARKING - 1 (REQUIRED)
VAN ACCESSIBLE PARKING - 3 (PROVIDED)

ALL UTILITIES AS SHOWN ARE APPROXIMATE
LOCATIONS DERIVED FROM GROUND
MEASUREMENTS AND AVAILABLE RECORDS. THEY
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LOI B - GRADING PLAN - PHASE 1

12/19/2022

Project No.:

Drawn by:

TIG

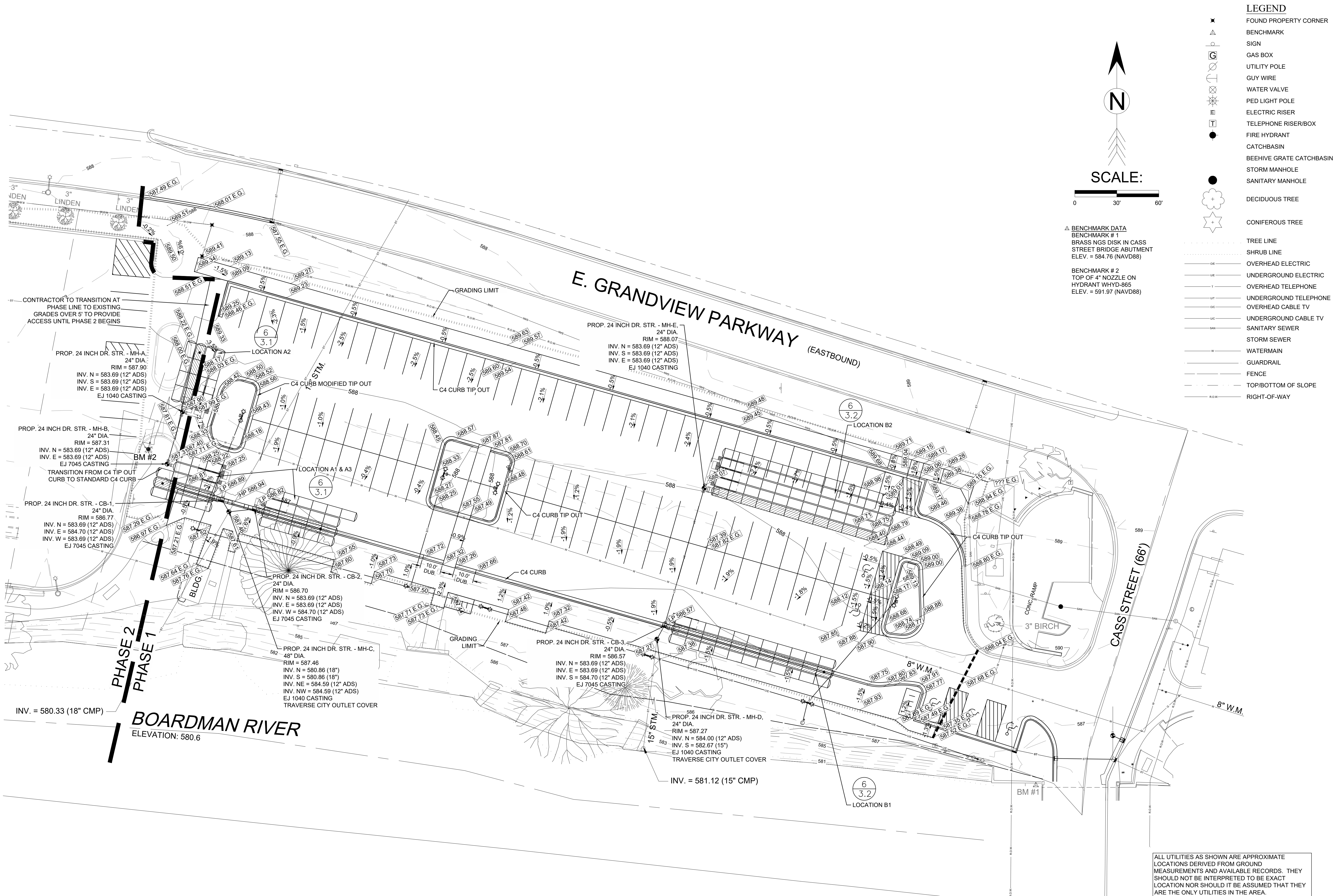
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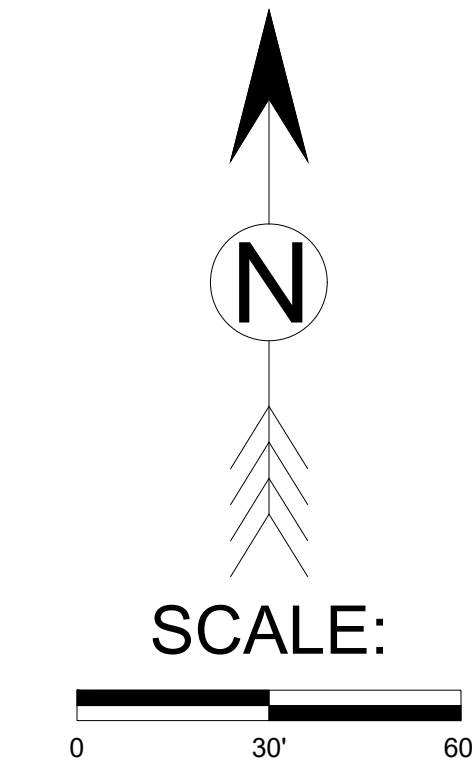
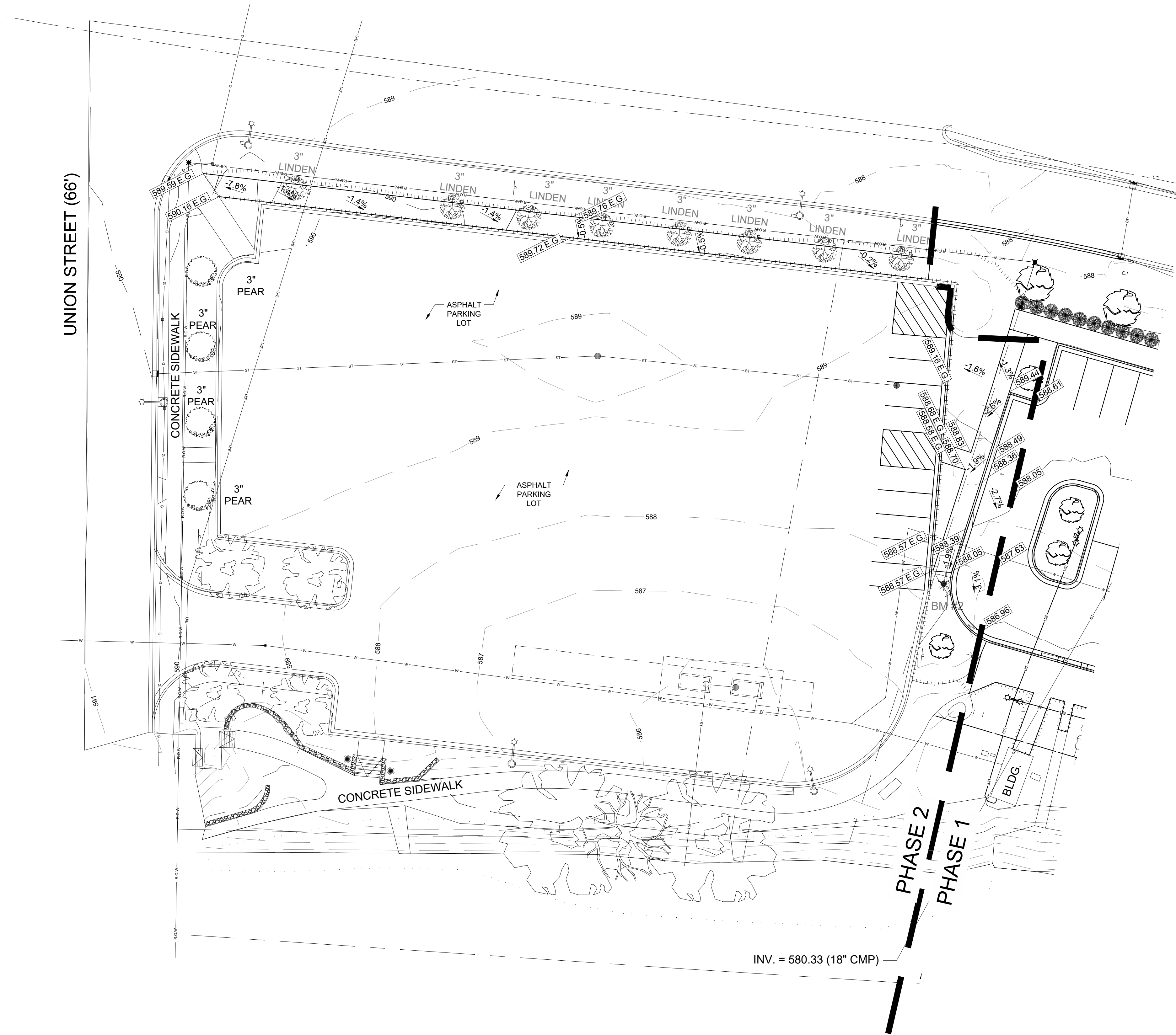
1"=30'

Sheet No.:

10 OF 16

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM GROUND MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.





