

CITY OF SHAKOPEE

CONSTRUCTION PLANS FOR

WHISPERING OAKS SANITARY SEWER EXTENSION

CITY PROJECT NO. 2017-3

FEBRUARY, 2017

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

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

PLAN REVISIONS		
REV	ISSUED FOR	DATE
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SHEET INDEX	
SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
2	LEGEND SHEET
3	CONSTRUCTION NOTES
4	DETAILS
5	DETAILS
6	DETAILS
7	EXISTING CONDITIONS & REMOVAL PLANS
8	EXISTING CONDITIONS & REMOVAL PLANS
9	EXISTING CONDITIONS & REMOVAL PLANS
10	SANITARY SEWER PLAN & PROFILE
11	SANITARY SEWER PLAN & PROFILE
12	SANITARY SEWER PLAN & PROFILE
13	SANITARY SEWER PLAN & PROFILE
14	SANITARY SEWER PLAN & PROFILE
15	SANITARY SEWER PLAN & PROFILE
16	MILL & OVERLAY
17	MILL & OVERLAY
18	STREET CONSTRUCTION
19	STREET CONSTRUCTION
20	STAGING & TRAFFIC CONTROL TABULATIONS & NARRATIVE
21	STAGE 1 TRAFFIC CONTROL PLAN
22	STAGE 2 TRAFFIC CONTROL PLAN
23	STAGE 3 TRAFFIC CONTROL PLAN
24	PROJECT INFORMATION
25	NARRATIVE - NON IMPAIRED
26	SOILS MAP

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.

JEFFREY WEYANDT

LIC. NO. 41342 DATE: XX/XX/XXXX

REVIEWED & APPROVED PUBLIC WORKS DIRECTOR DATE:



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RECORD DRAWING INFORMATION	CITY OF SHAKOPEE, MINNESOTA	SHEET 1 OF 26
OBSERVER:	WHISPERING OAKS SANITARY SEWER EXTENSION	
CONTRACTOR:	TITLE SHEET	
DATE:		

EXISTING

	IRON PIPE MONUMENT SET		ELECTRIC TRANSFORMER		SEMAPHORE TRAFFIC LIGHT
	MONUMENT FOUND		EXHAUST VENT		SIGNAL BOX
	CAST IRON MONUMENT FOUND		FLAG POLE		SIGNAL POLE - RR
	STONE MONUMENT FOUND		FILL PIPE		SOIL BORING
	POST SET		GAS MANHOLE		SIREN
	BENCH MARK		GAS REGULATOR		SPRINKLER HEAD
	AUTO SPRINKLER		GAS VALVE		STORM MANHOLE
	ANTENNA		GAS METER		TELEPHONE MANHOLE
	AIR CONDITIONER		ACCESS GRATE		PUBLIC TELEPHONE
	ANCHOR		HANDICAPPED PARKING		TILE INLET
	AIR PUMP		HAND HOLE		TILE RISER
	APRON		HYDRANT		TRAFFIC ARM BARRIER
	BASKETBALL HOOP		IRRIGATION CONTROL VALVE		TRAFFIC SIGN
	BIRD FEEDER		LIGHT DECORATIVE		TRANSMISSION TOWER
	BENCH		LIGHT POLE		UTILITY POLE
	BRACE POLE		MAILBOX		VACUUM
	CATCH BASIN		METER		VENT PIPE
	CLOTHES LINE POLE		POST		DECIDUOUS TREE
	CONTROL POINT		MANHOLE		CONIFEROUS TREE
	CLEAN OUT		LIFT STATION MANHOLE		STUMP
	COMMUNICATION PEDESTAL		MONITORING WELL		BUSH
	CURB STOP VALVE		ORDER MICROPHONE		WELL
	DITCH TOP		PARK GRILL		WATER MANHOLE
	DRINKING FOUNTAIN		GAS PUMP		WATER METER
	DOWN SPOUT		POST INDICATOR VALVE		WATER SPIGOT
	ELECTRIC MANHOLE		PARKING METER		WATER VALVE
	ELECTRIC METER		SANITARY MANHOLE		WETLAND / MARSH
	ELECTRIC PEDESTAL		SATELLITE DISH		WETLAND - DELINEATED

PROPOSED

	ALIGNMENT/CENTERLINE		WATERMAIN
	RIGHT-OF-WAY LINE		WATERMAIN SERVICE
	TEMPORARY EASEMENT		WATER SYSTEM MANHOLE
	CONSTRUCTION LIMITS		HYDRANT
	CURB & GUTTER		HYDRANT W/ VALVE
	CURB & GUTTER (OUT)		VALVE
	BITUMINOUS EDGE		CURBSTOP
	CONCRETE EDGE		BEND
	GRAVEL EDGE		REDUCER
	SILT FENCE-PREASSEMBLED		CROSS
	SILT FENCE-HEAVY DUTY		TEE
	EROSION PROTECTION AT INLET		CAP
	MANHOLE		SLEEVE
	CATCH BASIN		SIGN
	STORM INLET		LIGHT POLE
	APRON		GUARD RAIL
	STORM SEWER		SOIL BORING
	PERFORATED PIPE DRAIN		WETLAND
	STORM DRAIN TILE		BUSH
	CULVERT W/APRON		CONIFEROUS TREE
	STORM MANHOLE NUMBER		DECIDUOUS TREE
	SANITARY SEWER		
	SANITARY FORCEMAIN		
	SANITARY SEWER SERVICE		
	SANITARY LIFT STATION		
	SANITARY MANHOLE		
	SANITARY MANHOLE NUMBER		

	OVERHEAD ELECTRIC LINE		EASEMENT LINE
	UNDERGROUND ELECTRIC LINE		BUILDING SETBACK LINE
	GAS LINE		FENCE LINE
	FIBER OPTIC LINE		GUARD RAIL
	UNDERGROUND COMMUNICATIONS LINE		ACCESS CONTROL LINE
	OVERHEAD UTILITY LINE		CENTERLINE
	WATER SYSTEM		PROPERTY / LOT LINE
	STORM SEWER		ROAD RIGHT-OF-WAY LINE
	TILE LINE		RAILROAD RIGHT-OF-WAY LINE
	SANITARY SEWER		GRAVEL EDGE
	SANITARY FORCEMAIN		BITUMINOUS EDGE
	CULVERT		CONCRETE EDGE
	INTERMEDIATE CONTOURS		CURB & GUTTER
	INDEX CONTOURS		WATER EDGE
	COUNTY LINE		WATER CENTERLINE
	CITY LIMITS		HIGHWATER LINE
	SIXTEENTH LINE		WETLAND EDGE
	QUARTER LINE		SWALE CENTERLINE
	SECTION LINE		RAILROAD TRACKS
	ADJACENT LINES		TREE DRIP LINE

OVERLAY NOTES:

1. THE ENGINEER WILL MARK CRACK REPAIR AREAS AND BITUMINOUS MILLING REMOVAL LIMITS IN THE FIELD PRIOR TO CONSTRUCTION. NO WORK SHALL COMMENCE UNTIL ALL REMOVAL LIMITS ARE CLEARLY MARKED AND REVIEWED BY THE ENGINEER AND THE CONTRACTOR.
2. AREAS TO BE PATCHED WILL BE MARKED BY THE ENGINEER IN THE FIELD. PAYMENT FOR PATCHING SHALL BE PER THE BID ITEMS FOR COMMON EXCAVATION (CY), AGGREGATE CLASS 5 (TON), AND BITUMINOUS BASE COURSE (TON).
3. WHERE CURB REPLACEMENT OCCURS AT DRIVEWAYS, CONTRACTOR SHALL SAW CUT ENTIRE WIDTH (2' BEHIND CURB) AND REPLACE THE CONCRETE OR BITUMINOUS SURFACE TO MATCH EXISTING SECTION (SAW CUTTING AND REMOVAL OF BITUMINOUS DRIVE SHALL BE INCIDENTAL).
4. THE CONTRACTOR SHALL PROTECT ALL CONCRETE VALLEY GUTTERS, EDGES AND IRRIGATION/SPRINKLER SYSTEMS. REPAIR OF DAMAGED IRRIGATION SYSTEMS SHALL BE AT THE CONTRACTOR'S EXPENSE.
5. WHERE SOD PLACEMENT IS NECESSARY, PLACE 6-INCHES OF TOPSOIL AND NEATLY CUT ALL EDGES OF EXISTING SOD PRIOR TO PLACING NEW SOD. THE CONTRACTOR IS ONLY PERMITTED TO DISTURB TWO FEET OF SOD BEHIND THE CURB. ANY REMOVALS BEYOND THE APPROVED REMOVAL LIMITS SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.
6. ALL REMOVAL ITEMS SHALL BE DISPOSED OF OFF-SITE IN PROPER ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
7. PRIOR TO PLACEMENT OF NEW CONCRETE CURB & GUTTER, ALL EXISTING EDGES SHALL BE STRAIGHT AND EXPANSION JOINT MATERIAL SHALL BE PLACED AGAINST THE ABUTTING EDGE, AS DIRECTED. SAW CUTTING WILL BE REQUIRED AND IS INCIDENTAL TO THE REMOVAL OF EXISTING CURB.
8. MANHOLES AND GATE VALVES BOXES SHALL BE LOCATED IN THE FIELD BY THE CONTRACTOR. STRUCTURES SHOWN ON THE PLAN ARE SHOWN IN AN APPROXIMATE WAY ONLY AND IT IS NOT GUARANTEED THAT ALL MANHOLES AND GATE VALVES BOXES ARE SHOWN.
9. WHERE CURB IS TO BE REPLACED, THE CONTRACTOR SHALL SAWCUT AND PATCH THE STREET ADJACENT TO THE CURB. THE PATCH SHALL BE 18-INCHES WIDE AND SHALL CONSIST OF 8-INCHES OF CLASS 5 AGGREGATE BASE (100% CRUSHED) AND 3-INCHES OF SPNWB230B BITUMINOUS BASE COURSE.
10. THE CONTRACTOR SHALL SUPPLY UNEVEN PAVEMENT AND BUMP SIGNS IF REQUIRED BY THE MNMUTCD OR ENGINEER.
11. THE CONTRACTOR SHALL HAVE ONE QUALIFIED FLAG PERSON ON EACH END OF THE PAVING OPERATION AND AT OTHER LOCATIONS (SIDE STREETS, PARKING LOT ENTRANCES, ETC.) AS REQUIRED OR DIRECTED BY THE ENGINEER. (INCIDENTAL TO TRAFFIC CONTROL.)
12. PROVISIONS SHALL BE MADE AND MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION TO PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENTS AT ALL TIMES. TEMPORARY ACCESS AND/OR ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE NECESSARY TO ROUTE TRAFFIC. ALL DISTURBANCE OF ANY ACCESS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY DISTURBANCE OF THE DRIVEWAY. ALL TEMPORARY ACCESS WORK SHALL BE INCIDENTAL TO CONSTRUCTION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING, INSTALLING, ERECTING, MAINTAINING, AND THE COORDINATION OF ALL NO PARKING SIGNS TO TEMPORARILY PROHIBIT VEHICLES PARKING WITHIN THE PROJECT LIMITS DURING CONSTRUCTION IN ACCORDANCE WITH AN APPROVED PLAN. THE SIGN SIZE, COLOR, MESSAGE, ETC. SHALL BE APPROVED BY THE ENGINEER. NO SIGNS SHALL BE ERECTED WITHOUT PROPER NOTIFICATION TO THE SCOTT COUNTY DISPATCH, SHAKOPEE POLICE, AND ENGINEER.
14. WHERE CURB IS TO BE REMOVED AROUND CATCH BASINS, THE CATCH BASIN SHALL BE ADJUSTED WITH NEW RINGS, A NEW CASTING, OR BE COMPLETELY RECONSTRUCTED AS DIRECTED BY THE ENGINEER.
15. STREETS USED AS HAUL ROUTES SHALL BE SWEEPED/CLEANED DAILY IN ORDER TO PREVENT A BUILDUP FROM DROPPED MILLINGS, BITUMINOUS, AC, ETC. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PAVING.
16. ALL TRAFFIC CONTROL DEVICES SHALL BE IN COMPLIANCE WITH THE MN MUTCD MANUAL GUIDELINES. ALL LAYOUTS SHALL CONFORM WITH THE LATEST MN MUTCD FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
17. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF LAYOUTS AS DEEMED NECESSARY BY THE ENGINEER.
18. THE CONTRACTOR IS RESPONSIBLE FOR ANY SIGNAGE NEEDED TO FACILITATE TRAFFIC SWITCHES OR FOR TRANSITIONING TRAFFIC FROM ONE STAGE TO ANOTHER.
19. INSTALL ALL TRAFFIC CONTROL DEVICES IN COMPLIANCE WITH THE MNMUTCD FIELD MANUAL GUIDELINES.
20. PAVING OPERATIONS SHALL CONSIST OF ONLY ONE CONSTRUCTION JOINT AT THE CENTERLINE OF THE ROADWAY.
21. ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE CITY OF SHAKOPEE & SPUC STANDARD SPECIFICATIONS AND DETAIL PLATES.

