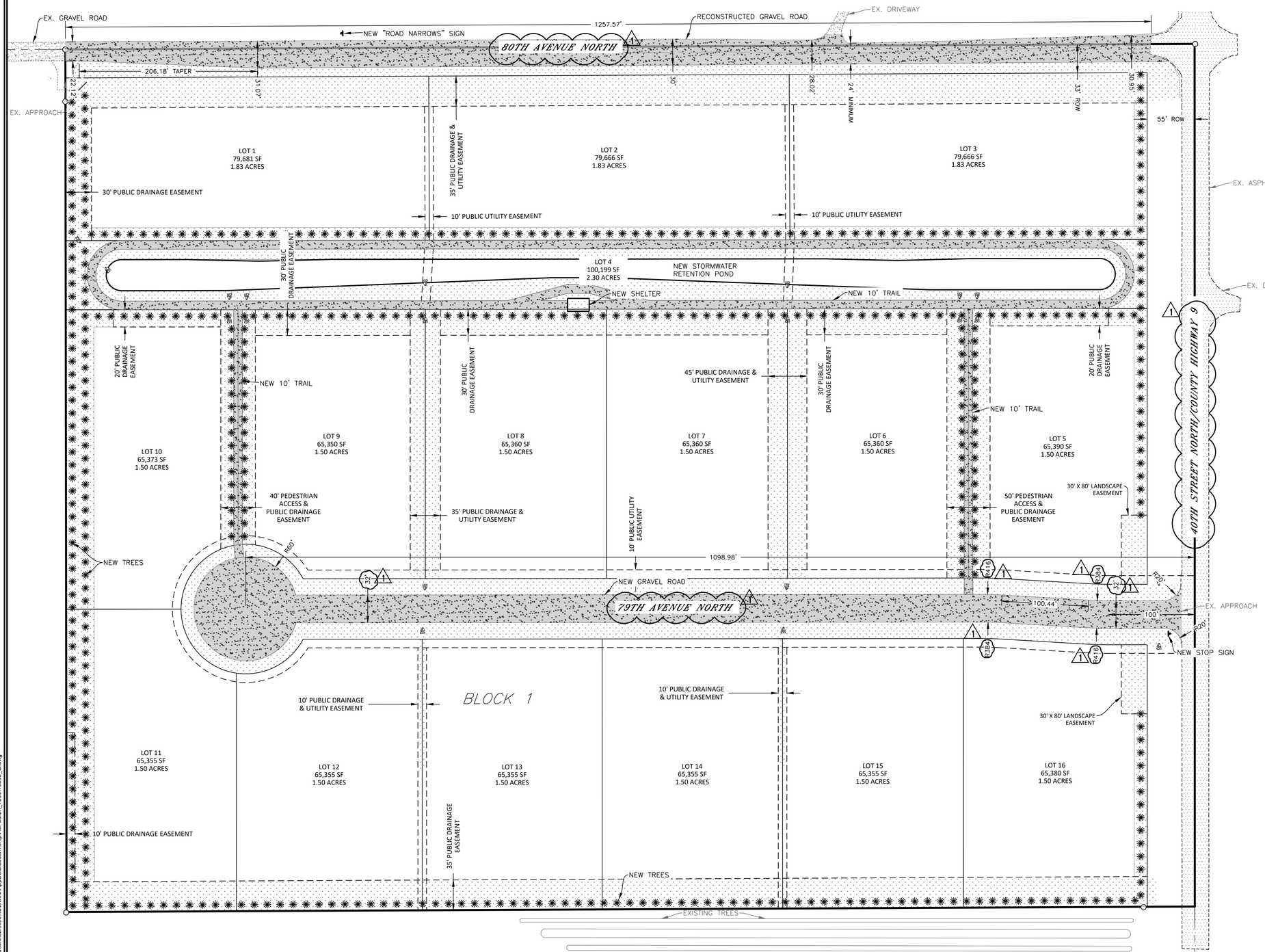
LINDEN TRAILS SUBDIVISION

NORTHEAST QUARTER OF THE NORTHEAST QUARTER SECTION 10 TOWNSHIP 140 N RANGE 48 W
CLAY COUNTY, MINNESOTA



1 05-13-19
- REVISED 79TH AVE TO 32' WIDE
- ADDED MISSING ROAD LABELS

BENCHMARK: IRON PIND FOUND IN SOUTHWEST CORNER OF PROPERTY. ELEVATION = 897.84'. NAVD 88 DATUM

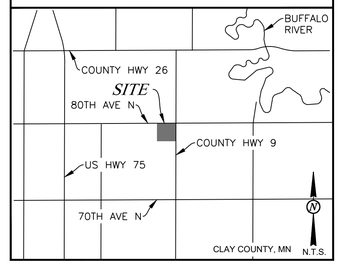
BASIS OF BEARING: CLAY COUNTY COORDINATES

CALL BEFORE YOU DIG MINNESOTA
UTILITIES UNDERGROUND LOCATION SERVICE
1-800-252-1166

OWNER
CV PROPERTIES
CHRIS VANDERLINDEN
2660 16TH AVENUE SOUTH
MOORHEAD, MN 56560
PH: 701-388-3648

CIVIL ENGINEER
LOWRY ENGINEERING
DANIELLE KUKOWSKI, P.E.
1111 WESTRAC DR., SUITE 108
FARGO, ND 58103
PH: 701-235-0199

VICINITY MAP

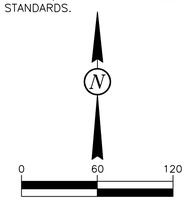


SHEET INDEX

ESTIMATED SITE QUANTITIES

ITEM	QUANTITY	UNIT
NEW TREE	493	EA
NEW SIGN	2	EA

NOTES:
1. CHANGES TO APPROVED PLANS SHALL NOT BE MADE WITHOUT OWNER'S WRITTEN APPROVAL
2. CHANGES TO APPROVED PLANS ON PUBLIC PROPERTY SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL FROM THE COUNTY.
3. LANDSCAPING IN LANDSCAPE EASEMENT AT ENTRANCE TO SUBDIVISION SHALL BE BY OWNER.
4. NEW SHELTER ON LOT 4 SHALL BE BY OWNER.
5. CONTRACTOR SHALL COORDINATE WITH OWNER ON TREE SPECIES.
6. STOP SIGN SHALL BE R1-1 30"x30". SIGN SHEETING, STRINGERS, ANCHORS, SUPPORT, AND HARDWARE SHALL MEET MNDOT STANDARD SPECIFICATIONS. BID PRICE FOR NEW STOP SIGN SHALL INCLUDE SIGN PANEL, POST, ANCHOR, BASE, HARDWARE, AND ANY OTHER ITEMS REQUIRED TO INSTALL.
6. ROAD NARROWS SIGN SHALL BE W5-1 30"x30". SIGN SHEETING, STRINGERS, ANCHORS, SUPPORT, AND HARDWARE SHALL MEET MNDOT STANDARD SPECIFICATIONS. BID PRICE FOR NEW STOP SIGN SHALL INCLUDE SIGN PANEL, POST, ANCHOR, BASE, HARDWARE, AND ANY OTHER ITEMS REQUIRED TO INSTALL.
7. SIGN LOCATION, ORIENTATION, AND HEIGHT SHALL BE PER MNDOT AND MUTCD STANDARDS.