△ BENCHMARK DATA
BENCHMARK # 1
BRASS NGS DISK IN CASS
STREET BRIDGE ABUTMENT
ELEV. = 584.76 (NAVD88)

BENCHMARK # 2
TOP OF 4" NOZZLE ON
HYDRANT WHYD-865
ELEV. = 591.97 (NAVD88)

- LEGEND**
- ✕ FOUND PROPERTY CORNER
 - △ BENCHMARK
 - SIGN
 - GAS BOX
 - UTILITY POLE
 - ⊥ GUY WIRE
 - ⊕ WATER VALVE
 - ⊕ PED LIGHT POLE
 - ⊕ ELECTRIC RISER
 - ⊕ TELEPHONE RISER/BOX
 - FIRE HYDRANT
 - CATCHBASIN
 - BEEHIVE GRATE CATCHBASIN
 - STORM MANHOLE
 - SANITARY MANHOLE
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - TREE LINE
 - SHRUB LINE
 - OE OVERHEAD ELECTRIC
 - UE UNDERGROUND ELECTRIC
 - T OVERHEAD TELEPHONE
 - UT UNDERGROUND TELEPHONE
 - OC OVERHEAD CABLE TV
 - UC UNDERGROUND CABLE TV
 - SAN SANITARY SEWER
 - S STORM SEWER
 - W WATERMAIN
 - G GUARDRAIL
 - F FENCE
 - TOP/BOTTOM OF SLOPE
 - R.O.W. RIGHT-OF-WAY

ALL UTILITIES AS SHOWN ARE APPROXIMATE
LOCATIONS DERIVED FROM GROUND
MEASUREMENTS AND AVAILABLE RECORDS. THEY
SHOULD NOT BE INTERPRETED TO BE EXACT
LOCATION NOR SHOULD IT BE ASSUMED THAT THEY
ARE THE ONLY UTILITIES IN THE AREA.



The City of Traverse City
Engineering Department
GOVERNMENTAL CENTER
400 Boardman Avenue
Traverse City, Michigan 49604

CITY OF TRAVERSE CITY 2023 PAVEMENT PRESERVATION PROJECT LOT T - GRADING PLAN - PHASE 2

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

Date: 12/19/2022
Project No.:
Drawn by: TIG
Scale: 1"=30'
Sheet No.: 11 OF 16

ESTIMATES QUANTITIES THIS SHEET - PHASE 1					
TYPE	KEY	SCIENTIFIC NAME	SIZE	QTY	REMARKS
1	UA	Ulmus americana, 'Princeton Elm'	2.5" Cal.	14	Located Per Plan, Min. 30' O.C.
2	SR	Syringa reticulata, 'Ivory Silk'	2.5" Cal.	7	Single Stem
3	JU	Juniperus, 'Upright Juniper'	4" HT	74	6' O.C.
4	BN	Betula nigra, 'River Birch'	2.5	3	Single Stem

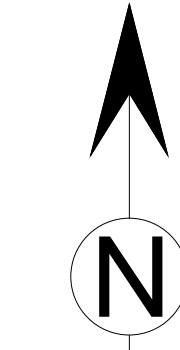
ESTIMATES QUANTITIES THIS SHEET - PHASE 1		
ITEM DESCRIPTION	UNIT	QUANTITY
IRRIGATION	LS	1
3 INCH PVC CONDUIT	LF	489
HARDWOOD MULCH	SYD	50
4 INCH TOPSOIL FERTILIZER MULCH	SYD	500
BIKE RACK	EA	2
TREE TYPE 1	EA	14
TREE TYPE 2	EA	7
TREE TYPE 3	EA	74
TREE TYPE 4	EA	3

GENERAL PLANTING NOTES:

- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ANY EXISTING GRASS, WEEDS OR SCRUB GROWTH WITHIN LIMITS OF PLANT BED EDGE OR WITHIN 36" DIAMETER CIRCLE AROUND BASE OF EACH TREE.
- PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISH GRADE ON EXISTING SOIL BASE. FOR BACKFILL AREAS, PLANT BALL UP TO 2-1/2" - 3" HIGHER TO ALLOW FOR SETTLEMENT.
- WHERE PRUNING IS REQUIRED PAINT ALL CUTS OVER 2" DIA.
- FLAG GUY WIRES WITH SURVEYOR TAPE FOR TREES.
- CONTRACTOR MAY DELETE STAKING OF PLANT MATERIAL IN AREAS ADJACENT TO PEDESTRIAN PATHWAYS PER ENGINEERS APPROVAL.

GENERAL SEEDING NOTES:

- THIS STANDARD ILLUSTRATES THE TYPICAL USE OF SEEDING WITH MULCH, AS THESE ITEMS RELATE TO ROADWAY CONSTRUCTION. THE ACTUAL DESIGN AND MATERIALS USED TO CONSTRUCT THE COMPLETE SECTION, WHICH INCLUDES SEEDING WITH MULCHING, WILL BE ACCORDING TO THE PLANS AND CURRENT SPECIFICATIONS.
- ITEMS CALLED FOR ON THIS SHEET MAY ALSO BE USED DURING CONSTRUCTION AS AN EROSION CONTROL MEASURE. SEE STANDARD PLAN R-96-SERIES.
- PERENNIALS ARE TO BE FULLY DEVELOPED TWO YEAR #2 CONTAINER PLANTS.
- ENTIRE PERENNIAL BED SHALL BE EXCAVATED DOWN 8" AND REPLACED WITH 8" OF PREPARED SOIL.



SCALE:

0 30' 60'

BENCHMARK DATA
BENCHMARK # 1
BRASS NGS DISK IN CASS
STREET BRIDGE ABUTMENT
ELEV. = 584.76 (NAVD88)

BENCHMARK # 2
TOP OF 4" NOZZLE ON
HYDRANT WHYD-865
ELEV. = 591.97 (NAVD88)

LEGEND

FOUND PROPERTY CORNER
BENCHMARK
SIGN
GAS BOX
UTILITY POLE
GUY WIRE
WATER VALVE
PED LIGHT POLE
ELECTRIC RISER
TELEPHONE RISER/BOX
FIRE HYDRANT
CATCHBASIN
BEEHIVE GRATE CATCHBASIN
STORM MANHOLE
SANITARY MANHOLE

TREE LINE
SHRUB LINE
OVERHEAD ELECTRIC
UNDERGROUND ELECTRIC
OVERHEAD TELEPHONE
UNDERGROUND TELEPHONE
UNDERGROUND CABLE TV
OVERHEAD CABLE TV
UNDERGROUND CABLE TV
SANITARY SEWER
STORM SEWER
WATERMAIN
GUARDRAIL
FENCE
TOP/BOTTOM OF SLOPE
RIGHT-OF-WAY

DECIDUOUS TREE
CONIFEROUS TREE

IRRIGATION LEGEND

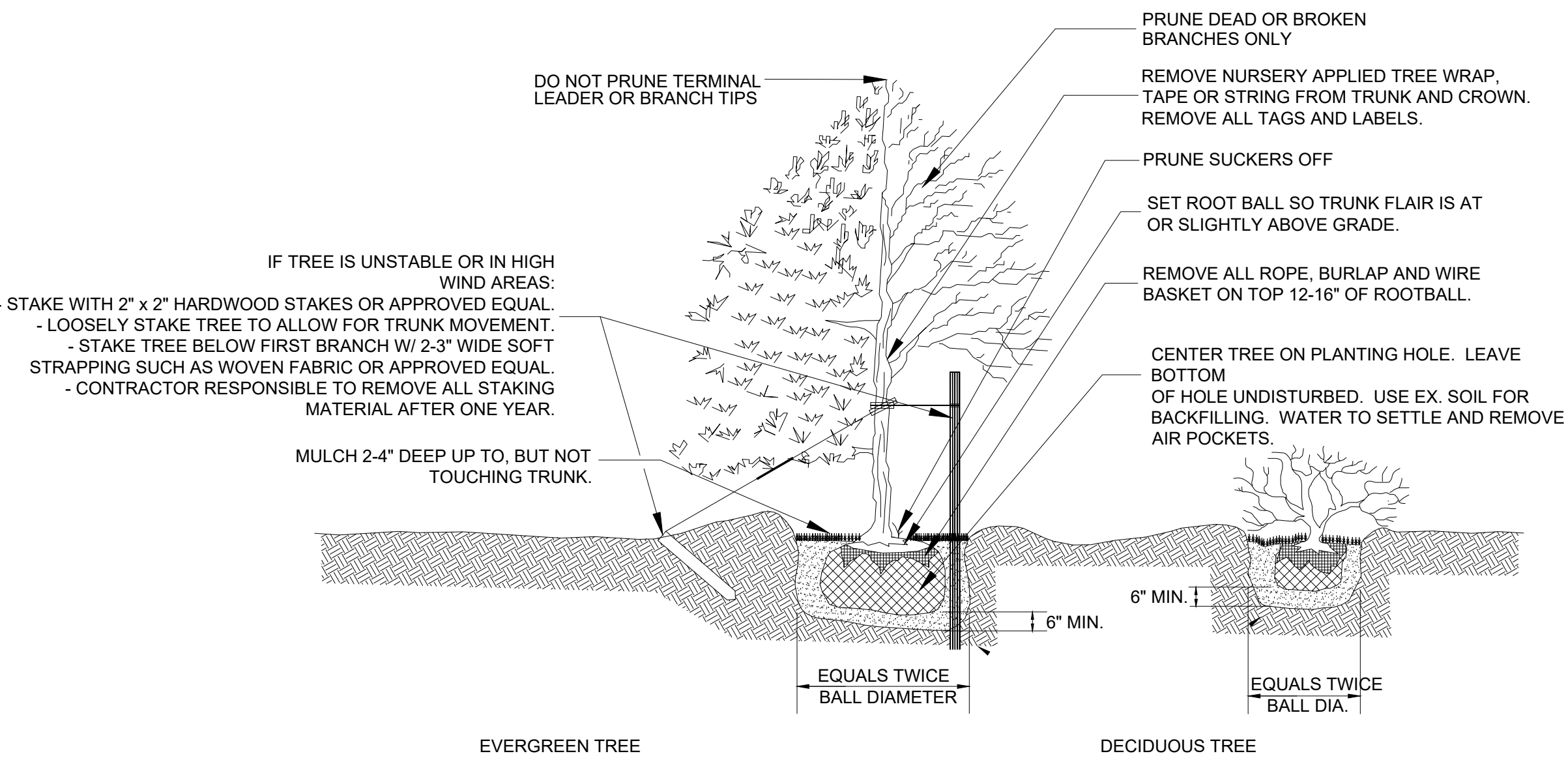
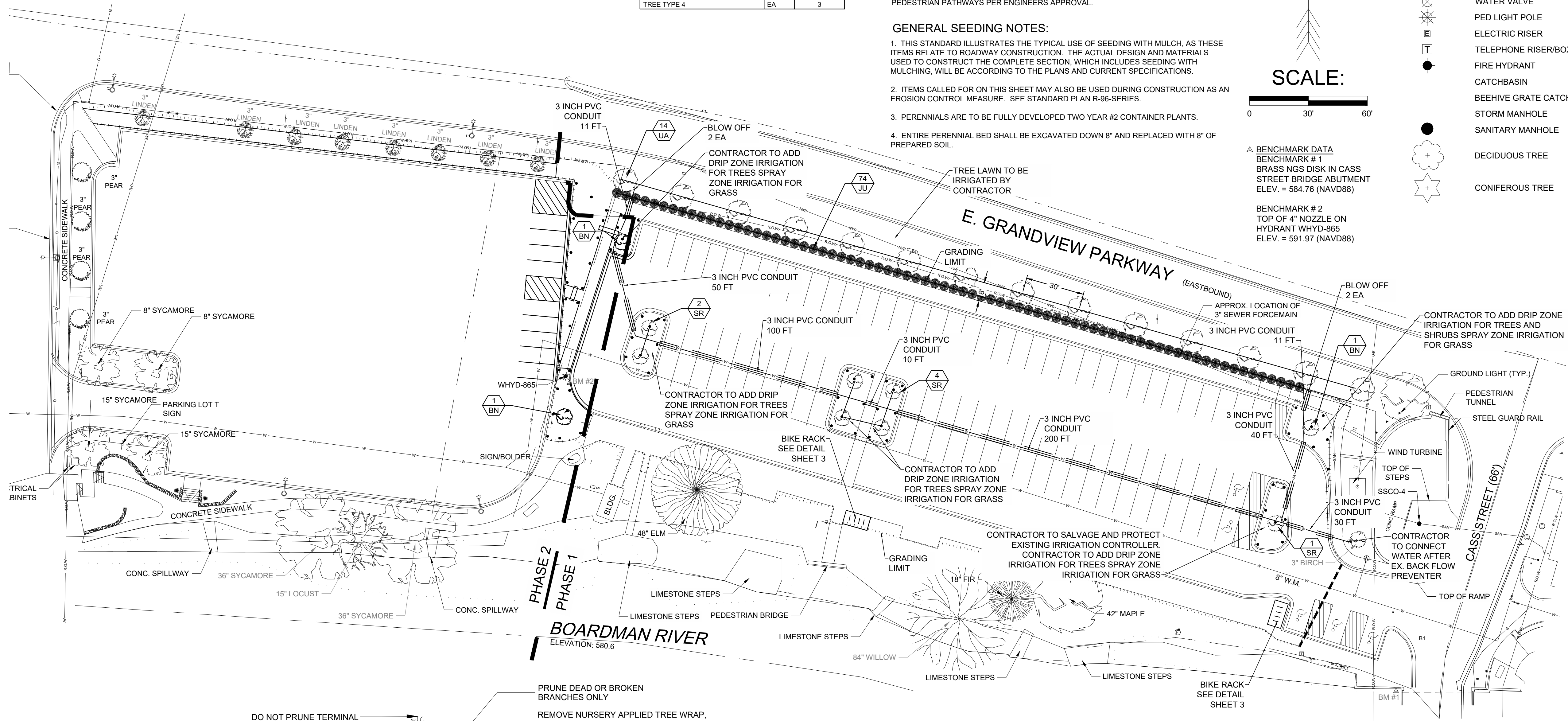
- PRESSURE REDUCER AND DRIP LOCATION
- QUICK COUPLING VALVE, 2"
- ELECTRIC VALVE, 2" WITH DC LATCHING SOLENOID
- AUTOMATIC CONTROLLER
- METER PIT
- TAP LOCATION, 2"
- PRESSURE VACUUM BREAKER, 2"