CONSTRUCTION NOTES:

1. ALL WORK SHALL REMAIN WITHIN THE EXISTING RIGHT OF WAY. ALL REMOVAL OUT OF THE APPROVED LIMITS AND THE RESTORATION THERE OF SHALL BE AT THE CONTRACTORS EXPENSE.
2. WHERE PAVEMENT TO BE REMOVED ADJOINS EXISTING PAVEMENT THAT IS TO REMAIN IN PLACE, THE PAVEMENT SHALL BE SAW CUT. BITUMINOUS PAVEMENT REMOVAL IS CONSIDERED INCIDENTAL TO COMMON EXCAVATION WITH NO DIRECT COMPENSATION PAID THEREFORE REGARDLESS OF THE BITUMINOUS THICKNESS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, TEMPORARY PLACEMENT, MAINTENANCE AND REINSTALLATION OF ALL MAIL BOXES WITHIN THE PROJECT AREA (INCIDENTAL).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SALVAGE, STORAGE, AND REINSTALLATION OF ALL SIGNS WHICH MAY NEED TO BE REMOVED DURING CONSTRUCTION (INCIDENTAL).
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL TREES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
6. PROTECT POWER POLES, AND LIGHT POLES UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL SPRINKLER SYSTEMS. IF A SPRINKLER SYSTEM IS DAMAGED THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING THE DAMAGE (INCIDENTAL). ALL SYSTEMS ARE NOT SHOWN ON PLANS.
8. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL UNDERGROUND FENCE SYSTEMS. IF AN UNDERGROUND FENCE SYSTEM IS DAMAGED THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING THE DAMAGE (INCIDENTAL). ALL SYSTEMS ARE NOT SHOWN ON PLANS.
9. REMOVAL LIMITS EXTEND 10-FEET BEHIND THE BACK OF CURB OR EDGE OF THE GRAVEL. AT UTILITY SERVICES THE REMOVAL LIMITS EXTEND TO THE RIGHT OF WAY AND 15-FEET ON EACH SIDE OF THE SERVICE. THE REMOVAL LIMITS SHOWN AND DESCRIBED IN THE PLAN ARE APPROXIMATE. ACTUAL REMOVAL LIMITS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
10. THE CONTRACTOR SHALL SALVAGE AND REINSTALL LANDSCAPE ROCK AND LANDSCAPE MULCH LOCATED WITHIN THE REMOVAL LIMITS AS DIRECTED.
11. CONTRACTOR SHALL COORDINATE THE RELOCATION OF ALL LIGHT POLES/POWER POLES WITH SHAKOPEE PUBLIC UTILITIES (INCIDENTAL).
12. PROTECTION AND/OR THE SALVAGE AND REINSTALLATION OF ALL ITEMS SHALL BE INCIDENTAL UNLESS THE PROPOSAL INCLUDES A LINE ITEM FOR THE SPECIFIC TASK.
13. REMOVAL AND DISPOSAL OF SHRUBS AND BUSHES INSIDE OF THE APPROVED REMOVAL LIMITS SHALL BE CONSIDERED INCIDENTAL.
14. THE CONTRACTOR MAY BE ABLE TO PROTECT SOME OF THE ITEMS THE ENGINEER IS CALLING OUT AS SALVAGE AND REINSTALL.
15. TRIMMING OF TREES NECESSARY TO INSTALL THE SANITARY SEWER IS INCIDENTAL TO SEWER INSTALLATION.
16. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO EXCAVATION/CONSTRUCTION.
17. ALL DRIVEWAYS SHALL BE REPLACED IN KIND (SEE DETAIL FOR MIN SECTION).
18. RADIUS TO THE BACK OF CURB AT ALL INTERSECTIONS IS 20' UNLESS OTHERWISE NOTED.
19. EXCESS EXCAVATED MATERIAL THAT CANNOT BE USED ON THE SITE SHALL BECOME PROPERTY OF THE CONTRACTOR, AND SHALL BE DISPOSED OFF-SITE AT THE CONTRACTOR'S EXPENSE.
20. DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
21. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
22. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL RESIDENTS. THE CONTRACTOR SHALL RESTORE ALL DRIVEWAYS AND THE ROADWAY WITH CLASS 5 OR MILLINGS AT THE END OF EACH WORK DAY TO THE SATISFACTION OF THE ENGINEER. TEMPORARY RESTORATION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
23. THE CONTRACTOR SHALL KEEP ALL CITY STREETS CLEAN AND FREE OF DEBRIS. (INCIDENTAL)
24. THE CONTRACTOR SHALL INSTALL SEDIMENT FILTERS AT ALL CATCH BASINS.
25. CONTRACTOR IS RESPONSIBLE FOR VERIFYING WITH THE SURVEYOR HOW CATCH BASINS ARE STAKED.
26. ALL STORM SEWER STRUCTURES SHALL BE PRECAST.
27. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING INVERT ELEVATIONS AT STORM SEWER CONNECTION POINTS PRIOR TO CONSTRUCTING PRECAST STRUCTURES.
28. SHAKOPEE PUBLIC UTILITIES WILL BE REPLACING STREET LIGHTS AND STREET LIGHT WIRING IN THE PROJECT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL LIGHTING WORK WITH SHAKOPEE PUBLIC UTILITIES.
29. SANITARY SEWER SERVICE PIPE SHALL BE PVC SDR 26 UNLESS OTHERWISE NOTED.
30. PROPOSED SERVICE LOCATIONS SHOWN ON PLANS ARE SHOWN IN AN APPROXIMATE WAY. THE EXACT LOCATION OF THE PROPOSED SERVICES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
31. THE CONTRACTOR SHALL INSTALL A STEEL POST OR A 2x2 WOOD POST LOCATING THE SANITARY SEWER SERVICE LATERALS AS DIRECTED BY THE ENGINEER. THE POST SHALL BE BROUGHT TO THE SURFACE TO ALLOW THE SURVEY CREW TO RECORD THE LOCATION. THE CONTRACTOR SHALL PROTECT THE LOCATING POLE AND COORDINATE WITH THE SURVEY CREW PRIOR TO GRADING THE BOULEVARD FOR SOD. THE CONTRACTOR SHALL REMOVE ALL MARKER POSTS AFTER THE SURVEY CREW HAS GATHERED THE NECESSARY INFORMATION.
32. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE AND ELEVATION OF EXISTING UTILITIES AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION.
33. ALL CONNECTIONS TO EXISTING SANITARY OR STORM SEWER SHALL BE WATERTIGHT AND APPROVED BY THE ENGINEER.
34. ALL WORK DONE IN COUNTY RIGHT OF WAY SHALL BE COMPLETED IN ACCORDANCE WITH THE SCOTT COUNTY RIGHT OF WAY PERMIT.