LOWRY
ENGINEERING
1111 WESTRAC DRIVE - SUITE 108
FARGO, NORTH DAKOTA 58103

REVISIONS
1 05-13-19 - COUNTY COMMENTS

LINDEN TRAILS SUBDIVISION
S10-T140N-R48W
CLAY COUNTY, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

DANIELLE KUKOWSKI
DATE: 05/13/2019
LICENSE #: 56061

LE JOB #	18093
PROJECT DATE:	04/30/2019
CHECKED BY:	JML
DRAWN BY:	DJK
APPROVED BY:	DJK
SHEET:	1 OF 8

OVERALL SITE PLAN

C-1

GENERAL NOTES:
1. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS, OR IN THE FIELD PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER & ENGINEER.
2. A COMPLETE SET OF APPROVED DRAWINGS MUST BE MAINTAINED ON SITE AT ALL TIMES BY THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS.
3. CHANGES TO APPROVED PLANS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE OWNER AND ENGINEER.
4. CHANGES TO APPROVED PLANS ON PUBLIC PROPERTY SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL FROM THE RESPECTIVE PUBLIC ENTITY.
5. ALL SITE AND RIGHT-OF-WAY CONSTRUCTION SHALL MEET CLAY COUNTY STANDARD SPECIFICATIONS LATEST REVISION. IN THE CASE OF A DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS, THE PLANS SHALL GOVERN.
6. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING & VERIFYING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION & IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION. CONTRACTOR SHALL CONTACT THE LOCAL ONE-CALL SYSTEM AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.
7. ANY WORK ON EXISTING PRIVATELY OWNED UTILITIES SHALL REQUIRE NOTIFICATION TO THE RESPECTIVE ENTITY BY THE CONTRACTOR 24 HOURS PRIOR TO COMMENCING WORK.
8. THE CONTRACTOR SHALL COMPLY WITH ALL RULES & REGULATIONS OF FEDERAL, STATE, COUNTY, & LOCAL AUTHORITIES.
9. THE CONTRACTOR IS REQUIRED TO MEET ALL APPLICABLE FEDERAL, OSHA, STATE, AND LOCAL REGULATIONS CONCERNING PROJECT SAFETY AND ASSUMES FULL RESPONSIBILITY FOR SAFETY ON THE PROJECT.
10. CONTRACTOR SHALL VERIFY THAT ALL NECESSARY PERMITS FOR CONSTRUCTION HAVE BEEN OBTAINED, ALL BONDS ARE POSTED, ALL FEES ARE PAID AND PROOF OF INSURANCE IS PROVIDED PRIOR TO THE START OF THE PROJECT.
11. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL HORIZONTAL AND VERTICAL CONTROLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEY AND RELATED COSTS.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN MEASUREMENTS AND QUANTITIES. ENGINEER QUANTITIES ARE ESTIMATES ONLY.
13. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF UNDERGROUND UTILITIES BY THE APPROPRIATE UTILITY ENTITY. PROPER COORDINATION WITH THE RESPECTIVE UTILITY ENTITIES SHALL BE PERFORMED BY THE CONTRACTOR TO INSURE THAT ALL UTILITY ENTITY STANDARDS FOR MATERIAL AND METHODS ARE MET. THE GENERAL CONTRACTOR SHALL OVERSEE INSTALLATION OF UTILITIES AND COORDINATE WITH ALL SUBCONTRACTORS TO AVOID CONFLICTS.
14. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES.
15. THE CONTRACTOR SHALL PROVIDE TESTING, INSPECTIONS, AS-BUILT DRAWINGS, CERTIFICATIONS AND ANY OTHER PROCEDURES OR DOCUMENTATION REQUIRED BY THE GOVERNING AGENCIES TO CLOSE OUT THE PROJECT.
16. THE CONTRACTOR SHALL RESTORE ANY STRUCTURES, PIPE, UTILITY, PAVEMENT, CURBS SIDEWALKS, LANDSCAPED ARES, ETC. WITHIN THE SITE OR ADJOINING PROPERTIES DISTURBED DURING DEMOLITION OR CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AND TO THE SATISFACTION OF THE OWNER/JURISDICTIONAL AUTHORITY.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL STRIPPING, RUBBISH, TRASH, DEBRIS, ORGANIC, AND EXCESS EXCAVATED MATERIAL IN A LAWFUL MANNER.
18. CONTRACTOR SHALL REFERENCE THE PROJECT GEOTECHNICAL REPORT AVAILABLE IN THE PROJECT MANUAL AND COMPLY WITH ALL REPORT REQUIREMENTS. IF A CONFLICT ARISES BETWEEN THE GEOTECHNICAL REPORT AND CIVIL DOCUMENTS, THE GEOTECHNICAL REPORT SHALL GOVERN.
19. FOR THE PURPOSES OF CONSTRUCTION SURVEY, ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH STRUCTURAL AND ARCHITECTURAL PLANS.

GRADING NOTES:
1. LOCATION AND TOP ELEVATIONS OF STRUCTURES MAY NEED TO BE ADJUSTED IN THE FIELD BY THE CONTRACTOR WHERE NECESSARY AND SHALL BE APPROVED BY THE ENGINEER. CONTRACTOR SHALL NOTE ANY CHANGES IN AS-BUILT DRAWINGS.
2. IF UNSUITABLE SUBGRADE MATERIALS ARE ENCOUNTERED, THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT (FROM OFF-SITE BORROW MATERIAL) OF ALL UNSUITABLE MATERIAL TO CLASSIFIED AS MH, CH, OH, OL AND PEAT IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM, UNLESS APPROVED IN WRITING BY THE PROJECT GEOTECHNICAL ENGINEER. THE SITE ENGINEER AND GEOTECHNICAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON ENCOUNTERING UNSUITABLE SUBGRADE MATERIAL.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATIONS AND GRADING INCLUDING FURNISHING OFF-SITE BORROW AND DISPOSING OF EXCESS MATERIAL AS REQUIRED TO MEET PLAN GRADES. OFF SITE BORROW SHALL MEET ALL REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT (IF AVAILABLE) OR PER CLAY COUNTY STANDARD SPECIFICATIONS.
4. COMPACTION LIFTS AND TESTING SHALL BE PER CLAY COUNTY REQUIREMENTS IN TRENCHING, SUB-BASE, BASE, AND PAVING MATERIALS. SUB-BASE LIFTS SHALL NOT EXCEED 12", BASE LIFTS SHALL NOT EXCEED 6".
5. CONTRACTOR SHALL UNIFORMLY GRADE TO MATCH EXISTING GRADES AT PROPERTY LINES.
6. GRADE TO ENSURE POSITIVE DRAINAGE. ALL FINISHED SURFACES SHALL BE FREE FROM SURFACE IRREGULARITIES.

PAVING NOTES:
1. ALL PAVEMENT SECTION MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF CLAY COUNTY.
2. AGGREGATE BASE COURSE SHALL MEET THE REQUIREMENTS OF MNDOT.

STORM SEWER & DRAINAGE NOTES:
1. CMP PIPE SHALL BE SPIRAL RIB 16 GA POLYMERIC COATED OR 12 GA ALUMINIZED.
2. HDPE PIPE SHALL BE ADS N12 OR PRINSCO GOLDFLO OR APPROVED EQUAL.
3. INVERTS SHOWN ON PLAN DRAWINGS ARE PIPE INVERTS UNLESS NOTED OTHERWISE.
4. ANY SUBSTITUTION FOR MATERIALS OR PROCEDURES MUST HAVE PRIOR WRITTEN APPROVAL OF THE COUNTY AND THE PROJECT ENGINEER.