PVC MAINLINE, CLASS 160, BE, 18" BURY, SIZE 3"
POLY LATERAL, 100 PSI, NSF, 12" BURY, SEE PIPE CHART
PVC SLEEVING, CLASS 160, BE
EXISTING WATERMAIN
PROPOSED 2" WATER SERVICE

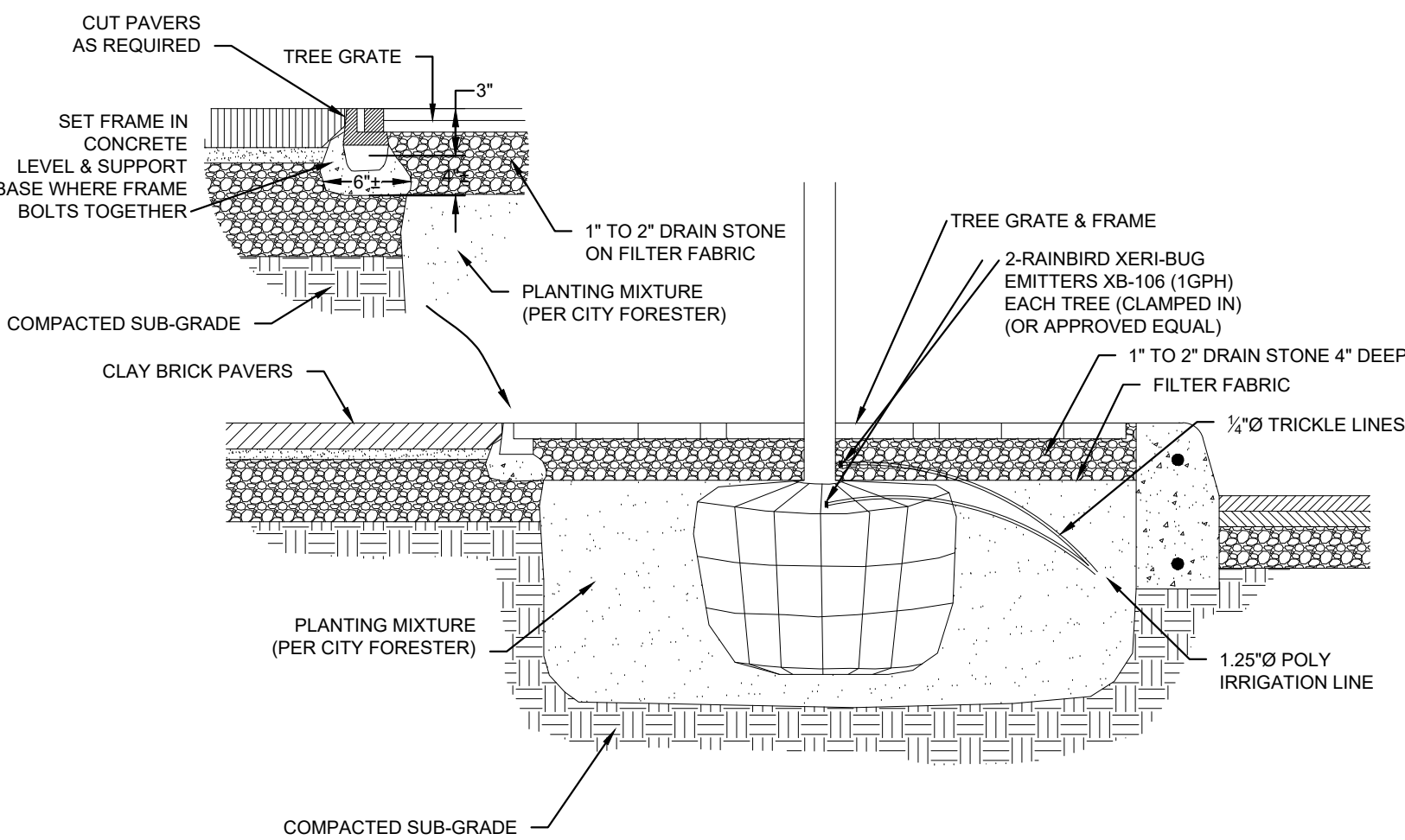
LATERAL PIPE SIZE CHART

0-12 GPM 1"

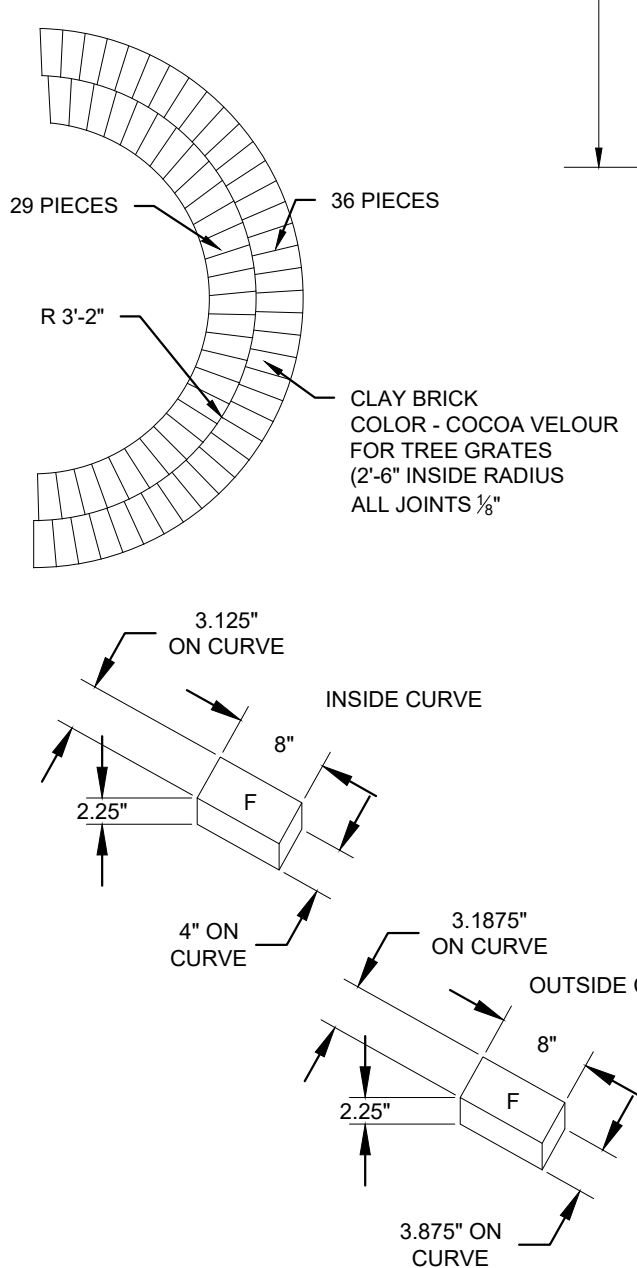
13-30 GPM 1.5"