NOTE: DETAILS ARE NOT TO SCALE



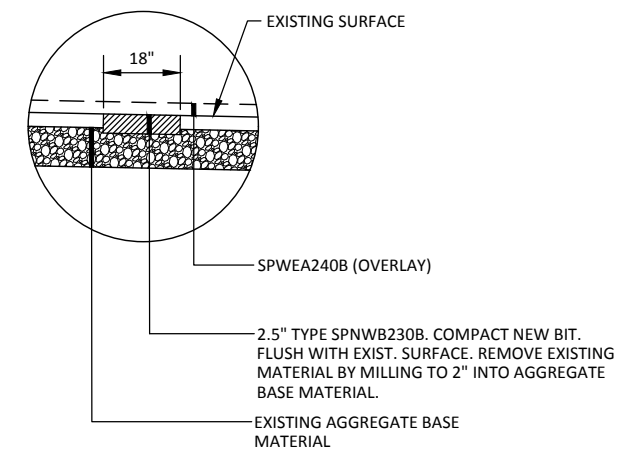
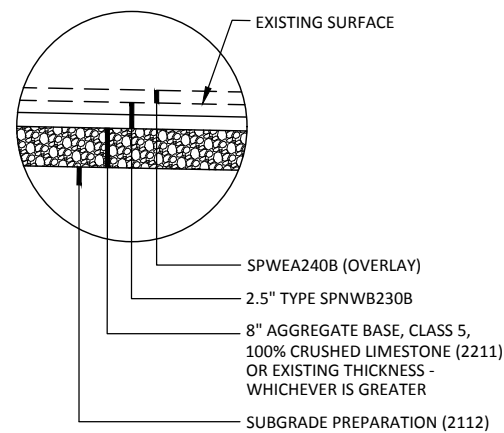
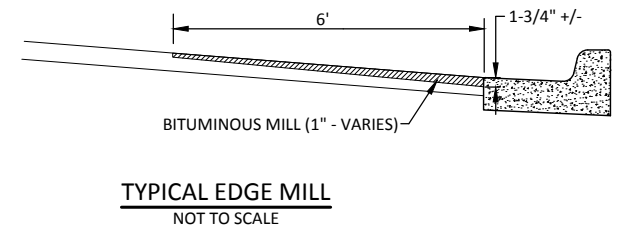
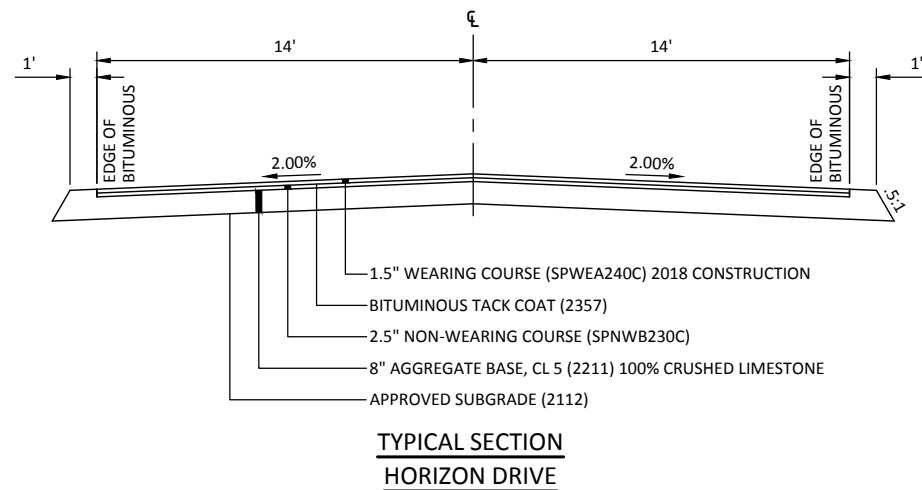
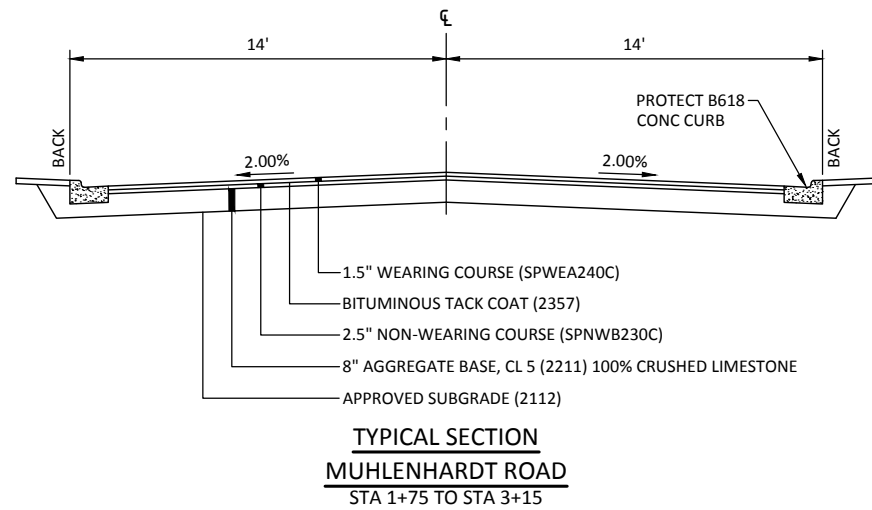
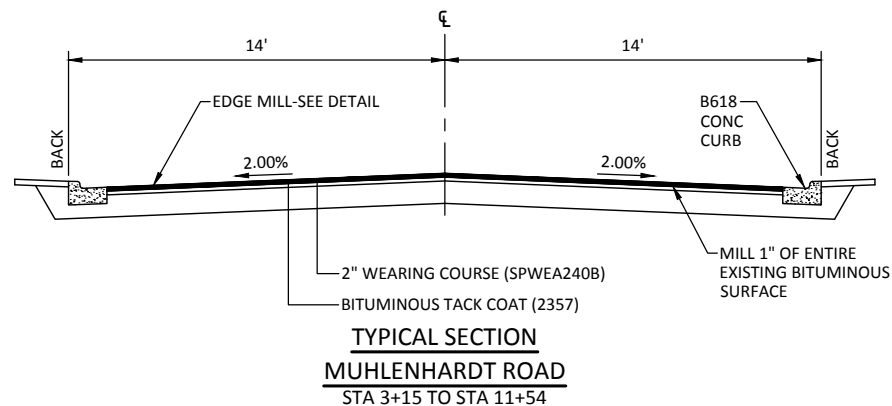
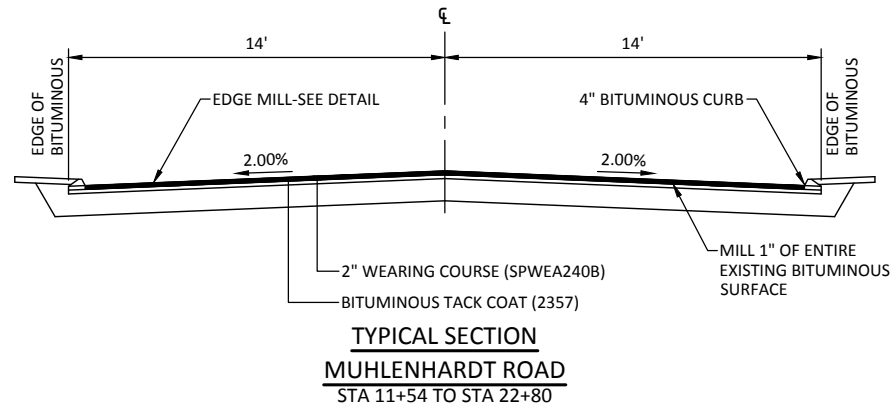
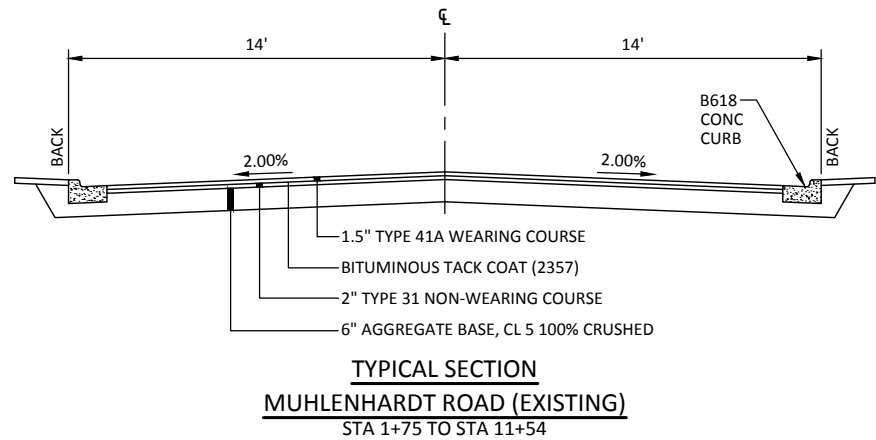
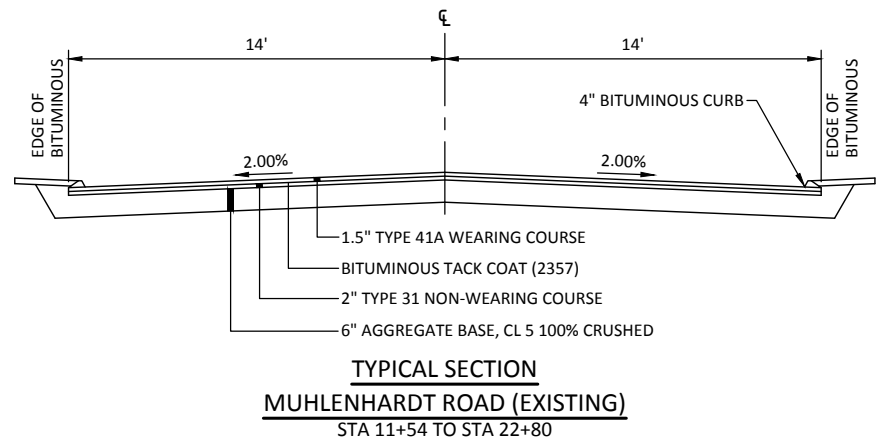
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JEFFREY WEYANDT	
LIC. NO. 41342	DATE XX/XX/XXXX

DESIGNED KED
DRAWN DDS
CHECKED JJW

CITY OF SHAKOPEE, MINNESOTA
WHISPERING OAKS SANITARY SEWER EXTENSION
CONSTRUCTION NOTES



NOTE: DETAILS ARE NOT TO SCALE



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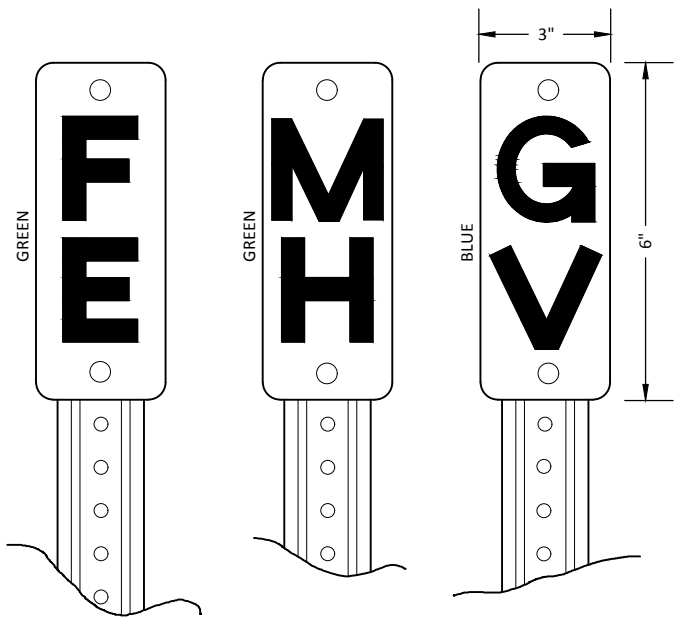
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**CITY OF SHAKOPEE, MINNESOTA**  
**WHISPERING OAKS SANITARY SEWER EXTENSION**  
**DETAILS**