EROSION & SEDIMENT CONTROL / SWPPP NOTES
1. IF THE LAND BOUNDARY DENOTED ON THE PLANS ENCOMPASSES MORE THAN 1 ACRE, A NOTICE OF INTENT TO OBTAIN A STORM WATER POLLUTION CONTROL PERMIT SHALL BE ACQUIRED BY THE CONTRACTOR AND OWNER FROM THE MINNESOTA POLLUTION CONTROL AGENCY 7 DAYS PRIOR TO CONSTRUCTION. THIS NOTICE OF INTENT SHALL BE PROVIDED WITH THE BUILDING PERMIT APPLICATION. CONTRACTOR IS RESPONSIBLE FOR NOI & SWPPP SUBMITTAL.
2. COPY OF NOI, COVERAGE LETTER FROM THE DOH AS WELL AS ALL MAINTENANCE AND INSPECTION RECORDS TO BE KEPT ON SITE AND AVAILABLE FOR REVIEW BY CITY, STATE OR FEDERAL OFFICIALS UPON REQUEST.
3. CONTRACTOR SHALL HAVE AN UPDATED SWPPP AVAILABLE ON SITE ANYTIME WORK IS BEING DONE. THIS DOCUMENT SHALL BE AVAILABLE FOR REVIEW BY CITY, STATE OR FEDERAL OFFICIALS UPON REQUEST. THE SWPPP SHALL BE IN ACCORDANCE WITH THE MINNESOTA GENERAL PERMIT NO. MNR100001 AND THE PLANS. THE ESC PLAN IS THE ENGINEER'S RECOMMENDATION FOR EROSION AND SEDIMENT CONTROL BASED ON THE DESIGN OF THE PROPOSED SITE. THIS DESIGN DOES NOT TAKE INTO EFFECT CONTRACTOR MEANS AND METHODS, CONSTRUCTION SCHEDULE, OR ORDER OF OPERATIONS. CONTRACTOR IS EXPECTED TO ADJUST DESIGN AS IS NECESSARY TO MEET THE REQUIREMENTS OF THE GENERAL PERMIT.
4. CONTRACTOR IS RESPONSIBLE FOR ALL EROSION AND SEDIMENT CONTROL ON THE SITE. THIS INCLUDES BUT IS NOT LIMITED TO STORM WATER EROSION, EROSION FROM PUMPING OPERATIONS, OFF SITE TRACKING, DUST CONTROL AND CONTROL OF ANY CONCRETE GRINDINGS OR SAW CUT DUST. CONTRACTOR IS ALSO RESPONSIBLE FOR ALL OTHER ITEMS AS REQUIRED IN THE GENERAL PERMIT.
5. INSPECTIONS SHALL BE DONE AND DOCUMENTED BY THE CONTRACTOR EVERY 14 DAYS AND AFTER AN RAIN EVENT ¼" OR GREATER. A RAIN GAUGE SHALL BE ONSITE AND USED TO MAKE THIS DETERMINATION.
6. SITE SHALL BE STABILIZED WITHIN 14 DAYS OF COMPLETION OF WORK OR WITHIN 14 DAYS OF SUSPENSION OF WORK PER THE GENERAL PERMIT.
7. ALL EROSION AND SEDIMENT RELATED CONTROL AND ITEMS NEED TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS OTHERWISE DICTATED IN THE PLANS.
8. CONTRACTOR IS RESPONSIBLE FOR ALL DE-WATERING AS NECESSARY TO MEET REQUIRED EXCAVATIONS AND GRADES. MUDDY WATER TO BE PUMPED FROM EXCAVATION AND WORK AREAS MUST BE HELD IN SETTLING BASINS OR FILTERED PRIOR TO ITS DISCHARGE INTO SURFACE WATERS OR STORM DRAINAGE SYSTEMS. WATER MUST BE DISCHARGED THROUGH A PIPE, WELL GRASSED OR LINED CHANNEL, OR OTHER EQUIVALENT MEANS SUCH THAT DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENTATION. THIS INCLUDES DE-WATERING OF RAINWATER, GROUND WATER, OR ANY OTHER WATER ON SITE CAUSING IMPACTS TO SITE CONSTRUCTION.
9. ALL DISTURBED AREAS SHALL BE SEEDED AND HYDROMULCHED UNLESS SHOWN OTHERWISE IN THE PLANS.
10. TOP SOIL OR OTHER SOIL/CLAY STOCKPILES ARE NOT TO BE LOCATED WITHIN FLOW PATHS, BASES OF ALL STOCKPILES SHALL BE SURROUNDED WITH SILT FENCE.

SEEDING NOTES:
1. ALL SEEDING MIX SHALL CONSIST OF THE FOLLOWING:
   - -PERENNIAL RYEGRASS = 50 LBS OF LIVE SEED PER ACRE
   - -PARK KENTUCKY BLUEGRASS = 50 LBS OF LIVE SEED PER ACRE
   - -DURAHARD FESCUE = 30 LBS OF LIVE SEED PER ACRE
   - -TOTAL LBS PER ACRE = 130
   - -FERTILIZER TYPE = 5-10-5
   - -FERTILIZER APPLICATION RATE = 50 LBS PER ACRE
2. CULTIVATE OR DISK TOPSOIL TO A DEPTH OF APPROXIMATELY 3".
3. REMOVE MATERIALS GREATER THAN 1" IN DIAMETER THAT CANNOT BE BROKEN UP.
4. PLANT SEEDS TO A DEPTH BETWEEN ¼" AND ½".
5. SEED ONLY WHEN WIND IS LESS THAN 15 MPH WHEN NOT USING A GRASS DRILL.
6. MULCHING SHALL BE USED IMMEDIATELY AFTER SEEDING TO PREVENT EROSION AND PROMOTE EARLIER VEGETATION COVER.
7. CONTRACTOR IS RESPONSIBLE FOR WATERING TO ESTABLISH GRASS GROWTH TO A HEIGHT OF 3".

TEMPORARY TRAFFIC CONTROL NOTES:
1. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AN ATSSA CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS) AND ANY NECESSARY TEMPORARY TRAFFIC CONTROL DEVICES ON AND OFF-SITE INCLUDING OBTAINING ANY APPLICABLE PERMITS. THE CONTRACTOR SHALL IDENTIFY THE TCS AND PROVIDE PROOF OF CERTIFICATION AT A PRECONSTRUCTION MEETING.
2. UNLESS A TEMPORARY TRAFFIC CONTROL PLAN IS INCLUDED WITH THE DESIGN DOCUMENTS, CONTRACTOR SHALL SUBMIT A COPY OF THE APPROVED TRAFFIC CONTROL PLAN TO THE ENGINEER FOR REVIEW.
3. CONTRACTOR IS RESPONSIBLE TO INSTALL, INSPECT, MAINTAIN, AND REMOVE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE LATEST STANDARDS AND REQUIREMENTS OF THE MUTCD, STANDARD HIGHWAY SIGNS AND MARKINGS BOOK PUBLISHED BY THE FHWA, AND LOCAL REGULATIONS.
4. CHANGES TO THE TEMPORARY TRAFFIC CONTROL PLAN SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE OWNER, ENGINEER, AND PERMITTING AUTHORITY IF APPLICABLE.

LEGEND

EX. LIGHT POLE	BORING LOCATION	FO — FO	EX. FIBER OPTIC
NEW LIGHT POLE	EX. SIGN	GAS	EX. GAS LINE
EX. POWER POLE	NEW SIGN	UGE	EX. ELECTRIC
NEW GREASE TRAP	NEW PROPERTY PIN SET	OHE	EX. OVERHEAD ELECTRIC
NEW CLEAN OUT	EX. PROPERTY PIN FOUND	CATV	EX. CABLE TV
EX. SANITARY MANHOLE	RIGHT OF WAY MARKER	T — T	EX. TELEPHONE
NEW SANITARY MANHOLE	HIGH WATER LINE	2452	EX. CONTOUR
EX. STORM MANHOLE	PARKING COUNT	2455	NEW CONTOUR
NEW STORM MANHOLE	DOWN SPOUT		CENTER LINE/SECTION LINE
EX. STORM CATCH BASIN	EXPANSION JOINT		GRADE BREAK/DRAINAGE AREAS
NEW STORM CATCH BASIN	EX. FENCE		NEW TRACKS
EX. CULVERT FLARE END	NEW FENCE		EX. TRACKS
NEW CULVERT FLARE END	EX. GUARDRAIL		EX. ASPHALT PAVEMENT
EX. HEADWALL	SET BACK		NEW ASPHALT PAVEMENT
NEW HEADWALL	EX. EASEMENT		EX. CONCRETE PAVEMENT
EX. GATE VALVE	NEW EASEMENT		NEW CONCRETE PAVEMENT
NEW GATE VALVE	EX. PROPERTY LINE		EX. GRAVEL SURFACE
EX. WATERLINE FITTINGS	NEW ROW/PROPERTY LINE		NEW GRAVEL SURFACE
NEW WATERLINE FITTINGS	PROPERTY BOUNDARY LINE		EX. SIDEWALK/FLATWORK
NEW TAPPING SLEEVE & VALVE	EX. CURB		NEW SIDEWALK/FLATWORK
EX. HYDRANT	NEW CURB(INFLOW)		ACCESSIBLE (ADA) RAMP
NEW HYDRANT & VALVE	NEW CURB(OUTFLOW)		STRIPING CROSSWALK
EX. STUMP	EX. RETAINING WALL		STRIPING ADA ACCESSIBLE
EX. SHRUB	NEW RETAINING WALL		STRIPING TURN ARROWS
EX. DECIDUOUS TREE	EX. SANITARY SEWER		SEEDING & HYDROMULCH
EX. CONIFEROUS TREE	NEW SANITARY SEWER		
NEW SHRUB	EX. SANITARY FORCE MAIN		
NEW DECIDUOUS TREE	NEW SANITARY FORCE MAIN		
NEW CONIFEROUS TREE	EX. WATER		
E.T. EX. ELECTRICAL TRANSFORMER	NEW WATER		
T.P. EX. TELEPHONE PEDISTAL	EX. STORM SEWER		
E.O. EX. ELECTRICAL OUTLET	NEW STORM SEWER		
U.P. EX. UTILITY PEDISTAL	EX. DRAIN TILE		
E ELEC MANHOLE EXIST	NEW DRAIN TILE		
	EX. STORM FORCE MAIN		
	NEW STORM FORCE MAIN		