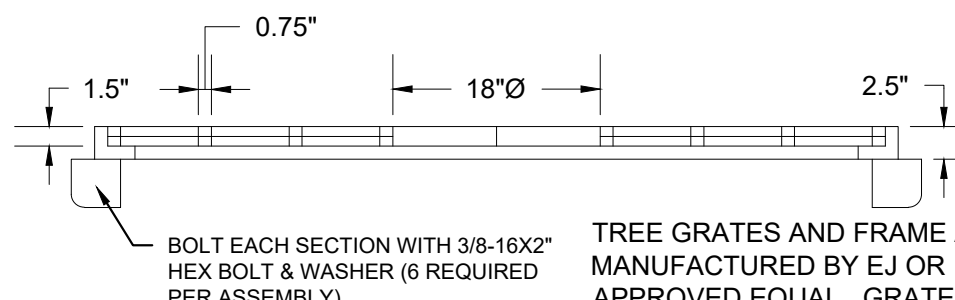
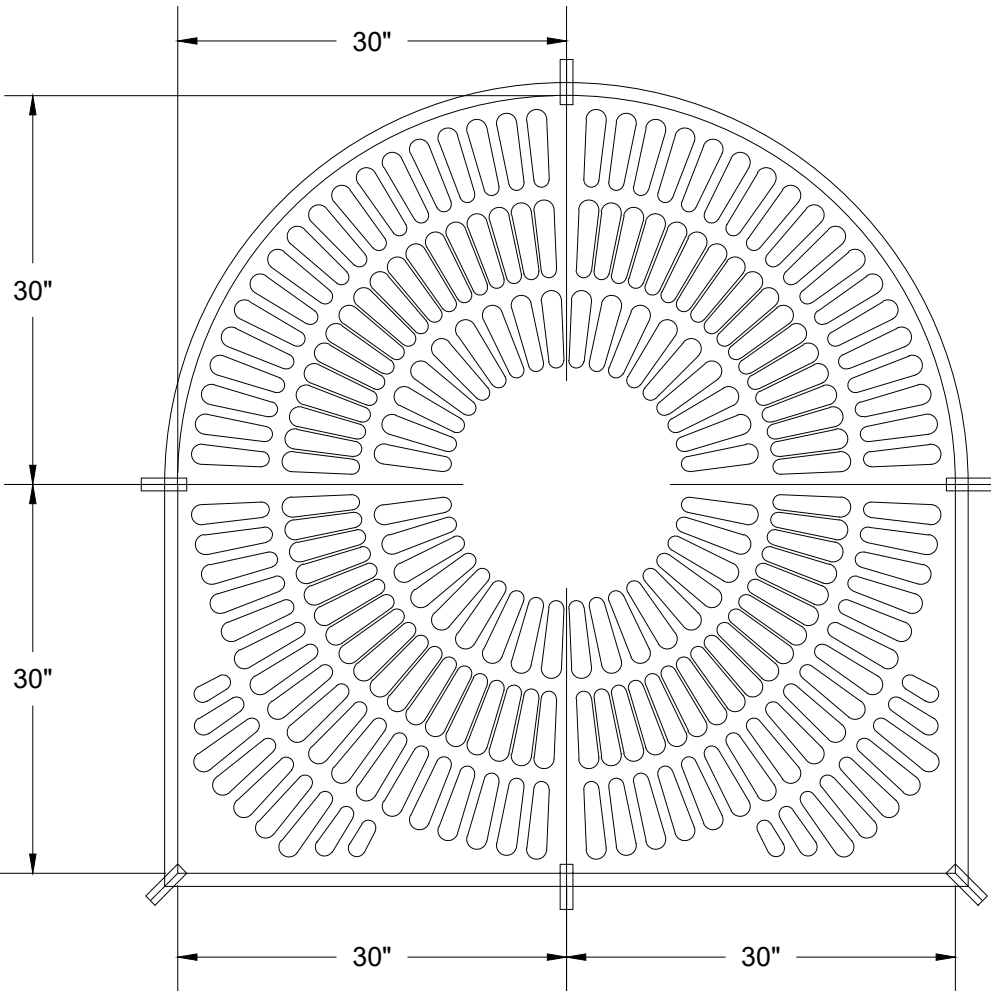
TREE & SHRUB PLANTING INSTALLATION
N.T.S.



STREET TREE DETAIL
N.T.S.



TREE GRATE BRICK DETAIL



TREE GRATE DETAIL
N.T.S.

MATERIAL ASTM A48 CL 35
UNIT WT. 435 LBS

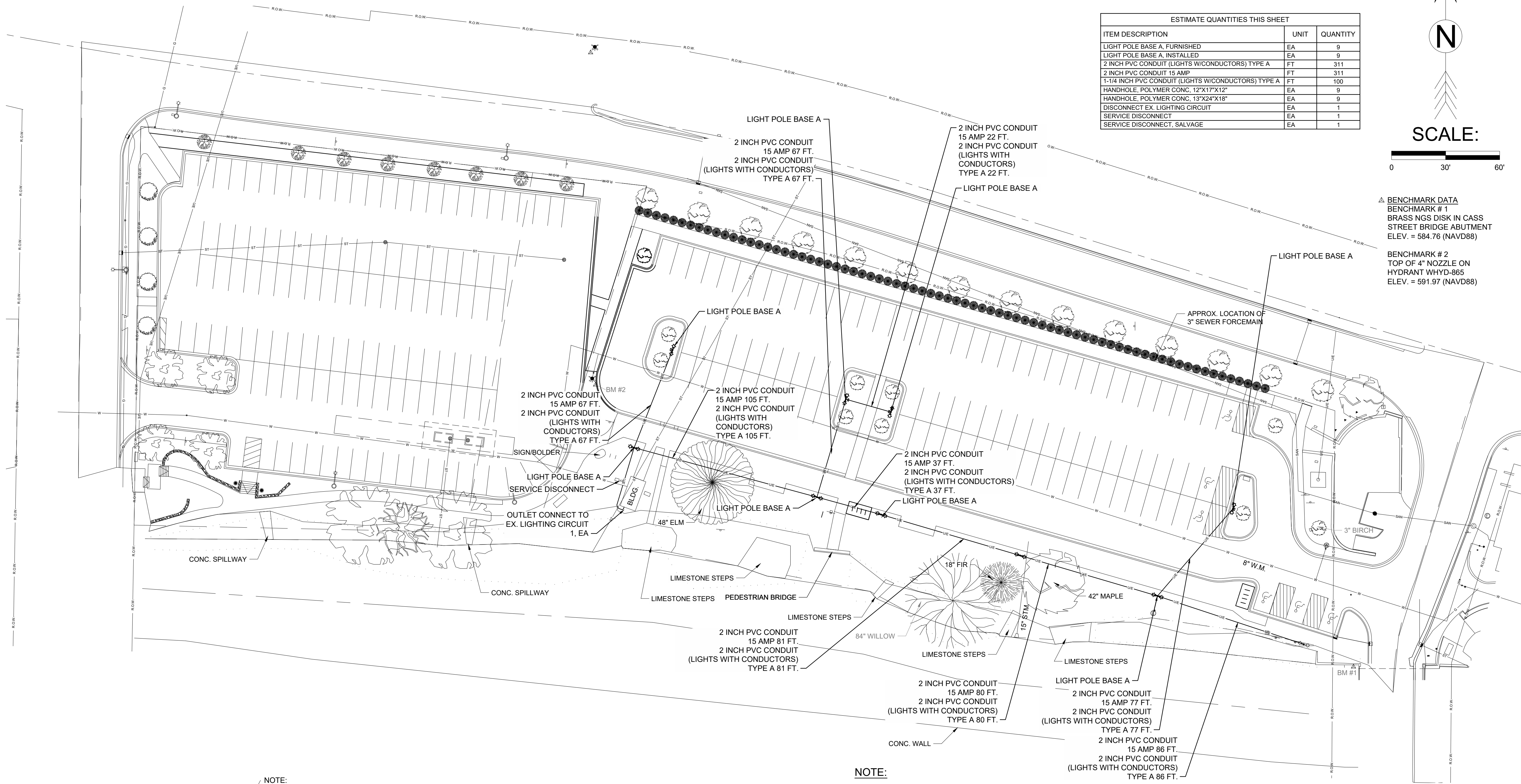


The City of Traverse City
Engineering Department
400 Boardman Avenue
Traverse City, Michigan 49604

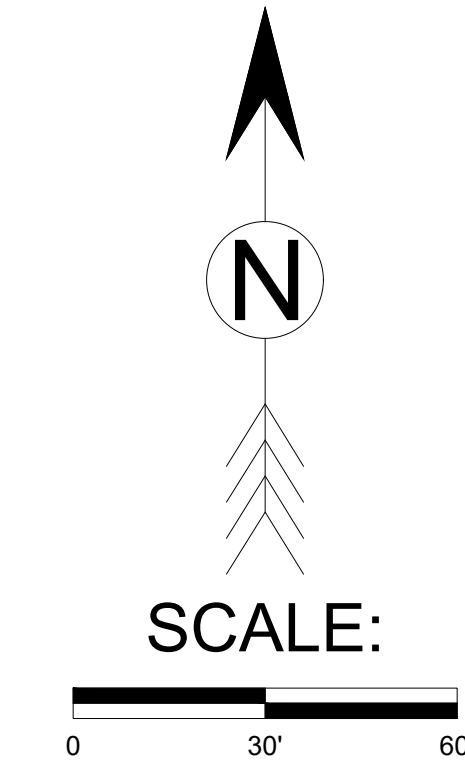
CITY OF TRAVERSE CITY 2023 PAVEMENT PRESERVATION PROJECT LOT B - LANDSCAPE / IRRIGATION PLAN - PHASE 1