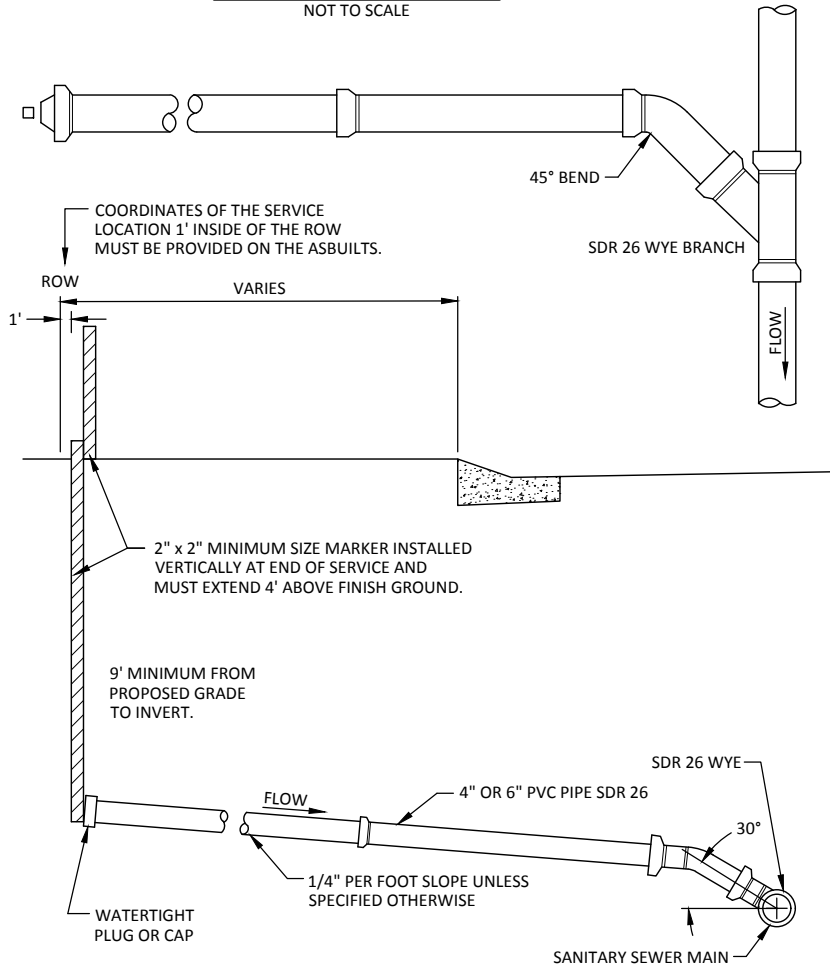
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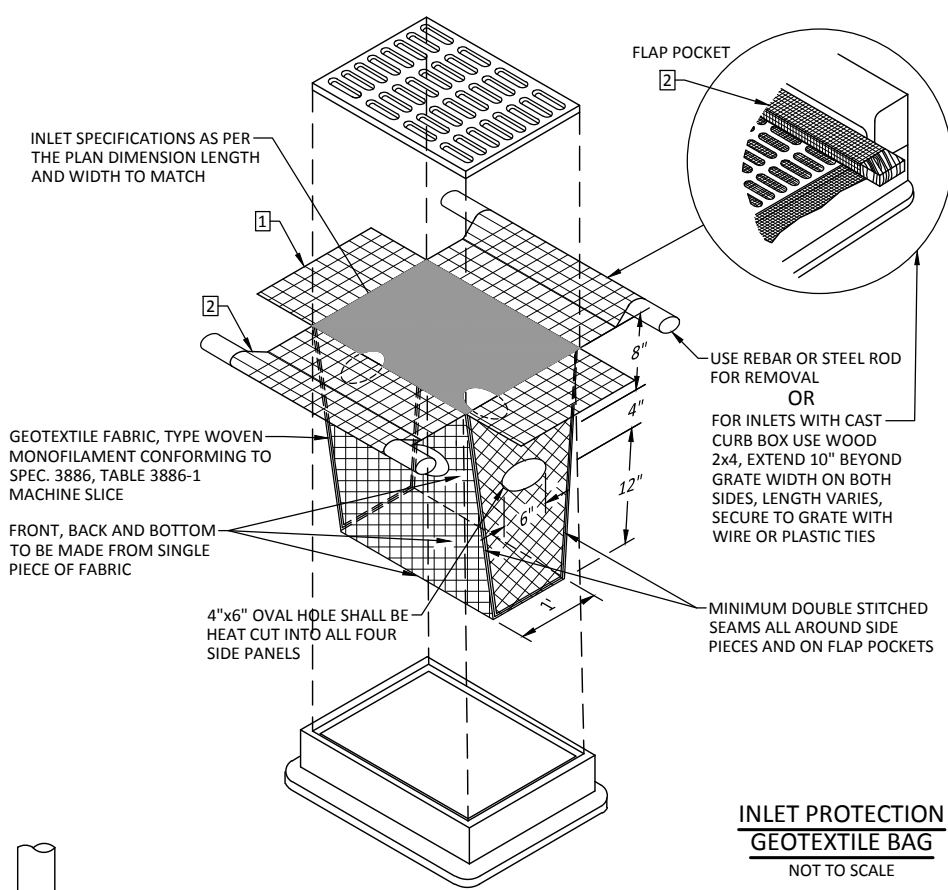
NOTE:  
3" x 6" STRUCTURE MARKER SIGNS SHALL BE FURNISHED AND INSTALLED FOR ALL STRUCTURES LOCATED OUTSIDE OF THE STREET RIGHT OF WAY AND SHALL BE CONSIDERED INCIDENTAL.  
0.063" THICK ALUMINUM SIGN. BLACK LETTERS ON GREEN OR BLUE HIGH INTENSITY REFLECTORIZED BACKGROUND.  
U-CHANNEL POST, MINIMUM 1.2 LB./FT. 6'-6" LONG, PAINTED GREEN.  
FLARED END SECTION POST SHALL NOT BE POSITIONED IN A WAY THAT WILL BLOCK FLOW.

#### STRUCTURE MARKER SIGN NOT TO SCALE



#### SANITARY SEWER SERVICE NOT TO SCALE

NOTE: DETAILS ARE NOT TO SCALE



#### INLET PROTECTION GEOTEXTILE BAG NOT TO SCALE

NEENAH R-1642 (OR EQUAL)  
LETTERING TO READ SANITARY SEWER  
WITH CONCEALED PICKHOLES

- 1 RUBBER GASKET.
- 2 FLEXIBLE WATERTIGHT SEAL TO BE APPROVED BY ENGINEER.
- 3 SHAPE, DEPTH AND SLOPE OF INVERT TO BE APPROVED BY ENGINEER.
- 4 STEEL REINFORCED PLASTIC STEPS SHALL BE A POLYPROPYLENE PLASTIC REINFORCED WITH A NO. 2 DEFORMED STEEL ROD GRADE 60.
- 5 MN/DOT TYPE "B" ECCENTRIC PRECAST CONCRETE CONE SECTION TYPICAL FOR ALL MANHOLES.
- 6 CONCRETE ADJUSTING RINGS MINIMUM 2 RINGS (4 INCHES) MAXIMUM 18" INCLUDING CASTING.

6" MIN. INTEGRAL PRECAST CONCRETE BASE  
REFER TO PLANS FOR PIPE REQUIRED

#### STANDARD SANITARY MANHOLE NOT TO SCALE

NOTES:  
1 INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENTS EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL IN THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

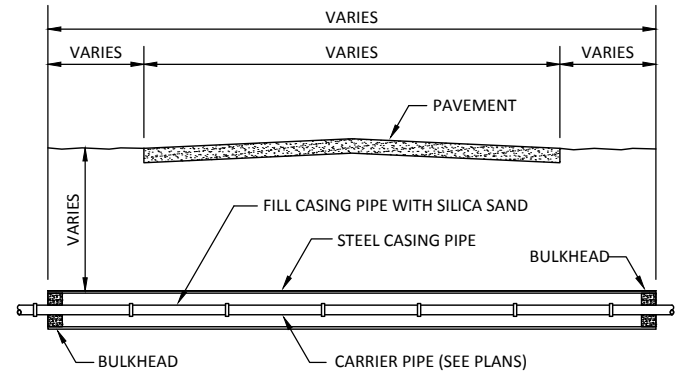
2 FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2x4.

INSTALLATION NOTES:  
DO NOT INSTALL PROTECTION IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

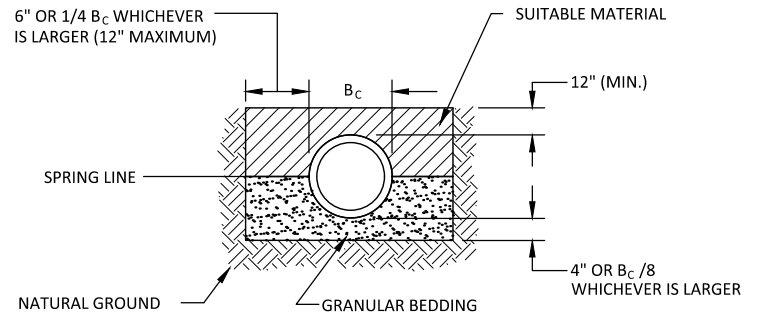
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CLUNCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



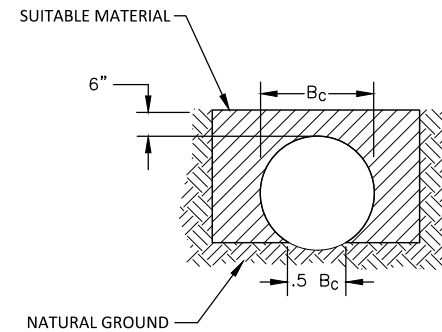
NOTE:  
PIPE SHALL HAVE RESTRAINED JOINTS CARRIER PIPE SHALL BE INSTALLED USING SKIDS & BRACING FOR CARRIER PIPE. SEE SPECIFICATIONS FOR CASING PIPE WALL THICKNESS.

#### BORING



NOTE: ALL COSTS OF EXCAVATION BELOW GRADE AND PLACEMENT OF GRANULAR BEDDING SHALL BE INCLUDED IN THE BID PRICES FOR PIPE ITEMS, UNLESS SPECIFIC BID QUANTITIES ARE LISTED FOR GRANULAR BEDDING FOR WATERMAIN.

#### CLASS "B" PIPE BEDDING



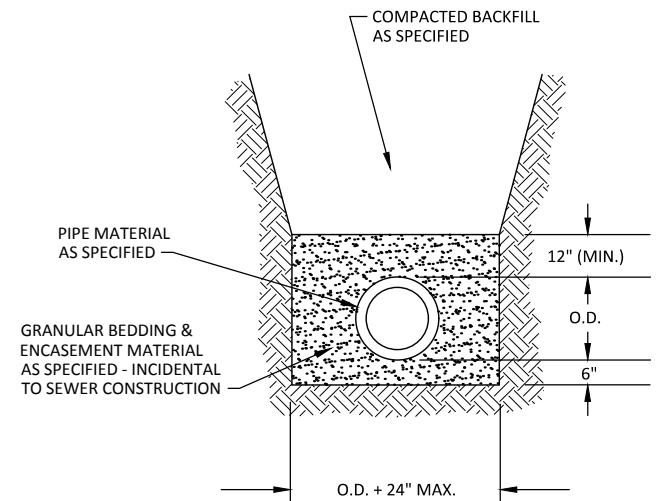
THE BOTTOM OF THE TRENCH SHALL BE SHAPED TO FIT THE PIPE BARREL FOR AT LEAST 50% OF THE OUTSIDE DIAMETER. THE REMAINDER OF THE PIPE IS SURROUNDED TO HEIGHT OF AT LEAST 6" ABOVE IT'S TOP BY SELECT FILL MATERIALS, PLACED BY HAND TOOLS AND COMPACTED TO COMPLETELY FILL ALL SPACES UNDER AND ADJACENT TO THE PIPE.

NOTE: ALL COSTS OF EXCAVATION BELOW GRADE AND PLACEMENT OF GRANULAR BEDDING SHALL BE INCLUDED IN THE BID PRICES FOR PIPE ITEMS.