ABBREVIATIONS

ADJ	ADJACENT	ELEV	ELEVATION	P.C.	PRECAST CONCRETE
ALT	ALTERNATE	ENCL	ENCLOSURE	PVIE	POINT OF VERTICAL INTERSECTION ELEVATION
ARCH	ARCHITECT	E.O.P.	END OF PROJECT	PVIS	POINT OF VERTICAL INTERSECTION STATION
ACP	ASBESTOS CEMENT PIPE	E.J.	EXPANSION JOINT	PREFAB	PREFABRICATED
BIT	BITUMINOUS	EX.	EXISTING	PSI	POUNDS PER SQUARE INCH
BLDG	BUILDING	EX.A.	EACH WAY	PVC	POLYVINYL CHLORIDE PIPE
BM	BENCHMARK	EVCE	END VERTICAL CURVE	PP	POWER POLE
B.O.	BY OWNER/BY OTHERS		ELEVATION	R	RADIUS
B.O.P.	BEGINNING OF PROJECT	EVCS	END VERTICAL CURVE STATION	RCP	REINFORCED CONCRETE PIPE
BV	BUTTERFLY VALVE	FD	FIRE DEPARTMENT	RD	ROOF DRAIN
BVCE	BEGINNING VERTICAL CURVE ELEVATION	FFE	FIRST FLOOR ELEVATION	REQ'D	REQUIRED
BVCS	BEGINNING VERTICAL CURVE STATION	FO	FIBER OPTICS	RIM	RIM OF INLET OR CASTING
C	CIVIL	FTG	FOOTING	ROW	RIGHT OF WAY
B.P.	CAST IRON	G.C.	GENERAL CONTRACTOR	SAN	SANITARY
CIP	CAST IRON PIPE	GALV	GALVANIZED	SS	SANITARY SEWER
CU	COPPER	GAL	GALLON	ST	STORM
CMP	CORRUGATED METAL PIPE	GRAN	GRANULAR	STD	STANDARD
CJ	CONTROL JOINT	GV	GATE VALVE	SB	SOIL BORING
CONC	CONCRETE	HDPE	HIGH DENSITY POLYETHYLENE	STRUCT	STRUCTURAL
CF	CUBIC FEET	HORZ	HORIZONTAL	SF	SQUARE FEET
CS	CURB STOP	HB	HOSE BIB	SCH	SCHEDULE
C.O.	CLEAN OUT	HDCP	HANDICAPPED	SW	SIDEWALK
CNTR	CENTER	HYD	HYDRANT	T	TELEPHONE
CONST	CONSTRUCTION	I	INLET	TYP	TYPICAL
CONTR	CONTRACTOR	K	CURVATURE VALUE	UNEX	UN-EXCAVATED
CY	CUBIC YARD	M	MECHANICAL	UE	UTILITY EASEMENT
DIA	DIAMETER	MH	MANHOLE	UGE	UNDERGROUND ELECTRIC
DIP	DUCTILE IRON PIPE	MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
DEMO	DEMOLITION	MIN	MINIMUM	VERT	VERTICAL
DTL	DETAIL	M.J.	MECHANICAL JOINT	V	VERIFY
DIM	DIMENSION	MISC.	MISCELLANEOUS	VCL	VERTICAL CURVE LENGTH
DOM	DOMESTIC	NC	NON-CORROSIVE	VOL	VOLUME
D.S.	DOWN SPOUT	NOM	NOMINAL	VCP	VITRIFIED CLAY PIPE
DWG	DRAWING	NIC	NOT IN CONTRACT	W/	WITH
DWL	DOWEL	NTS	NOT TO SCALE	W/O	WITH OUT
EA	EACH	OD	OUTSIDE DIMENSION	WTH	WIDTH
ELEC	ELECTRIC	OCEW	ON CENTER EACH WAY	W	WATER
		OC	ON CENTER		
		OHE	OVERHEAD ELECTRIC		

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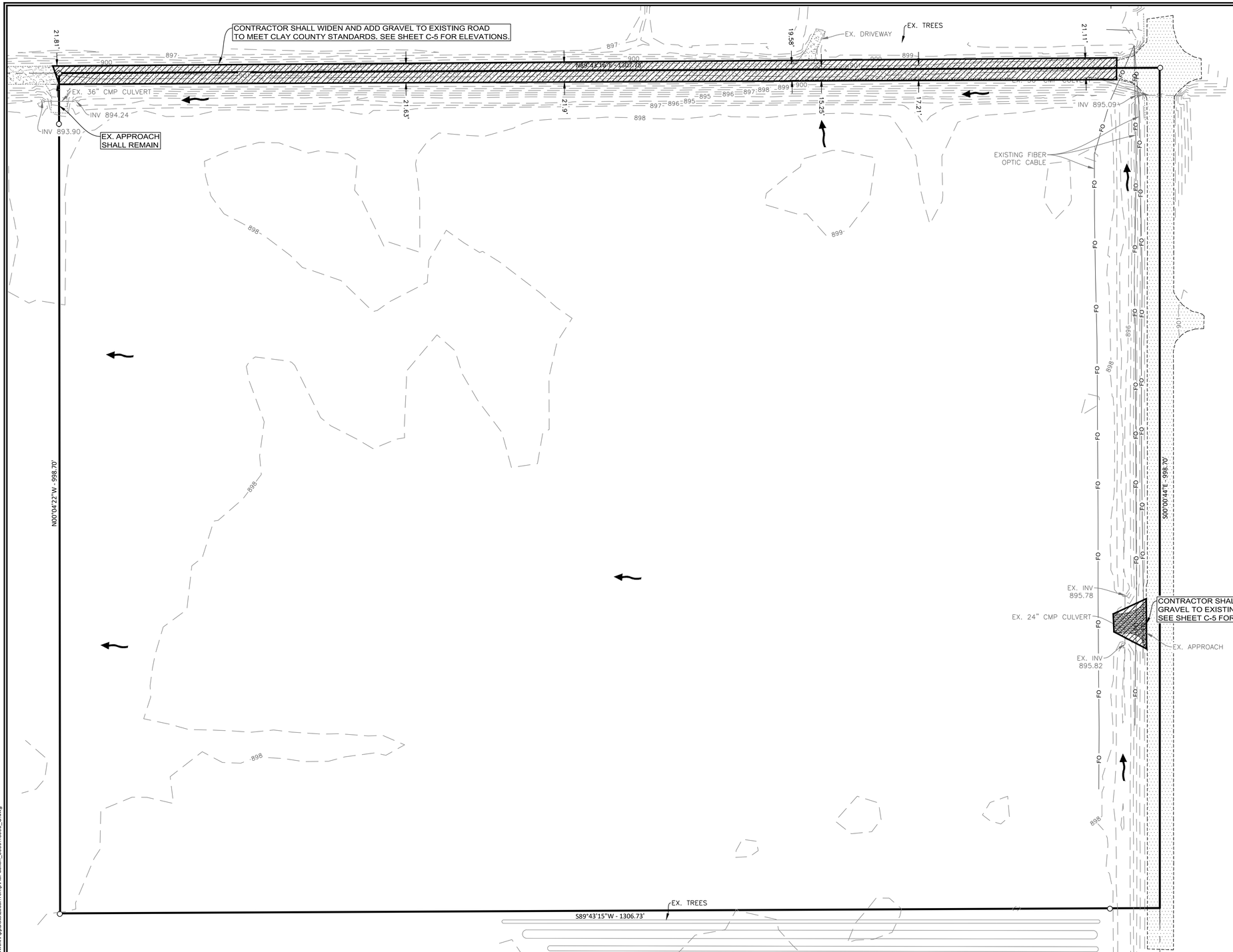
APPROVED BY:	DJK
SHEET:	2 OF 8