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

Date:	12/19/2022
Project No.:	
Drawn by:	TIG
Scale:	1"=30'
Sheet No.:	12 OF 16



ESTIMATE QUANTITIES THIS SHEET		
ITEM DESCRIPTION	UNIT	QUANTITY
LIGHT POLE BASE A, FURNISHED	EA	9
LIGHT POLE BASE A, INSTALLED	EA	9
2 INCH PVC CONDUIT (LIGHTS W/CONDUCTORS) TYPE A	FT	311
2 INCH PVC CONDUIT 15 AMP	FT	311
1-1/4 INCH PVC CONDUIT (LIGHTS W/CONDUCTORS) TYPE A	FT	100
HANDHOLE, POLYMER CONC. 12"x17"x12"	EA	9
HANDHOLE, POLYMER CONC. 13"x24"x18"	EA	9
DISCONNECT EX. LIGHTING CIRCUIT	EA	1
SERVICE DISCONNECT	EA	1
SERVICE DISCONNECT, SALVAGE	EA	1



△ BENCHMARK DATA
BENCHMARK #1
BRASS VGS DISK IN CASS
STREET BRIDGE ABUTMENT
ELEV. = 584.76 (NAVD88)

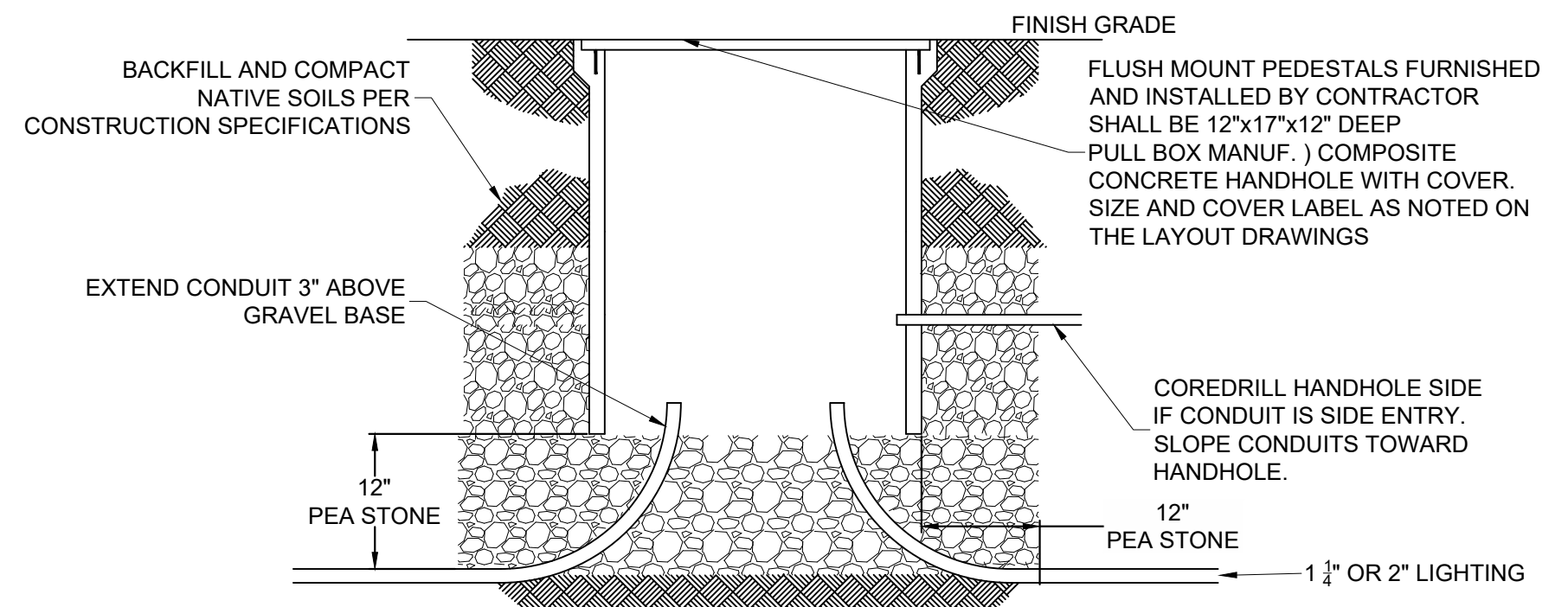
BENCHMARK #2
TOP OF 4" NOZZLE ON
HYDRANT WHYD-865
ELEV. = 591.97 (NAVD88)

- LEGEND**
- ✕ FOUND PROPERTY CORNER
 - △ BENCHMARK
 - G SIGN
 - GAS BOX
 - UTILITY POLE
 - GUY WIRE
 - WATER VALVE
 - PED LIGHT POLE
 - ELECTRIC RISER
 - TELEPHONE RISER/BOX
 - FIRE HYDRANT
 - CATCHBASIN
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 - STORM MANHOLE
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 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - TREE LINE
 - SHRUB LINE
 - OE OVERHEAD ELECTRIC
 - UE UNDERGROUND ELECTRIC
 - T OVERHEAD TELEPHONE
 - UT UNDERGROUND TELEPHONE
 - OC OVERHEAD CABLE TV
 - UC UNDERGROUND CABLE TV
 - SAN SANITARY SEWER
 - S STORM SEWER
 - W WATERMAIN
 - G GUARDRAIL
 - F FENCE
 - TOP/BOTTOM OF SLOPE
 - RIGHT-OF-WAY
 - LIGHT POLE BASE A

- LIGHTING LEGEND**
- PROPOSED LIGHT TYPE A
 - PROPOSED LIGHT TYPE B (WALL MOUNTED)

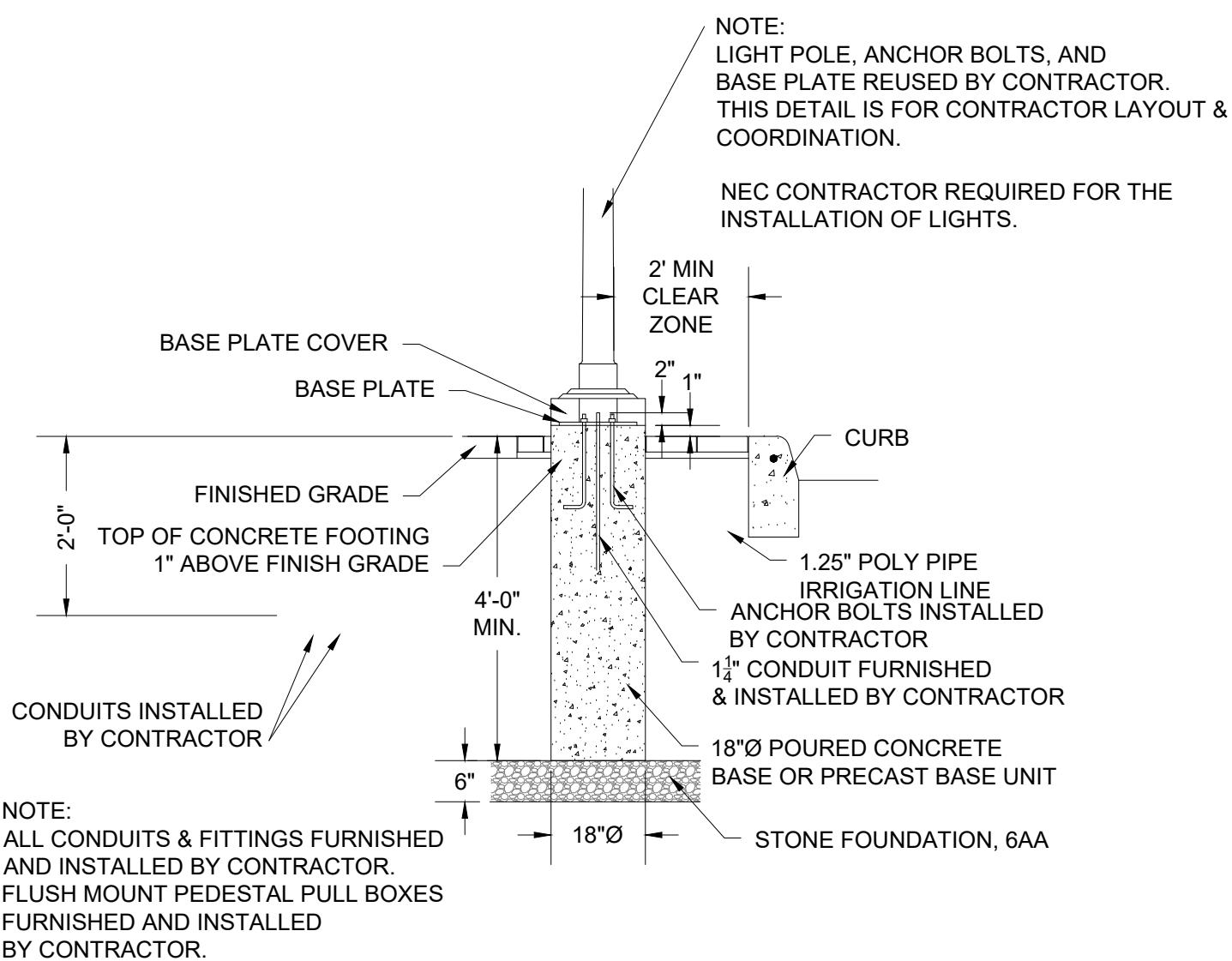
NOTE:

- CONTRACTOR TO ACQUIRE AND SECURE ALL NECESSARY LOCAL PERMITS PRIOR TO BEGINNING ELECTRICAL WORK. INCLUDED IN PAY ITEM "SERVICE DISCONNECT AND SALVAGE".
- CONTRACTOR TO COORDINATE WITH TRAVERSE CITY LIGHT AND POWER FOR DISCONNECTION OF LIGHT CIRCUIT INCLUDED IN PAY ITEM "SERVICE DISCONNECT".
- RECONNECTION OF LIGHTING CIRCUIT INCLUDED IN PAY ITEM "SERVICE DISCONNECT, SALVAGE".
- 120V OUTLET CIRCUIT SERVED BY NEC COMPLIANT CONDUCTOR, 6 AWG OR MOST EFFICIENT. WIRE SHALL BE SIZED ACCORDINGLY TO SERVE FUTURE DUPLEX 15 AMP OUTLETS.
- CONTRACTOR TO PULL 120V WIRE AND SWEEP TO OUTLET HANDHOLE AND TERMINATE IN BOX. WIRE TO SERVICE FUTURE 15 AMP DUPLEX OUTLETS.
- CONTRACTOR TO ENSURE NEW "LIGHT POLE BASE A, FURNISHED" AND INSTALLED HAVE THE PROPER BOLT PATTERN, TO MATCH THE EXISTING LIGHTS.
- WIRE SIZING FOR THE 2 INCH CONDUIT SHALL BE ALUMINUM 1/0 TRIPLEX BETWEEN HANDHOLE AND THE CONNECT TO EXISTING. WIRE SIZING FOR THE 1 1/2 INCH CONDUIT SHALL BE ALUMINUM 6 DUPLEX FROM THE HANDHOLE TO THE LIGHT.