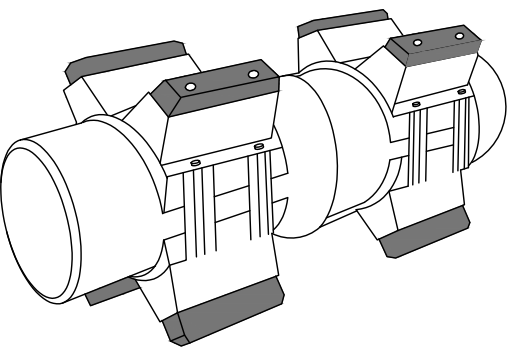
#### CLASS "C" PIPE BEDDING

#### RCP STORM SEWER

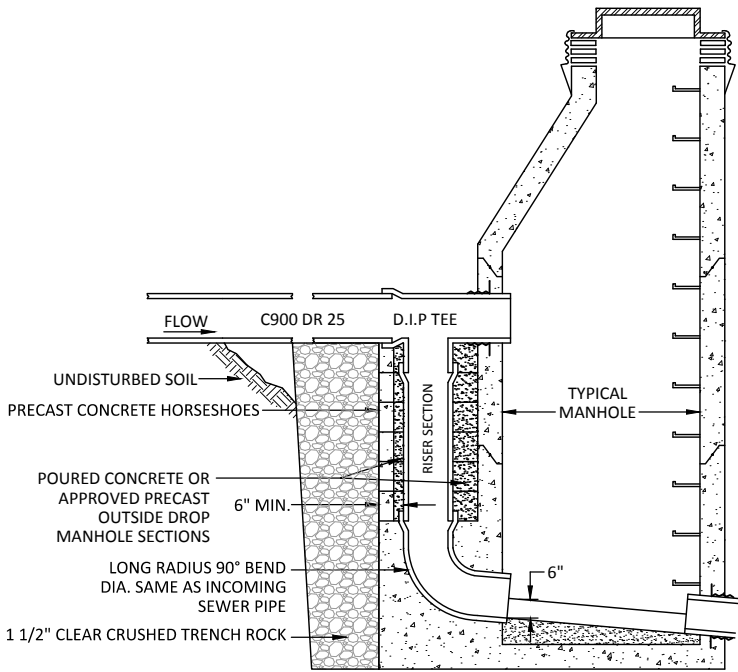
#### PIPE BEDDING NOT TO SCALE



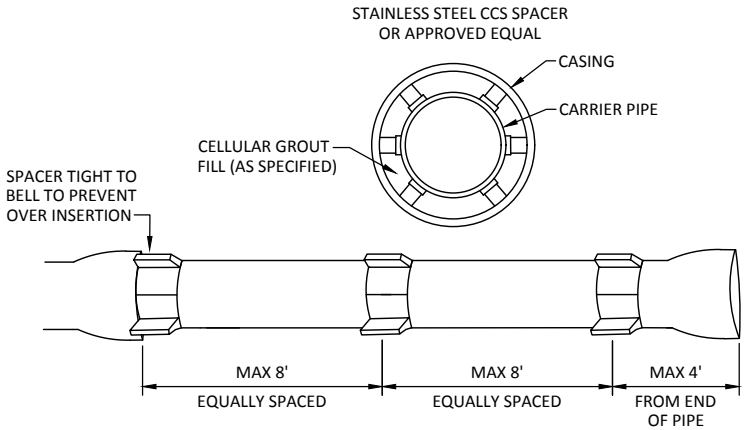
#### PVC SANITARY SEWER



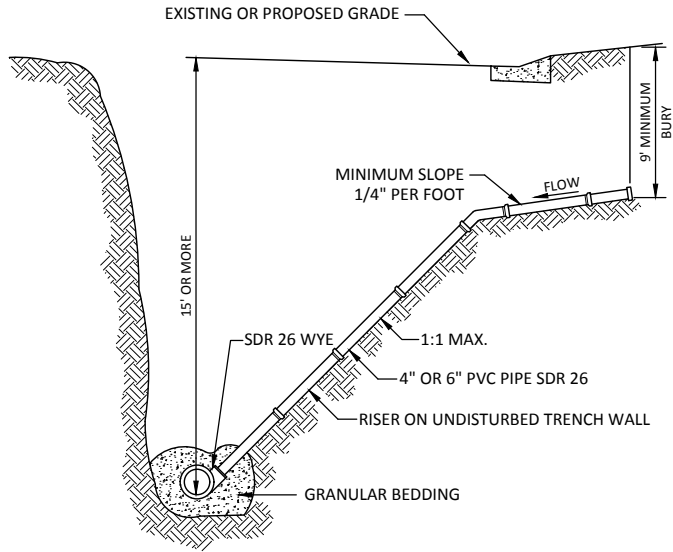
STAINLESS STEEL CCS SPACERS AS SPECIFIED  
NOT TO SCALE



SANITARY MANHOLE WITH OUTSIDE DROP  
NOT TO SCALE



PIPE SUPPORT  
IN CASING & STAINLESS STEEL SPACERS  
NOT TO SCALE



SANITARY SEWER RISER  
NOT TO SCALE

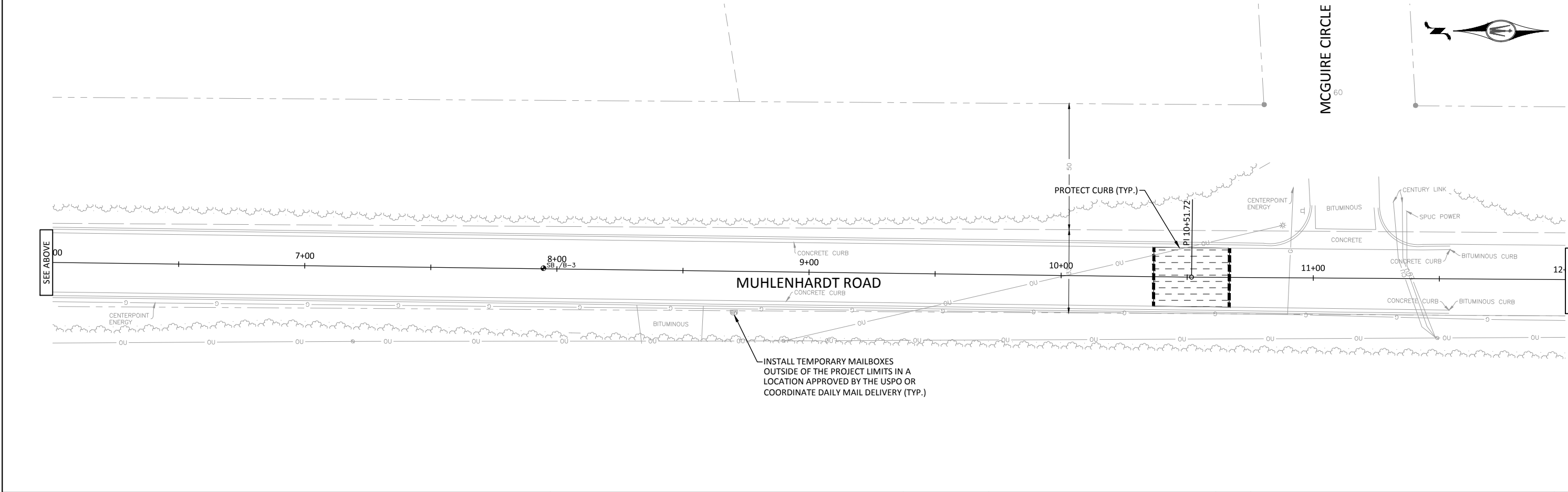
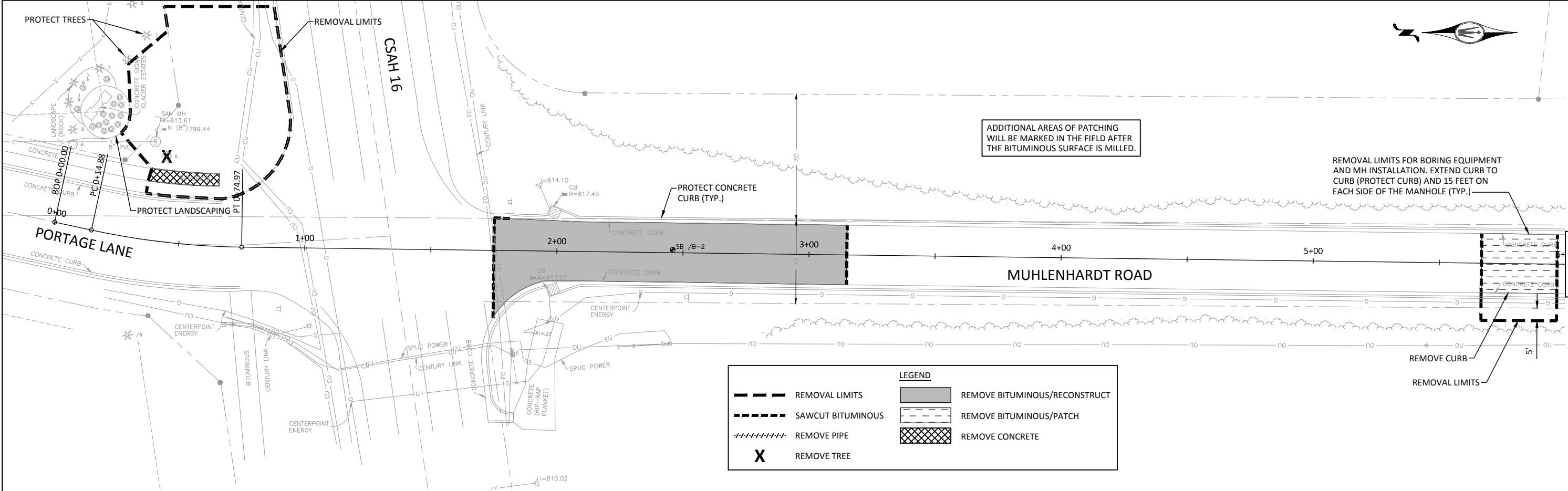
NOTE: DETAILS ARE NOT TO SCALE

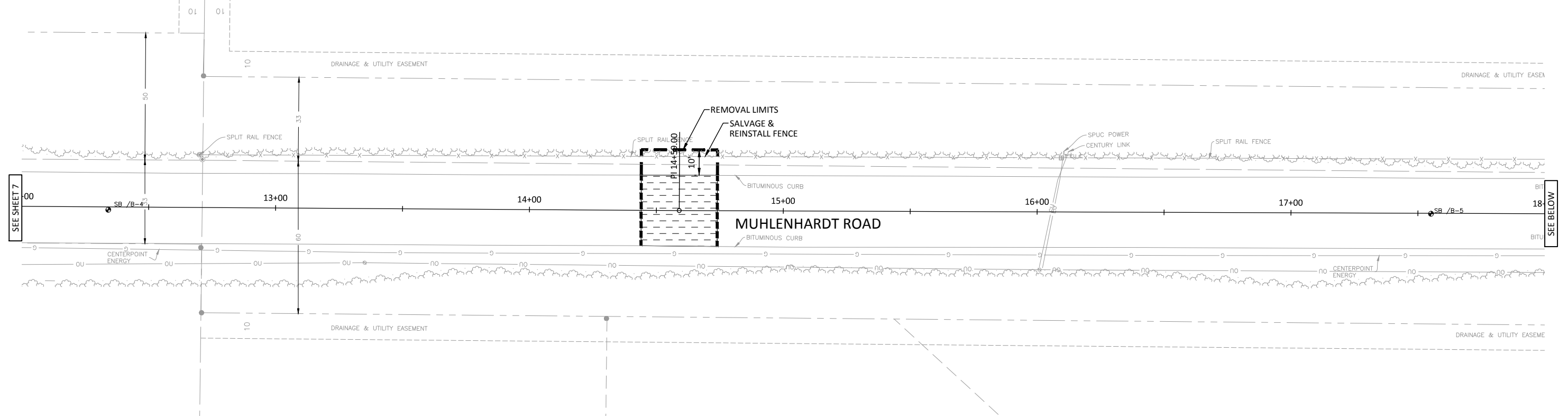
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JEFFREY WEYANDT		
LIC. NO.	41342	DATE XX/XX/XXXX