GENERAL
NOTES & LEGEND

C-2



BENCHMARK: IRON PIND FOUND IN SOUTHWEST CORNER OF PROPERTY. ELEVATION = 897.84'. NAVD 88 DATUM

BASIS OF BEARING: CLAY COUNTY COORDINATES

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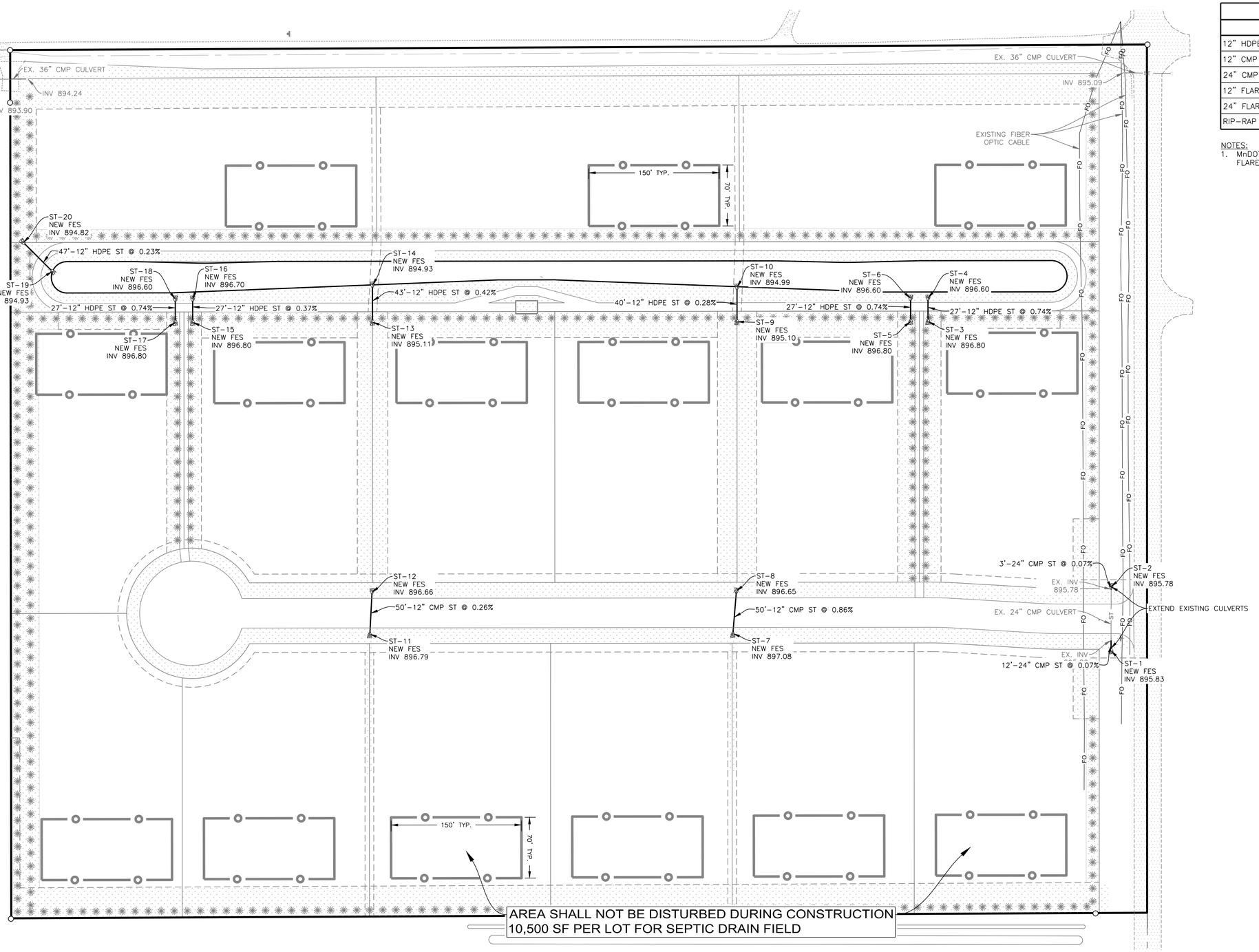
SHEET:	3 OF 8

SURVEY OVERLAY & DEMOLITION PLAN

C-3



ESTIMATED STORM QUANTITIES

ITEM	QUANTITY	UNIT
12" HDPE STORM PIPE	238	LF
12" CMP STORM PIPE	100	LF
24" CMP STORM PIPE	15	LF
12" FLARED END SECTION	18	EA
24" FLARED END SECTION	2	EA
RIP-RAP	12	CY

NOTES:
1. MnDOT CLASS III RIP-RAP SHALL BE INSTALLED AT EACH NEW FLARED END SECTION PER DETAIL.

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SHEET:	4 OF 8

0 60 120

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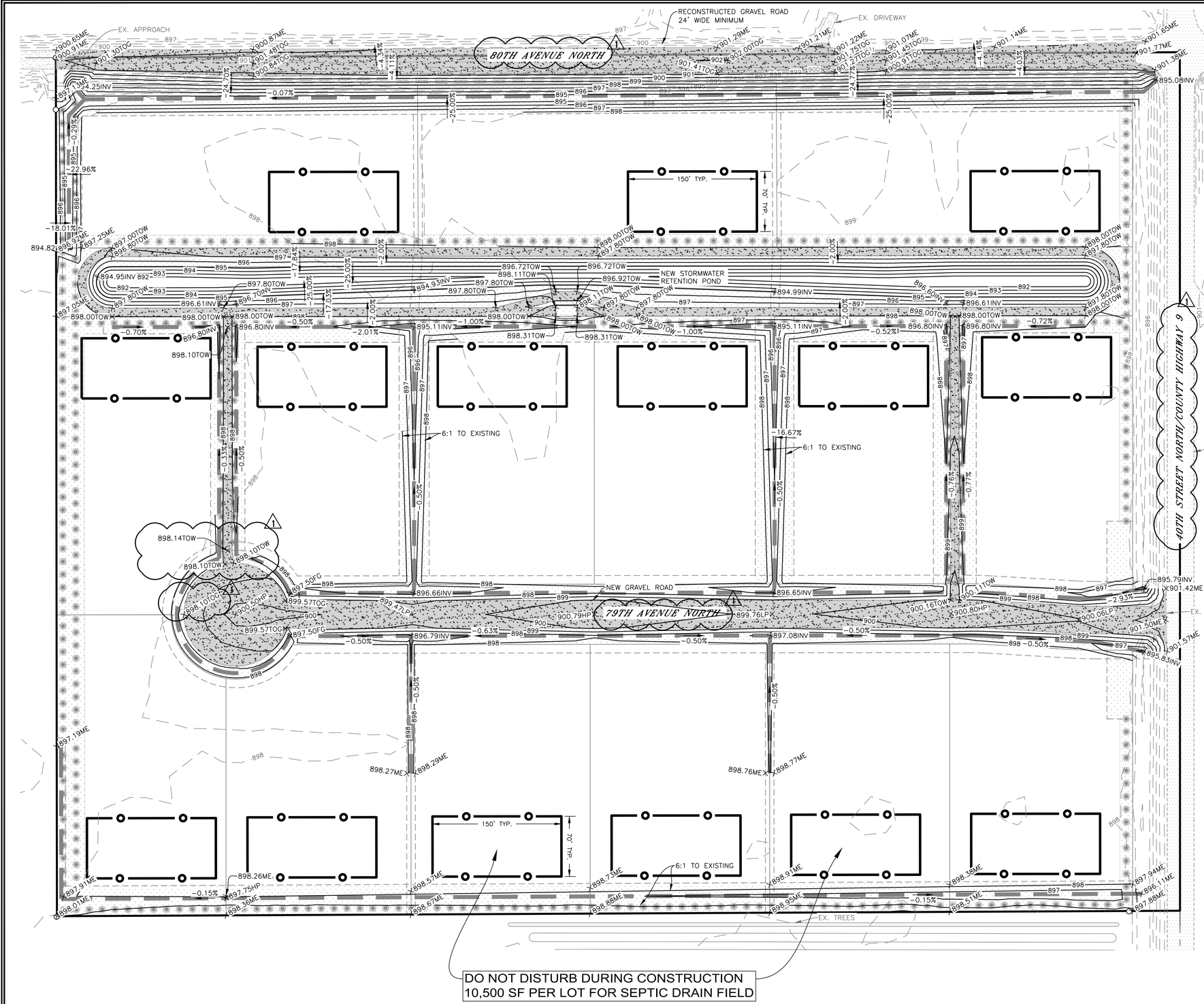
UTILITIES UNDERGROUND LOCATION SERVICE
1-800-252-1166