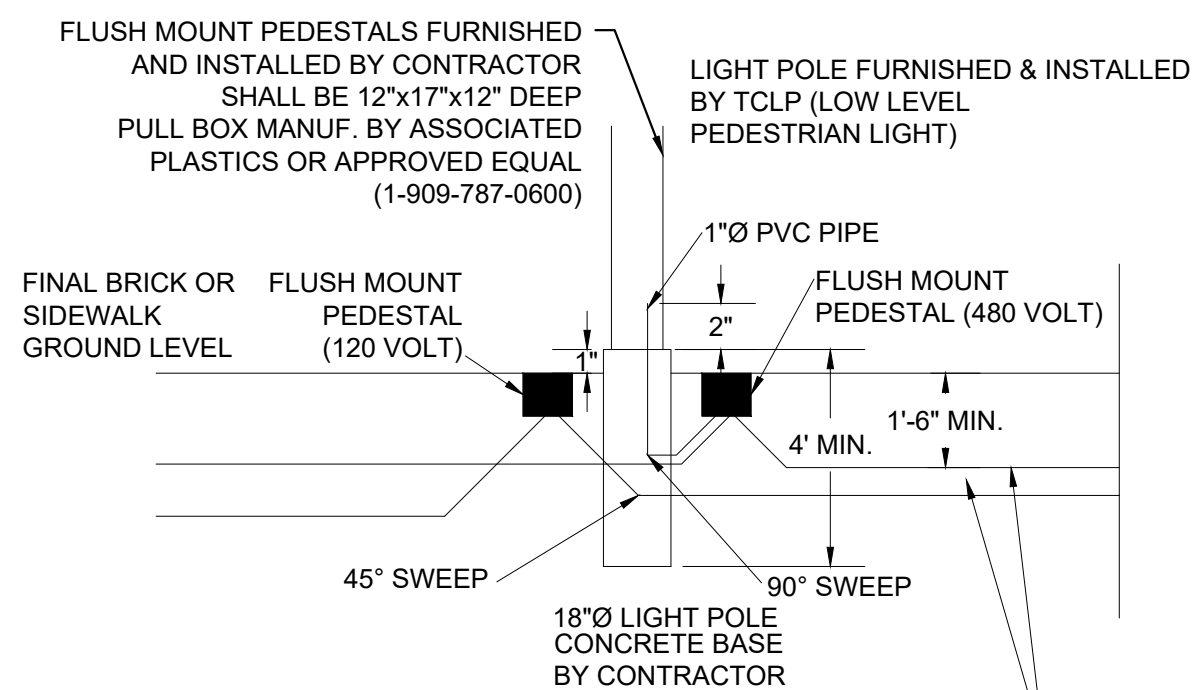


- NOTE:**
- ELBOWS SHALL BE STANDARD RADIUS 90° PVC OR AS NOTED.
 - IF BOX DEPTH IS GREATER THAN 36", CONDUITS MAY PENETRATE SIDEWALL OF HANDHOLE WITHOUT ELBOWS.
 - SWEEP CONDUIT INTO HAND HOLE PER PLAN LAYOUT. KEEP OTHER REMAINING CONDUIT STRAIGHT. (UNDER HAND HOLE)

LIGHTING HANDHOLE DETAIL



FOUNDATION BASE TYPE A
N.T.S.



ELECTRICAL LIGHT BASE/ "PEDESTAL" LOCATIONS
N.T.S.

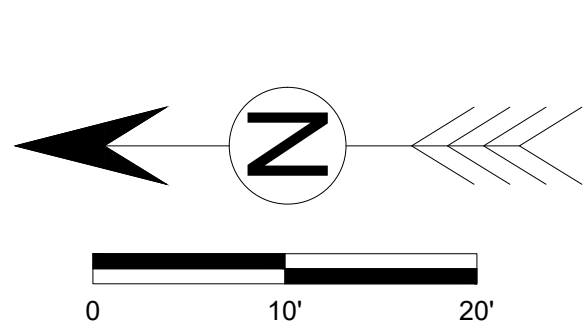
NOTES:
ALL PVC PIPE AT PEDESTALS AND BASES TO BE LABELED. ALL PEDESTALS ARE TO BE LABELED ON THE INSIDE (480 VOLT OR 120 VOLT DESIGNATION). PROVIDE A PULL STRING INSIDE ALL 2 INCH PVC PIPE. AS A GENERAL RULE, KEEP ALL 120 VOLT PEDESTALS ON THE WEST SIDE OF THE LIGHT POLE BASES AND KEEP ALL 480 VOLT PEDESTALS ON THE EAST SIDE.



The City of Traverse City
Engineering Department
GOVERNMENTAL CENTER
400 Boardman Avenue
Traverse City, Michigan 49604

CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
LOT B - ELECTRICAL PLAN

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23
Date: 12/19/2022	
Project No.:	
Drawn by: TIG	
Scale: 1"=30'	
Sheet No.: 13 OF 16	



- LEGEND**
- ✱ FOUND PROPERTY CORNER
 - △ BENCHMARK
 - SIGN
 - ⊙ GAS BOX
 - ⊙ UTILITY POLE
 - ⊙ GUY WIRE
 - ⊙ WATER VALVE
 - ⊙ PED LIGHT POLE
 - ⊙ ELECTRIC RISER
 - ⊙ TELEPHONE RISER/BOX
 - FIRE HYDRANT
 - ⊙ CATCHBASIN
 - ⊙ BEEHIVE GRATE CATCHBASIN
 - ⊙ STORM MANHOLE
 - SANITARY MANHOLE
 - ⊙ DECIDUOUS TREE
 - ⊙ CONIFEROUS TREE

- TREE LINE
- SHRUB LINE
- OE OVERHEAD ELECTRIC
- UE UNDERGROUND ELECTRIC
- T OVERHEAD TELEPHONE
- UT UNDERGROUND TELEPHONE
- OC OVERHEAD CABLE TV
- UC UNDERGROUND CABLE TV
- SAN SANITARY SEWER
- ST STORM SEWER
- W WATERMAIN
- GUARDRAIL
- FENCE
- TOP/BOTTOM OF SLOPE

HATCH LEGEND

- ⊘ HMA SURFACE, REM
- ▨ SIDEWALK, REM
- ▨ CURB & GUTTER, REM
- ▨ CURB & GUTTER, REM

NOTES:
CONTRACTOR TO PROTECT EXISTING CURB AND GUTTER TO REMAIN.

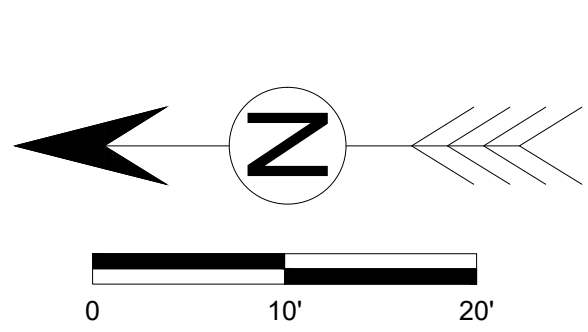
QUANTITY DESCRIPTION THIS SHEET		
ITEM DESCRIPTION	UNIT	QUANTITY
MOBILIZATION / TRAFFIC CONTROL (LOT G)	LSUM	1
SIDEWALK, REM	SYD	160
CURB & GUTTER, REM	FT	130
TREE, REM, 6 INCH TO 18 INCH	EA	1
SIGN SALVAGE/REUSE	EA	2
EROSION CONTROL, INLET PROTECTION, FABRIC DROP	EA	1
PAVT, REM, SPECIAL	SYD	14

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CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
LOT G - REMOVAL SHEET

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

Date: 12/19/2022
Project No.:
Drawn by: TIG
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- LEGEND**
- FOUND PROPERTY CORNER
 - BENCHMARK
 - SIGN
 - GAS BOX
 - UTILITY POLE
 - GUY WIRE
 - WATER VALVE
 - PED LIGHT POLE
 - ELECTRIC RISER
 - TELEPHONE RISER/BOX
 - FIRE HYDRANT
 - CATCHBASIN
 - BEEHIVE GRATE CATCHBASIN
 - STORM MANHOLE
 - SANITARY MANHOLE
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - TREE LINE
 - SHRUB LINE
 - OVERHEAD ELECTRIC
 - UNDERGROUND ELECTRIC
 - OVERHEAD TELEPHONE
 - UNDERGROUND TELEPHONE
 - OVERHEAD CABLE TV
 - UNDERGROUND CABLE TV
 - SANITARY SEWER
 - STORM SEWER
 - WATERMAIN
 - GUARDRAIL
 - FENCE
 - TOP/BOTTOM OF SLOPE

- HATCH LEGEND**
- PROPOSED SIDEWALK, CONC, 6 INCH
 - PROPOSED SIDEWALK, CONC, 4 INCH
 - E4 CURB
 - PROPOSED HMA
 - PROPOSED HMA HAND PATCH
 - PROPOSED PAVERS NON VEHICULAR