DESIGNED KED
DRAWN DDS
CHECKED JJW

CITY OF SHAKOPEE, MINNESOTA	
WHISPERING OAKS SANITARY SEWER EXTENSION	
DETAILS	



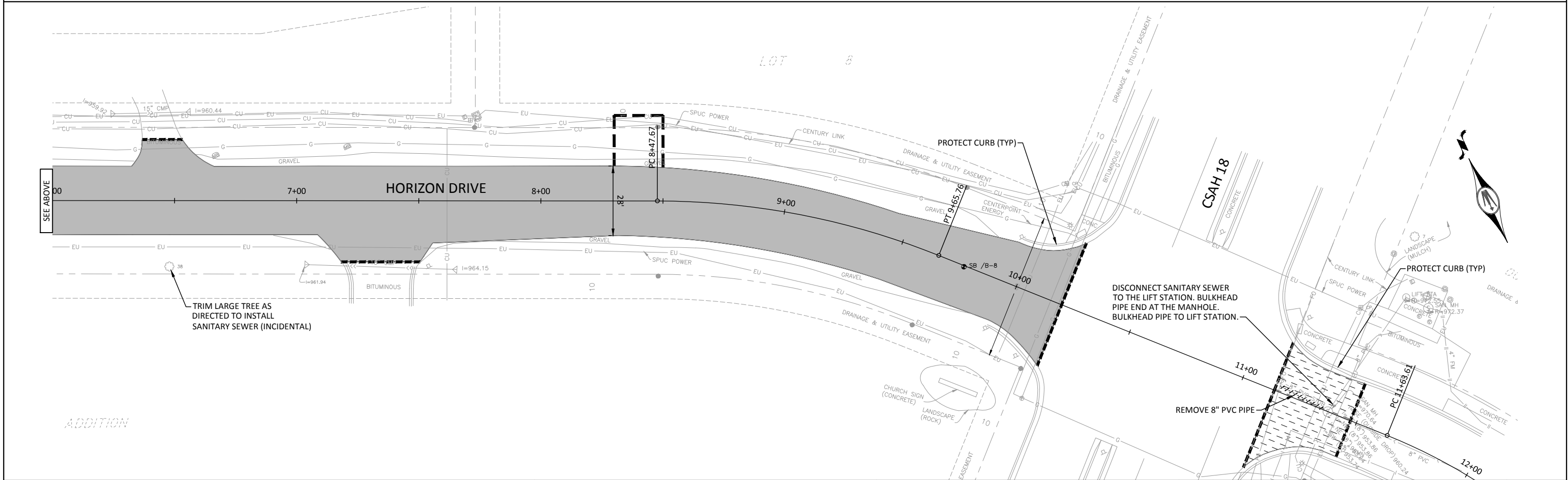
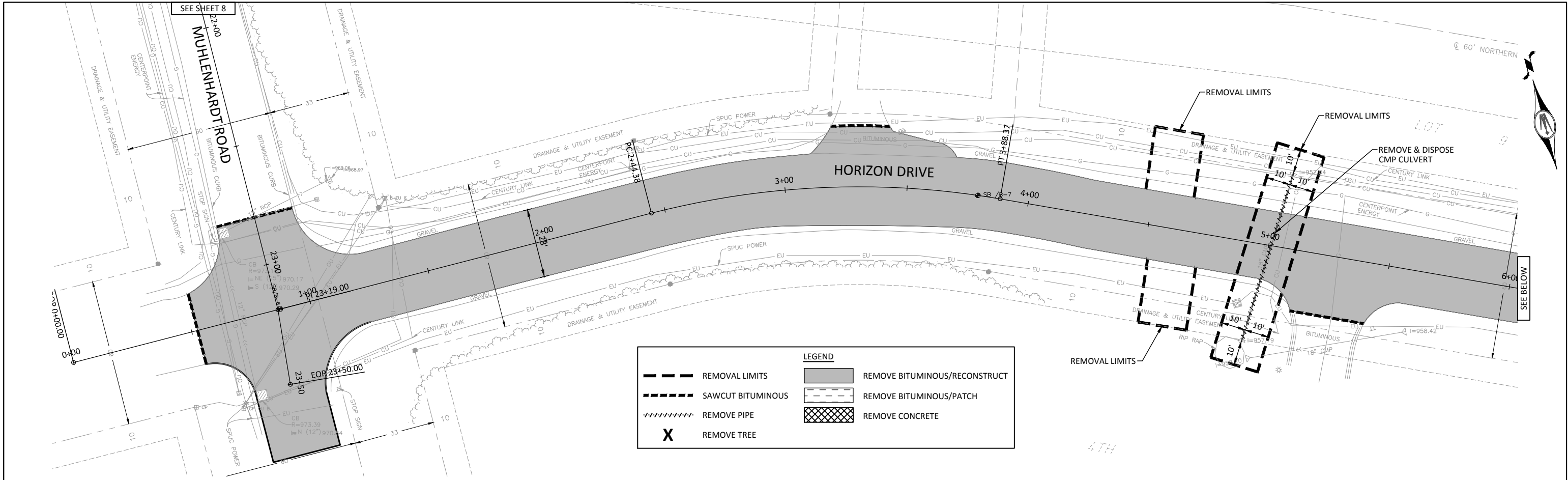


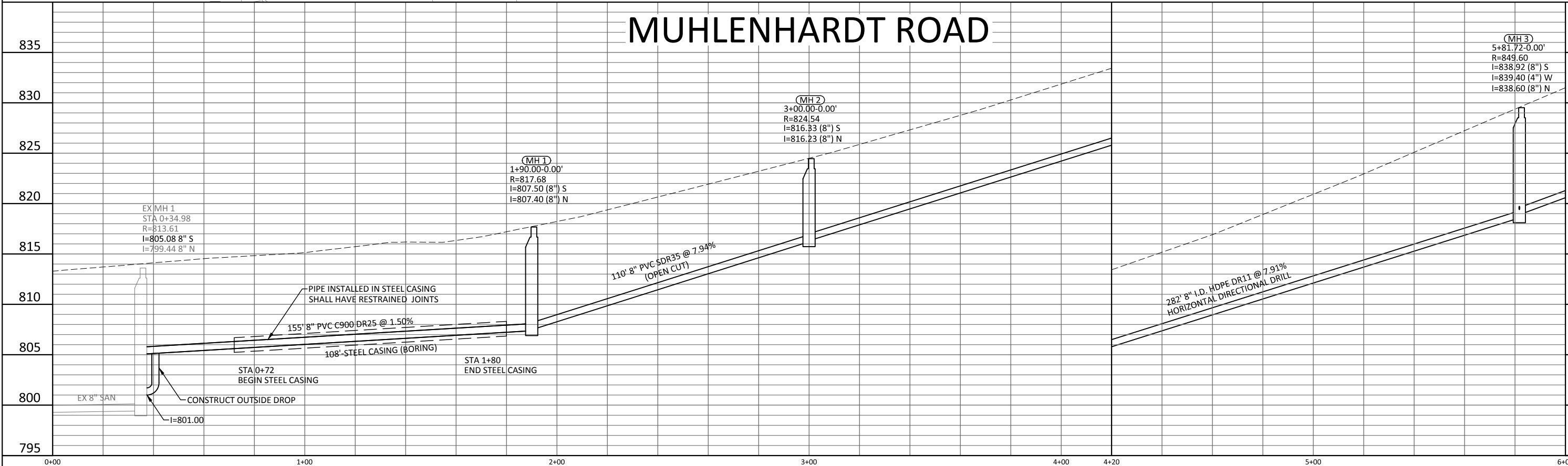
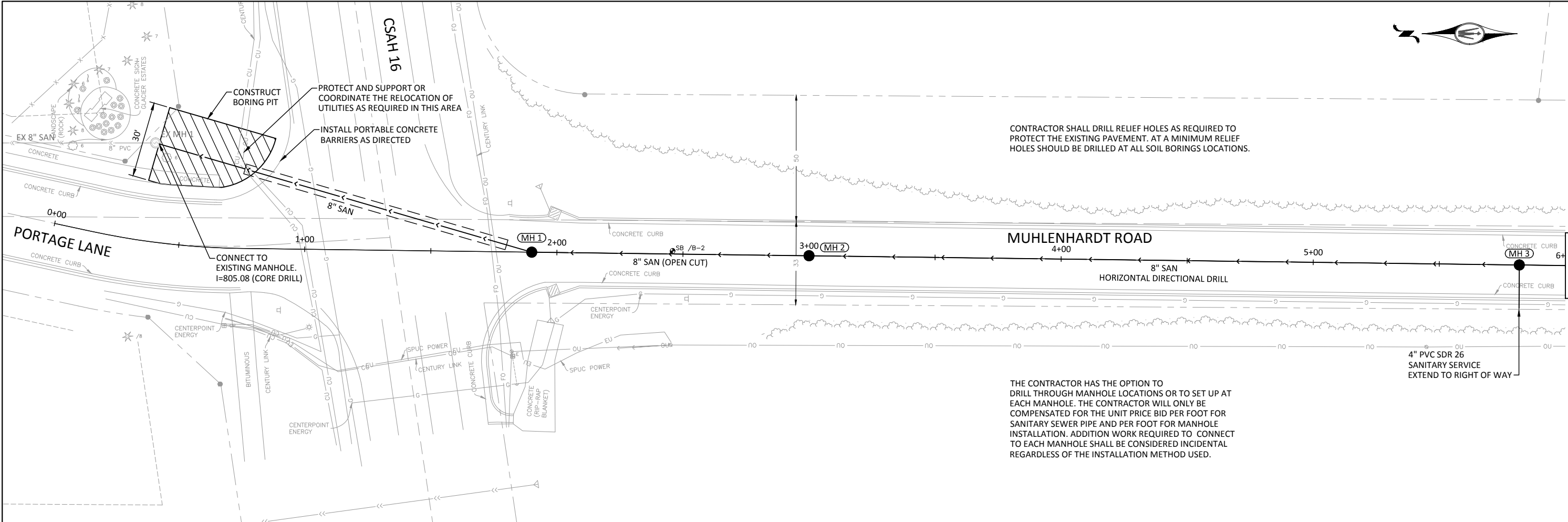
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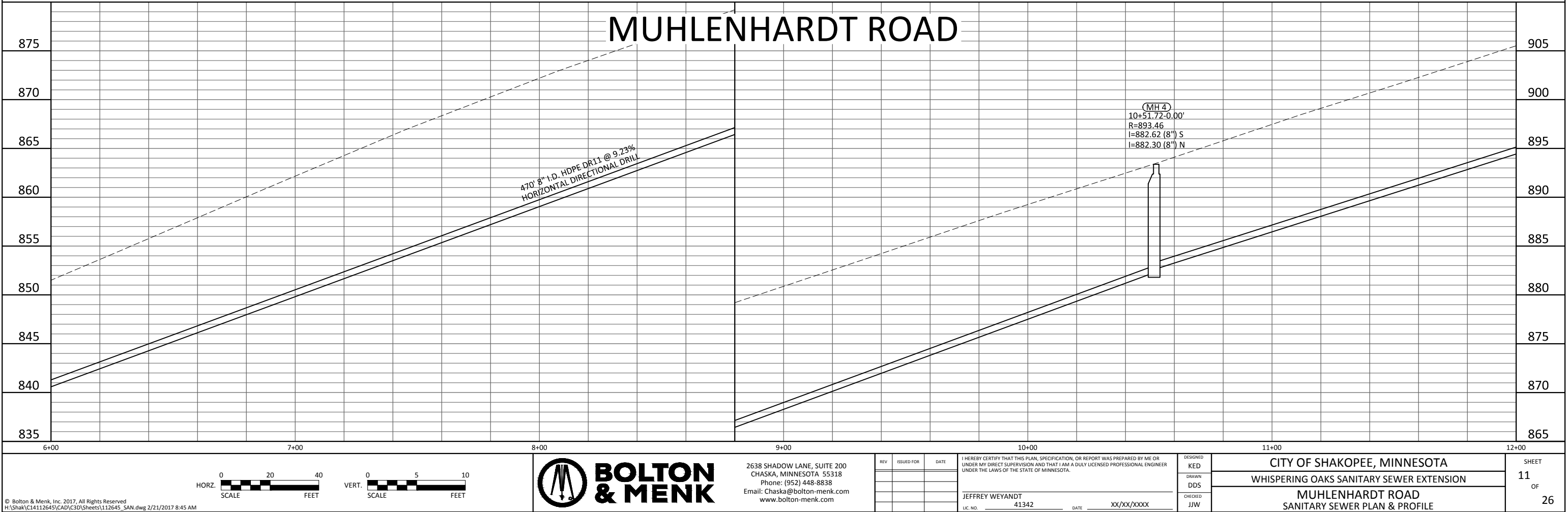
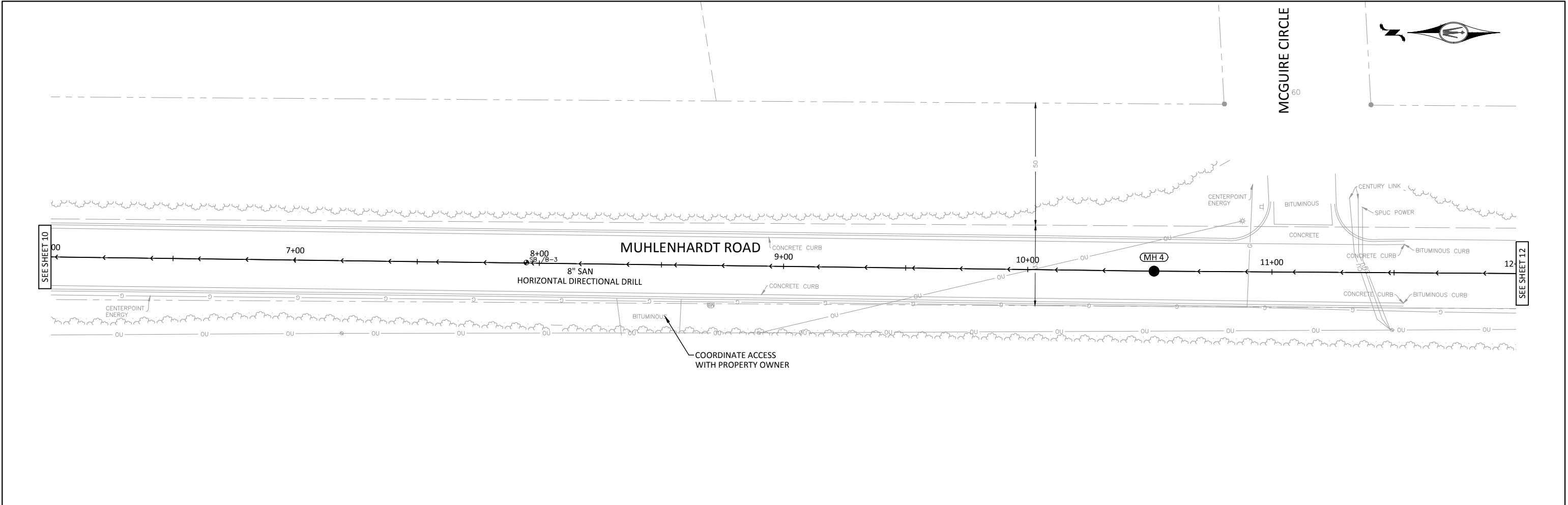
JEFFREY WEYANDT  
LIC. NO. 41342 DATE XX/XX/XXXX