UTILITY PLAN

C-4



ESTIMATED GRADING QUANTITIES

ITEM	QUANTITY	UNIT
TOPSOIL STRIPPING	14,646	CY
COMMON EXCAVATION (1)	11,334	CY
EXPORT (1)	508	CY
SUBGRADE PREPARATION	4,918	SY
MNDOT TYPE V MODIFED FABRIC	4,918	SY
MNDOT CLASS 5 AGGREGATE	2,056	CY

NOTES:
1. ELEVATIONS ARE FLOWLINE ELEVATIONS UNLESS OTHERWISE NOTED.
2. 12" OF TOPSOIL STRIPPING WAS ASSUMED TO ALLOW FOR CLEARING OF ALL VEGETATION FROM IMPACTED AREAS OF THE SITE.
3. CONSTRUCTION EQUIPMENT SHALL NOT ENTER AREAS RESERVED FOR SEPTIC DRAIN FIELD.
4. (1) CONTRACTOR SHALL STOCKPILE EXCESS TOPSOIL AND SUBGRADE MATERIAL IN WINDROW STOCKPILES EVENLY ACROSS EACH LOT.
5. CONTRACTOR SHALL WIDEN 80TH AVE NORTH TO 24' MINIMUM, ADD CLASS 5 AGGREGATE TO A FINAL MINIMUM DEPTH OF 8" WITH 4% CROWN. CONTRACTOR SHALL HOLD EXISTING ELEVATIONS AND ALIGNMENT ALONG THE NORTH SIDE OF THE ROAD AND EXTEND ROAD TO THE SOUTH. NEW DITCH INSLOPE SHALL BE 4:1 WITH 6' BOTTOM AND BACKSLOPE SHALL DAYLIGHT TO EXISTING GROUND AT 4:1 SLOPES.
6. NEW TRAIL SHALL BE MINIMUM 4" THICK MNDOT CLASS 5. NO FABRIC REQUIRED.
7. (1) EXPORT QUANTITY ASSUMES A FILL FACTOR OF 1.3.
8. QUANTITY FOR FABRIC DOES NOT INCLUDE REQUIRED OVERLAP.
9. CLASS 5 QUANTITY DOES NOT INCLUDE COMPACTION.
10. CONTRACTOR SHALL SALVAGE AND REUSE EXISTING GRAVEL ON 80TH AVE NORTH. NEW CLASS 5 QUANTITY FOR 80TH AVE NORTH ASSUMES ADDING 4" TO EXISTING ROAD PLUS 8" DEPTH AT 9' WIDE ON PORTION OF NEW EXTENSION TO THE SOUTH.

	GRADE BREAK/FLOW PATH
FG	FINISH GROUND
FL	FLOWLINE
HP	HIGH POINT
INV	STRUCTURE INVERT ELEVATION
LP	LOW POINT
MC	MIDPOINT OF CURVE
ME	MATCH EXISTING GROUND
PC	POINT OF CURVATURE
RIM	STRUCTURE RIM ELEVATION
TC	TOP OF CURB
TOC	TOP OF CONCRETE
TOW	TOP OF WALK

(1) 05-13-19
- REVISED GRADING CALL OUTS FOR 32' WIDE ROADWAY
- UPDATED IMPACTED QUANTITIES
- ADDED MISSING ROAD LABELS

0 60 120

CALL BEFORE YOU DIG
MINNESOTA
UTILITIES UNDERGROUND LOCATION SERVICE
1-800-252-1166

LOWRY
ENGINEERING
1111 WESTRAC DRIVE - SUITE 108
FARGO, NORTH DAKOTA 58103

REVISIONS
(1) 05-13-19 - COUNTY COMMENTS

LINDEN TRAILS SUBDIVISION
S10-T140N-R48W
CLAY COUNTY, MINNESOTA

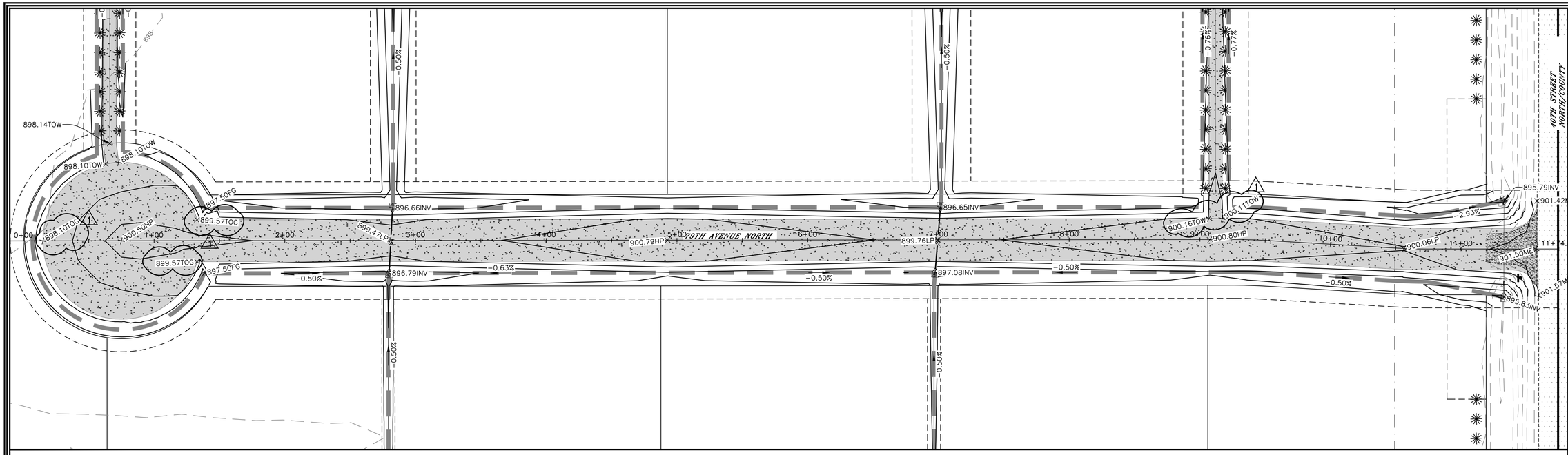
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

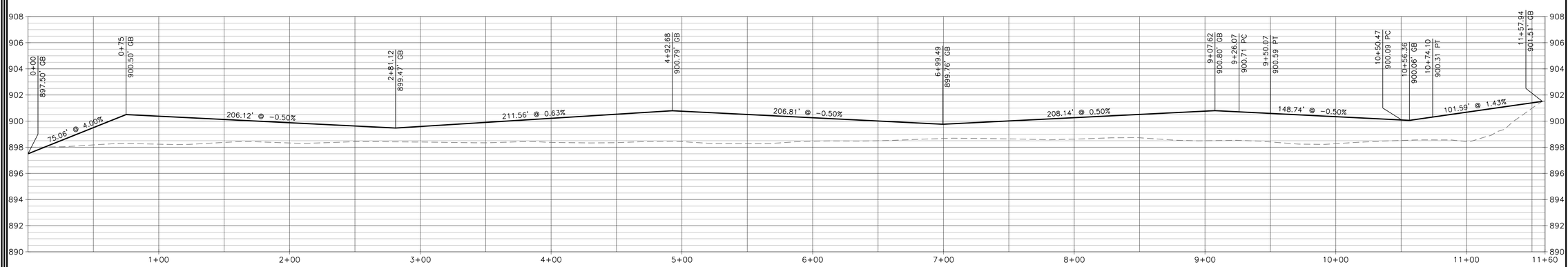
DANIELLE KUKOWSKI
DATE: 05/13/2019
LICENSE #: 56061