ESTIMATES QUANTITIES THIS SHEET		
ITEM DESCRIPTION	UNIT	QUANTITY
CURB AND GUTTER, CONC, DET E4	FT	93
AGGREGATE BASE, 8 INCH	SYD	61
HMA HAND PATCH (300 #/SYD)	TON	8
PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS, 4 INCH, (WHITE)	FT	970
PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS, 4 INCH, (BLUE)	FT	470
PAVT MRKG, WATERBORNE, ACCESSIBLE SYM	EA	3
SIDEWALK, CONC, 6 INCH	SFT	804
SIDEWALK, CONC, 4 INCH	SFT	41
SIDEWALK, CLAY BRICK PAVERS, MODIFIED	SFT	340
MACHINE GRADING, SPECIAL	SYD	190
2 INCH PVC CONDUIT	FT	90
IRRIGATION SYSTEM (LOT G)	LSUM	1
PARKING METER POST	EA	2

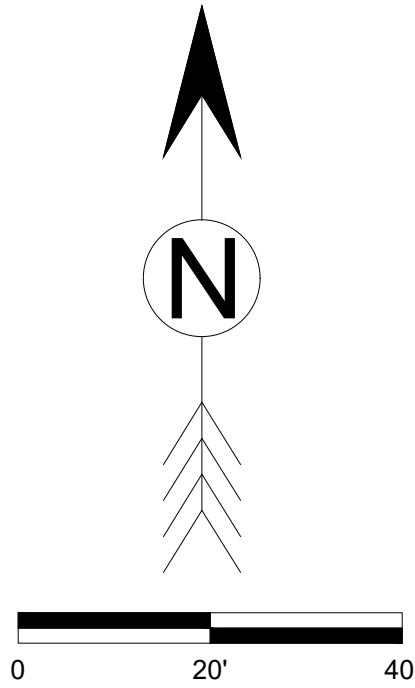
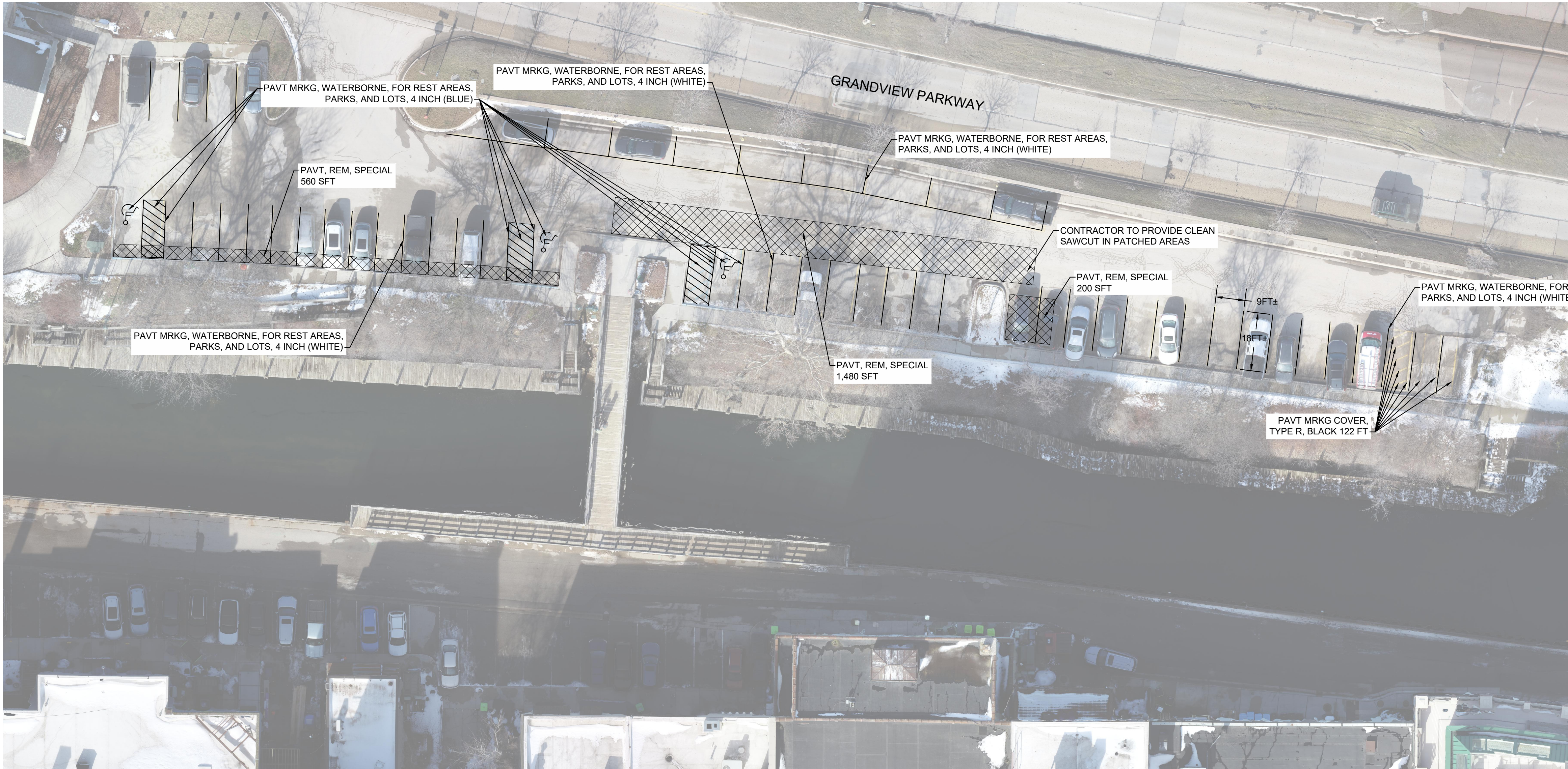
NOTE:
SIDEWALK, CLAY BRICK PAVERS, MODIFIED,
DETAILS SEE SHEET 12 OF 16.

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CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
LOT G - SITE PLAN SHEET

Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23

Date: 12/19/2022
Project No.:
Drawn by: TIG
Scale: 1"=30'
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- LEGEND**
- ✱ FOUND PROPERTY CORNER
 - △ BENCHMARK
 - SIGN
 - ⊗ GAS BOX
 - ⊕ UTILITY POLE
 - GUY WIRE
 - ⊗ WATER VALVE
 - ⊗ PED LIGHT POLE
 - ⊗ ELECTRIC RISER
 - ⊗ TELEPHONE RISER/BOX
 - FIRE HYDRANT
 - CATCHBASIN
 - ⊗ BEEHIVE GRATE CATCHBASIN
 - ⊗ STORM MANHOLE
 - SANITARY MANHOLE
 - ⊕ DECIDUOUS TREE
 - ⊕ CONIFEROUS TREE
 - TREE LINE
 - SHRUB LINE
 - OE — OVERHEAD ELECTRIC
 - UE — UNDERGROUND ELECTRIC
 - T — OVERHEAD TELEPHONE
 - UT — UNDERGROUND TELEPHONE
 - OC — OVERHEAD CABLE TV
 - UC — UNDERGROUND CABLE TV
 - SAN — SANITARY SEWER
 - ST — STORM SEWER
 - W — WATERMAIN
 - GUARDRAIL
 - FENCE
 - TOP/BOTTOM OF SLOPE

- HATCH LEGEND**
- ⊗ HMA SURFACE, REM

- NOTES:**
- CONTRACTOR TO PROTECT EXISTING CURB AND GUTTER TO REMAIN.
 - PROPOSED PAINT LAYOUT TO MATCH EXISTING LAYOUT.

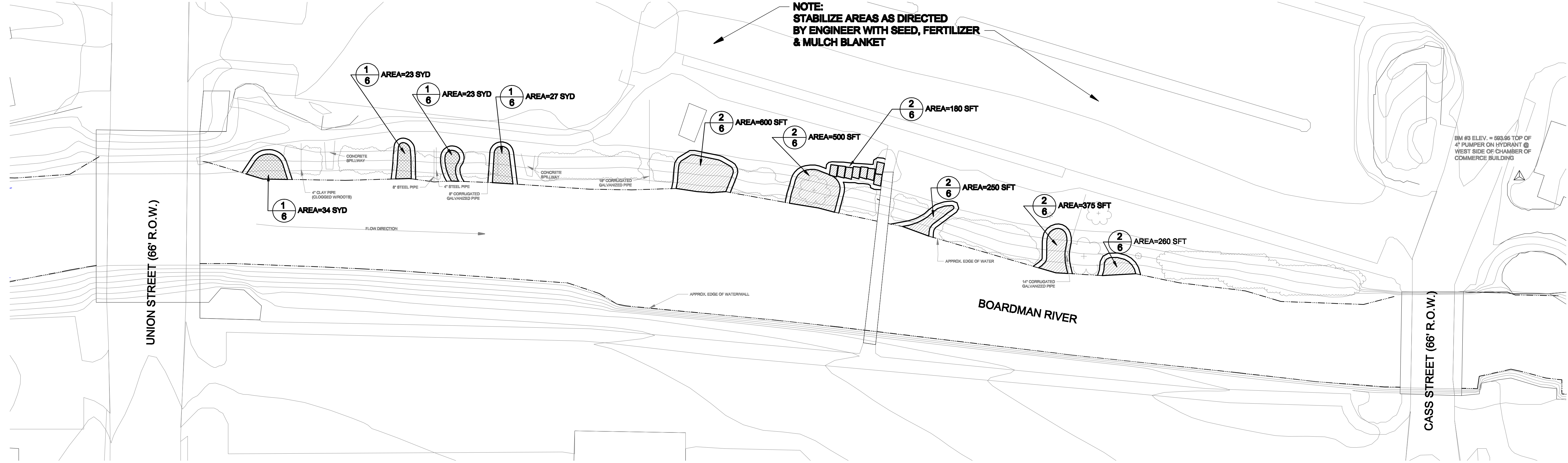
QUANTITY DESCRIPTION THIS SHEET		
ITEM DESCRIPTION	UNIT	QUANTITY
MOBILIZATION / TRAFFIC CONTROL (LOT C)	LSUM	1
HMA SURFACE, REM	SYD	250
HMA HAND PATCH (300#/SYD)	TON	46
PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS, 4 INCH (WHITE)	FT	970
PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS, 4 INCH (BLUE)	FT	355
PAVT MRKG, WATERBORNE, ACCESSIBLE SYM	EA	3
PAVT MRKG COVER, TYPE R, BLACK	FT	122