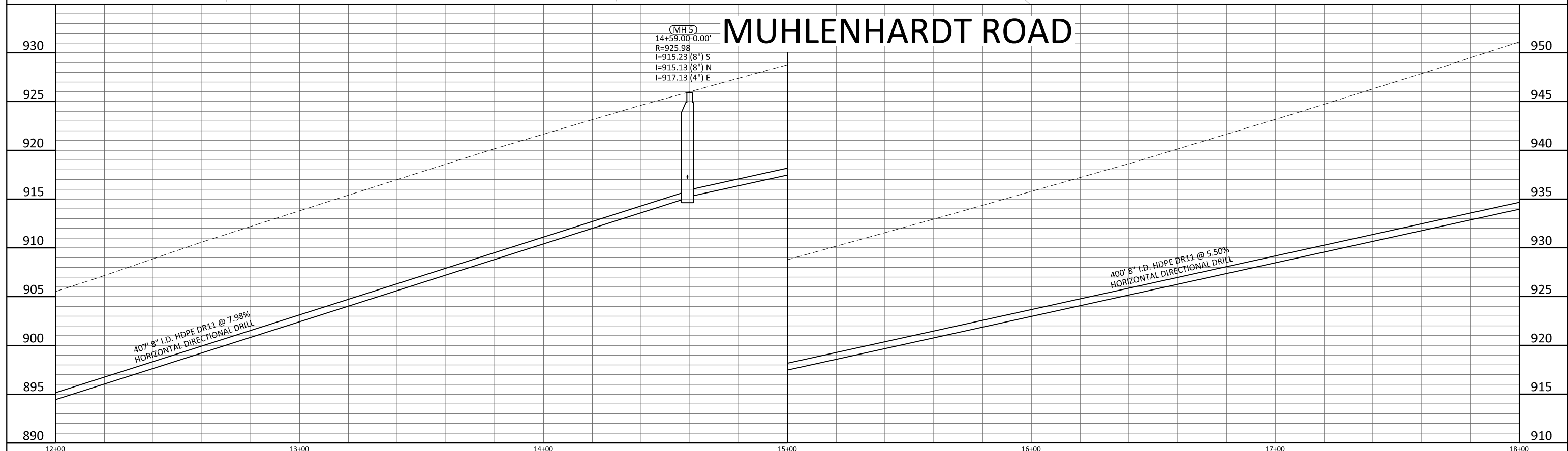
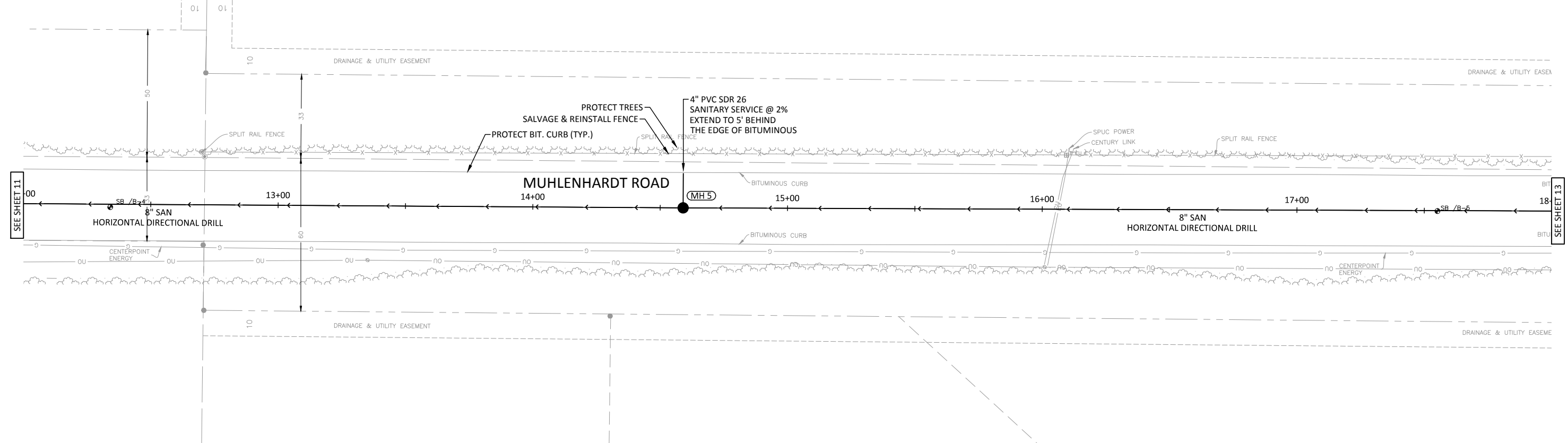
CITY OF SHAKOPEE, MINNESOTA  
WHISPERING OAKS SANITARY SEWER EXTENSION  
MUHLENHARDT ROAD  
EXISTING CONDITIONS & REMOVAL PLANS

26



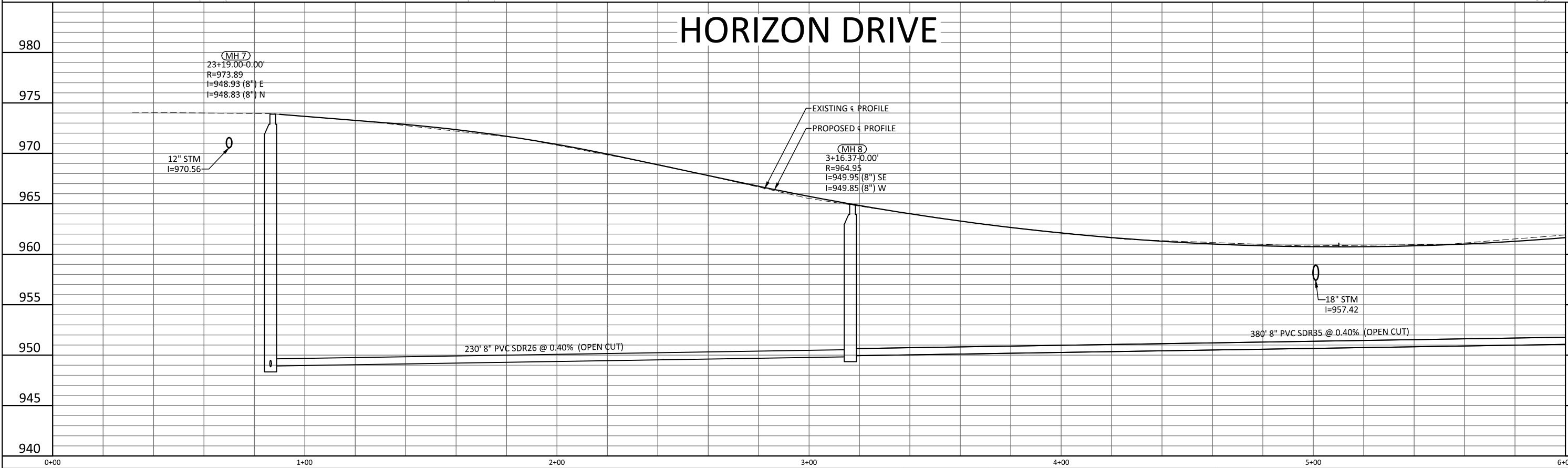
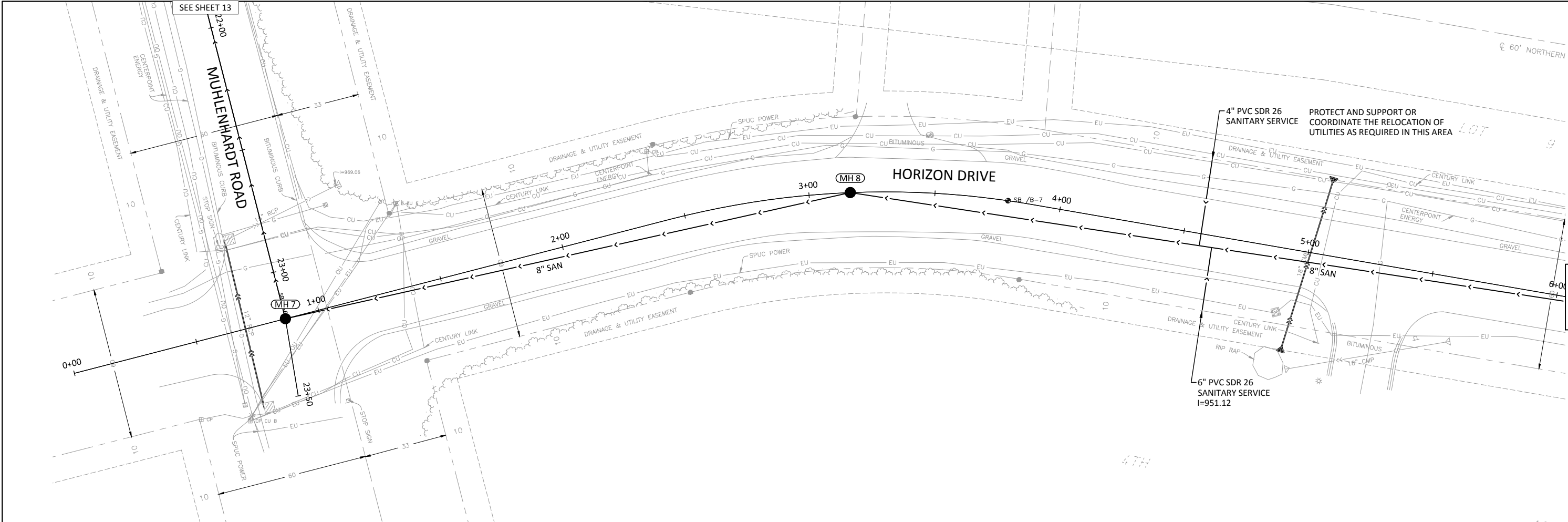