LE JOB #	18093
PROJECT DATE:	04/30/2019
CHECKED BY:	JML
DRAWN BY:	DJK
APPROVED BY:	DJK
SHEET:	5 OF 8

GRADING PLAN

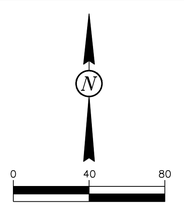
C-5





Profile View of 79th Ave Centerline

1 05-13-19
- REVISED GRADING CALL OUTS FOR 32' WIDE



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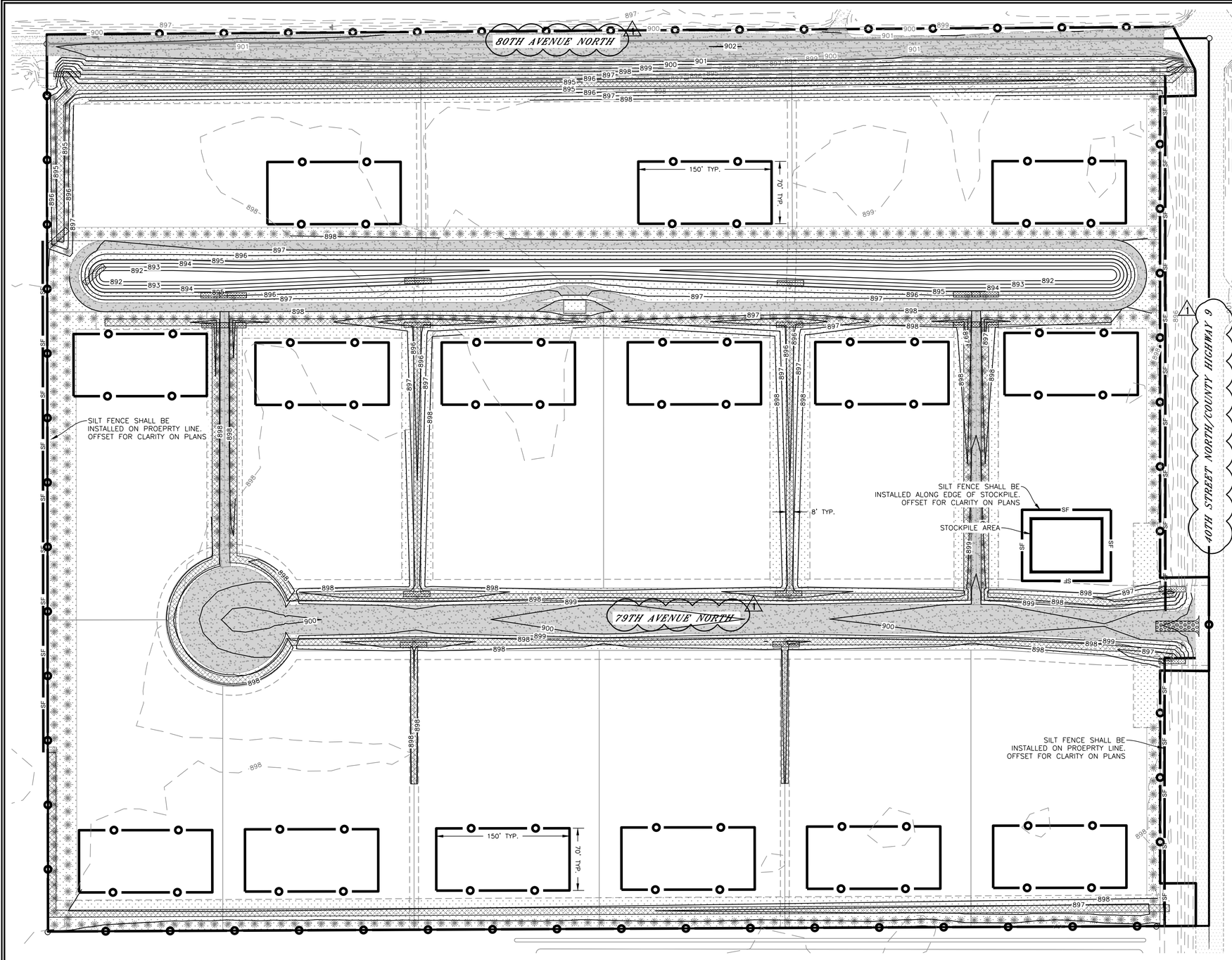
SHEET:	6 OF 8

PLAN
&
PROFILE

C-6



EROSION CONTROL LEGEND

	LIMITS OF CONSTRUCTION		
SF	SILT FENCE	1,879	LF
	FIBER ROLL PROTECTION (STRAW WATTLE)	216	LF
	SEEDING & HYDROMULCH 1	35,772	SY
	EROSION CONTROL BLANKET	7,448	SY
	VEHICLE TRACKING PAD	1	EA

NOTES:
1. CONTRACTOR SHALL FOLLOW MPCA STORMWATER POLLUTION PREVENTION STANDARDS FOR ALL EROSION CONTROL DURING CONSTRUCTION.
2. CONTRACTOR SHALL SEED & MULCH ALL DISTURBED AREAS WITHIN 14 DAYS.
3. CONTRACTOR SHALL INSTALL STRAW WATTLE AROUND FLARED END SECTIONS UNTIL RIP-RAP IS INSTALLED AND SITE IS STABILIZED.

1 05-13-19
- REVISED 79TH AVE TO 32' WIDE
- UPDATED IMPACTED QUANTITIES
- ADDED MISSING ROAD LABELS

0 60 120

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MINNESOTA
UTILITIES UNDERGROUND LOCATION SERVICE
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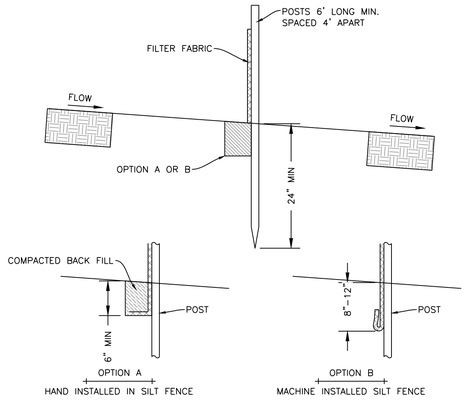
SHEET:	7 OF 8

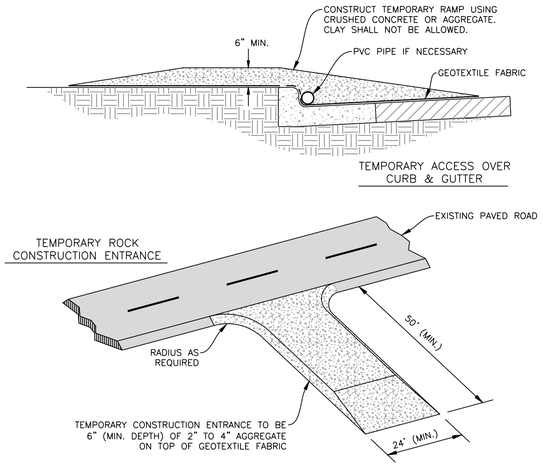
EROSION & SEDIMENT CONTROL PLAN

C-7



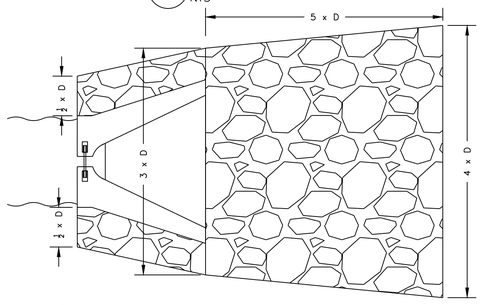
NOTES:
1. POSTS SHALL BE 2 INCH DIAMETER ROUND WOOD, 1.5 INCH RECTANGULAR WOOD, OR STEEL WITH A MINIMUM OF 0.95 POUNDS PER FOOT AND HAVE PROJECTIONS FOR FASTENING WIRE OR FABRIC.
2. FILTER FABRIC SHALL BE AS SPECIFIED IN AASHTO M 288 WITH A MINIMUM WIDTH OF 36 INCHES.
3. SILT FENCE SHALL BE INSTALLED ALONG THE CONTOURS OF THE SITE SO WATER CANNOT FLOW AROUND THE END OF THE FENCE.
4. IF JOINING TWO SECTION OF FILTER FABRIC, OVERLAP AT SUPPORT POSTS A MINIMUM OF 18 INCHES IN SUCH A MANNER THAT PREVENTS SILT FROM PASSING THROUGH THE FENCE.
5. REMOVE SEDIMENT FROM SILT FENCE WHEN IT REACHES ½ OF THE EXPOSED HEIGHT OF ANY SECTION, OR AS DIRECTED BY THE ENGINEER. THE ENGINEER MAY DIRECT THE INSTALLATION OF ADDITIONAL SILT FENCE IF REMOVING THE SEDIMENT DEPOSIT IS NOT FEASIBLE.
6. SILT FENCE SHALL BE INSPECTED EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF ANY STORM EVENT GREATER THAN ½" OF RAIN PER 24 HOUR PERIOD.