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CITY OF TRAVERSE CITY
2023 PAVEMENT PRESERVATION PROJECT
LOT C - PAVEMENT REPAIR AND RESTRIPIING

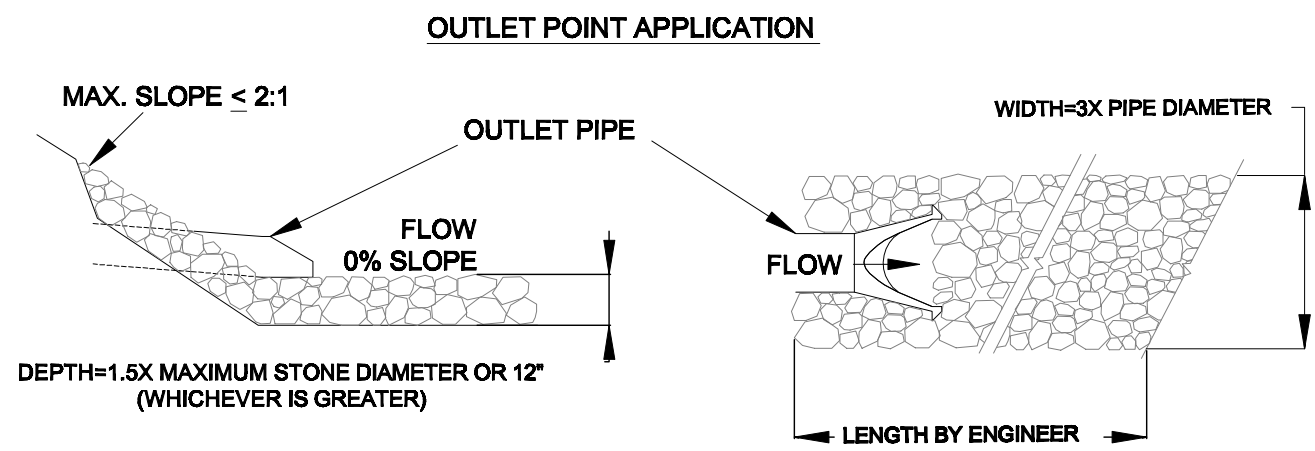
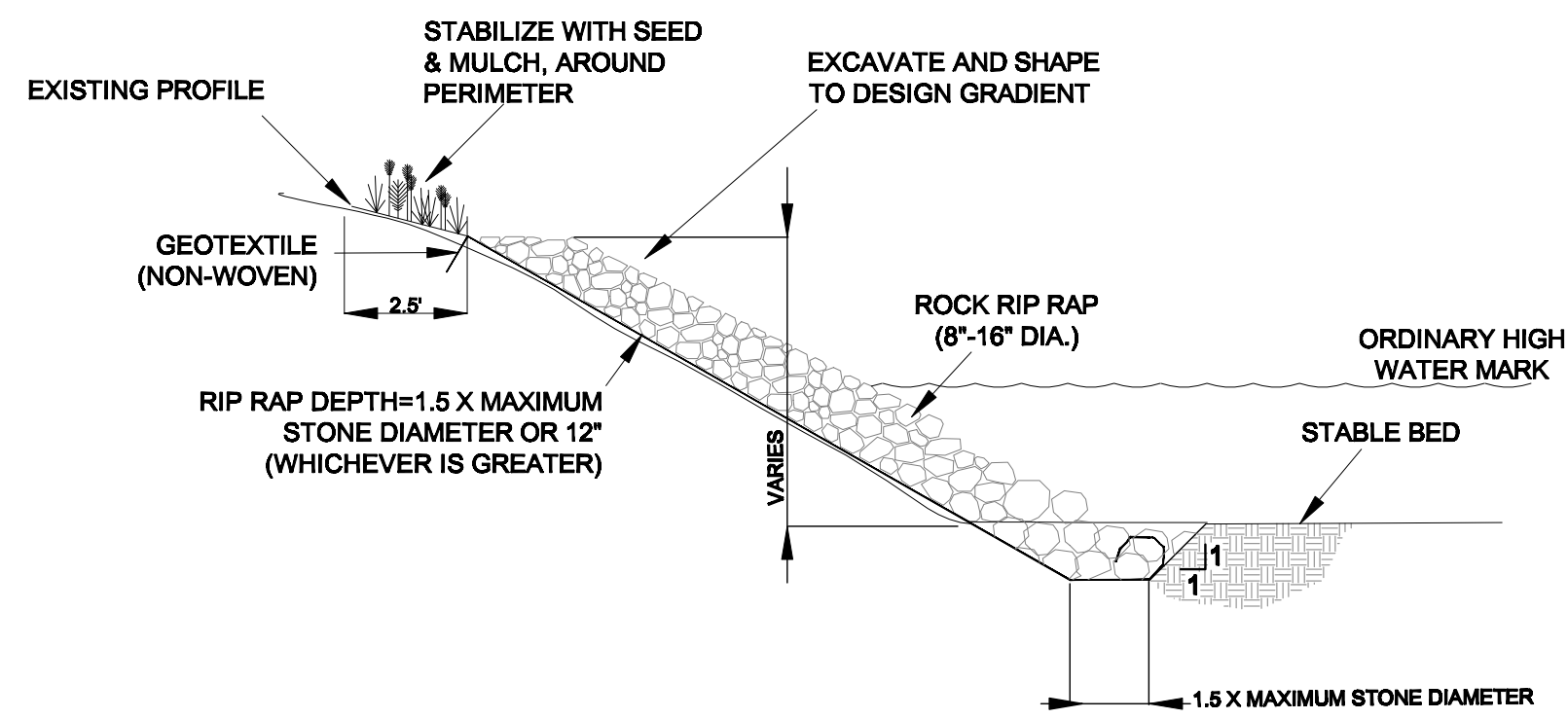
Revision/Issue	Date
BID SET	2/21/23
SESC PERMIT	2/21/23
MDOT PERMIT	2/24/23
Date:	12/19/2022
Project No.:	
Drawn by:	TIG
Scale:	1"=30'
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FARMERS MARKET

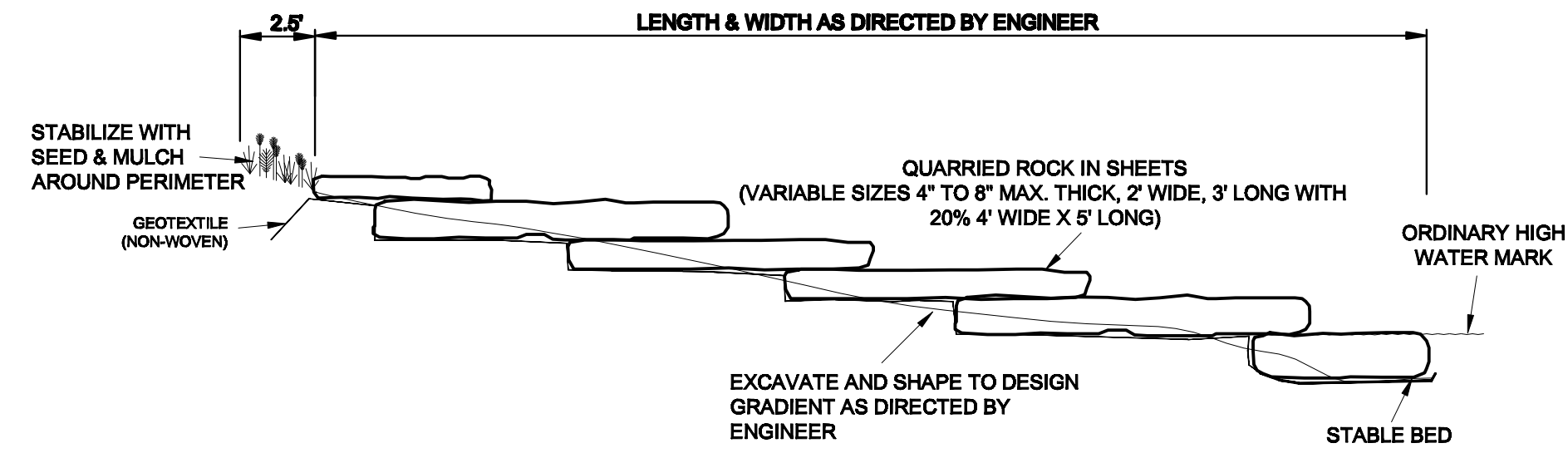


SCALE: 1"=30'

- LEGEND**
- BENCHMARK
 - SIGN
 - UTILITY POLE
 - GUY WIRE
 - WATER VALVE
 - LIGHT POLE
 - ELECTRIC RISER
 - CATCH BASIN
 - STORM MANHOLE
 - SANITARY MANHOLE
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - TREE LINE
 - RIP/RAP STABILIZATION AREA (SEE DETAIL 1/6)
 - QUARRIED ROCK
 - ACCESS STEP/STABILIZATION AREA (SEE DETAIL 2/6)



1/6 RIP RAP DETAIL
N.T.S. STREAM BANK APPLICATION



2/6 ROCK ACCESS STEP / STABILIZATION DETAIL
N.T.S.



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CITY OF TRAVERSE CITY
STORM WATER QUALITY IMPROVEMENT PROJECT
FARMERS MARKET

Revision/Issue	Date
REVIEW SET	6/23
PERMIT SET	6/26
BID SET	7/05
REVISED	10/27
REVISED	3/09
Date:	6-01-06
Project No.:	06-01
Drawn by:	JDM
Scale:	AS-NOTED
Sheet No.:	6 OF 11