1 SILT FENCE INSTALLATION
NTS



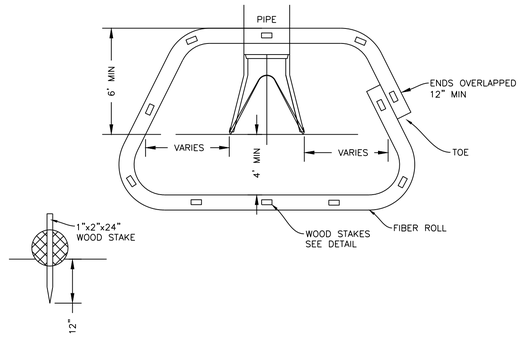
NOTES:
1. A TEMPORARY CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES OR EQUIPMENT ENTER OR EXIT THE CONSTRUCTION SITES.
2. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE THE TEMPORARY CONSTRUCTION ENTRANCE UNLESS NOTED OTHERWISE, AND THE SITE SHALL BE RESTORED TO ITS PREVIOUS CONDITION.
3. ENTRANCES SHALL BE MAINTAINED IN A MANNER TO MINIMIZE THE TRACKING OF SEDIMENT ONTO PAVED SURFACES.
4. TEMPORARY ACCESS OVER EXISTING CURB AND GUTTER SHOULD BE LOCATED AT HIGH POINTS IN THE STREET IF POSSIBLE TO MAINTAIN STREET DRAINAGE.
5. REMOVE TOPSOIL BEFORE CONSTRUCTION OF STABILIZED CONSTRUCTION ACCESS.

2 VEHICLE TRACKING PAD
NTS



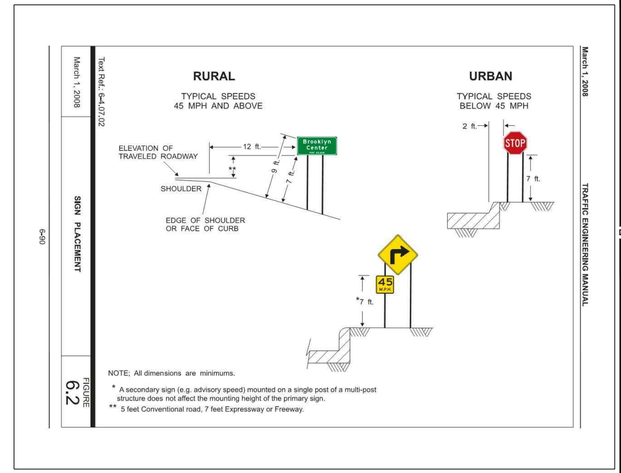
NOTES:
1. RIPRAP SHALL MEET MnDOT SPECIFICATIONS AND/OR APPROVED BY THE ENGINEER.
2. MnDOT TYPE 4 FABRIC SHALL BE INSTALLED UNDER RIP RAP.
3. RIPRAP DEPTH SHALL BE 18".
4. RIPRAP GRADATION PER PLANS

6 FES RIPRAP
N.T.S.



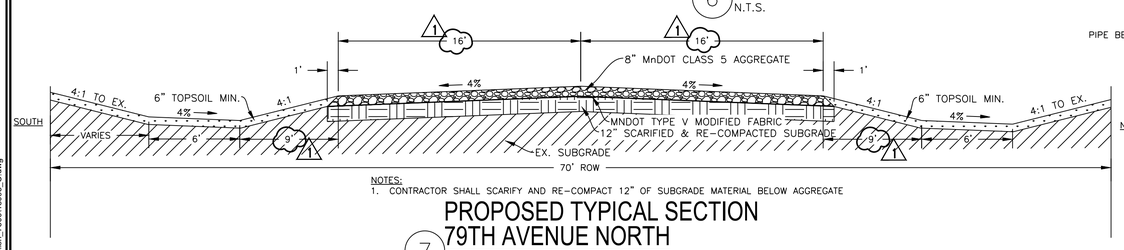
NOTES:
1. FIBER ROLLS SHALL BE COMPOSED OF DEGRADABLE NETTING THAT CONTAINS COMPRESSED HAY OR STRAW THAT IS FREE OF SEEDS AND NOXIOUS WEEDS, OR WOOD EXCELSIOR.
2. REMOVE SEDIMENT FROM FIBER ROLL WHEN IT REACHES ½ OF THE EXPOSED HEIGHT OF ANY SECTION, OR AS DIRECTED BY THE ENGINEER. THE ENGINEER MAY DIRECT THE INSTALLATION OF A SECOND FIBER ROLL IF REMOVING THE SEDIMENT DEPOSIT IS NOT FEASIBLE.
3. FIBER ROLL SHALL BE INSPECTED EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF ANY STORM EVENT GREATER THAN ¼" OF RAIN PER 24 HOUR PERIOD.

3 FIBER ROLL PROTECTION FLARED END SECTION
NTS



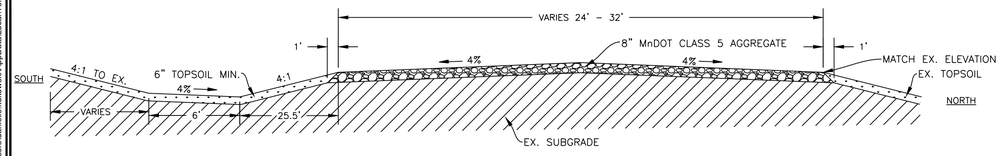
4 STOP SIGN PLACEMENT
N.T.S.

5 PEDESTRIAN ACCESS EASEMENT CROSS SECTION
N.T.S.

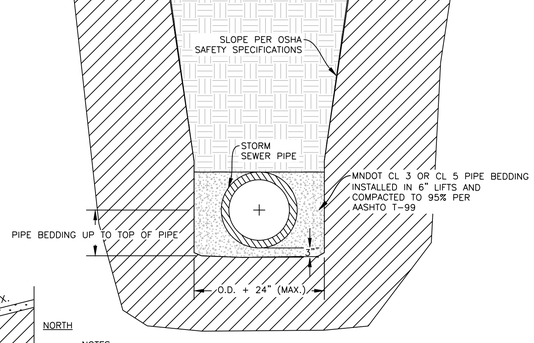


NOTES:
1. CONTRACTOR SHALL SCARIFY AND RE-COMPACT 12" OF SUBGRADE MATERIAL BELOW AGGREGATE

PROPOSED TYPICAL SECTION 79TH AVENUE NORTH
7 N.T.S



PROPOSED TYPICAL SECTION 80TH AVENUE NORTH
9 N.T.S



NOTES:
1. MAXIMUM TRENCH WIDTH FOR 60", 66" & 72" NOT TO EXCEED OUTSIDE DIAMETER OF PIPE + 12" FROM BOTTOM OF TRENCH TO A POINT 2' ABOVE PIPE.
2. LAST 3' OF PIPE MEASURE FROM BACK OF FLARED END SECTION TO BE BEDDED IN CLAY AND NOT CLASS 5 OR CLASS 3 TO PREVENT SCOUR.

8 CULVERT TRENCH
N.T.S.

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DETAILS

C-8