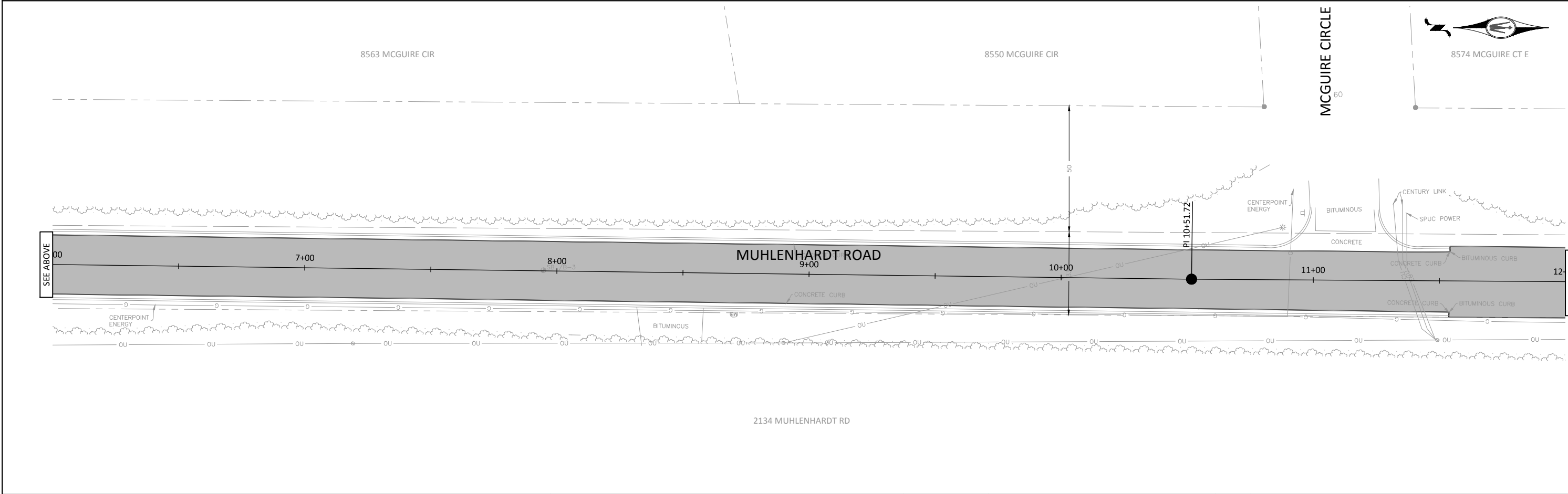
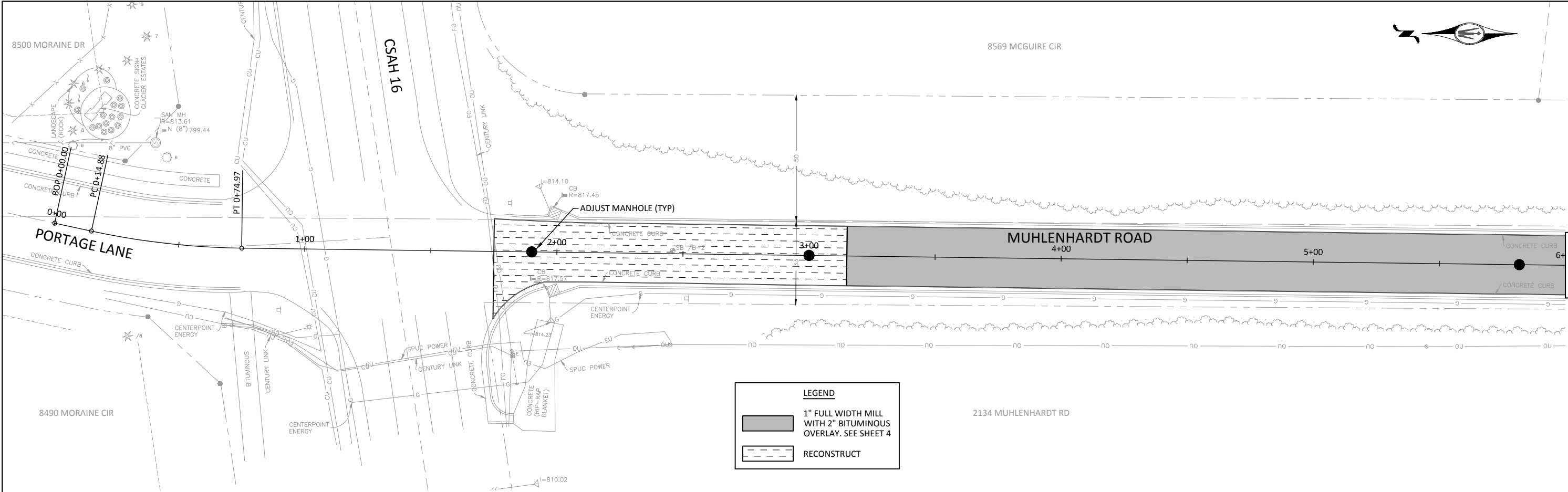


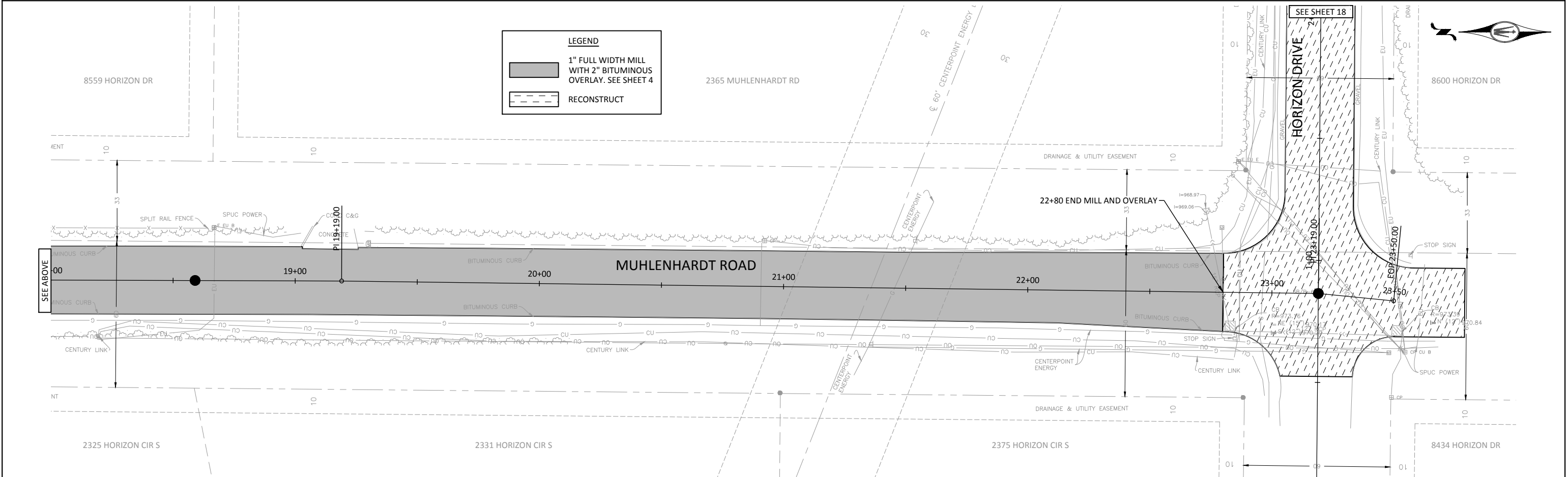
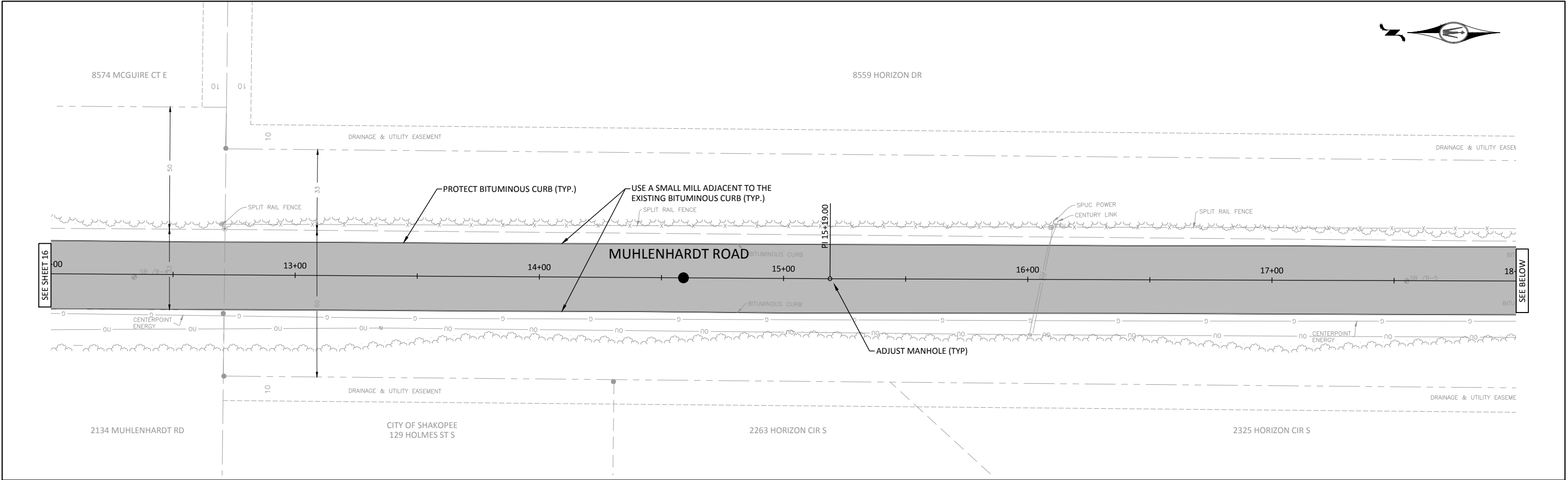


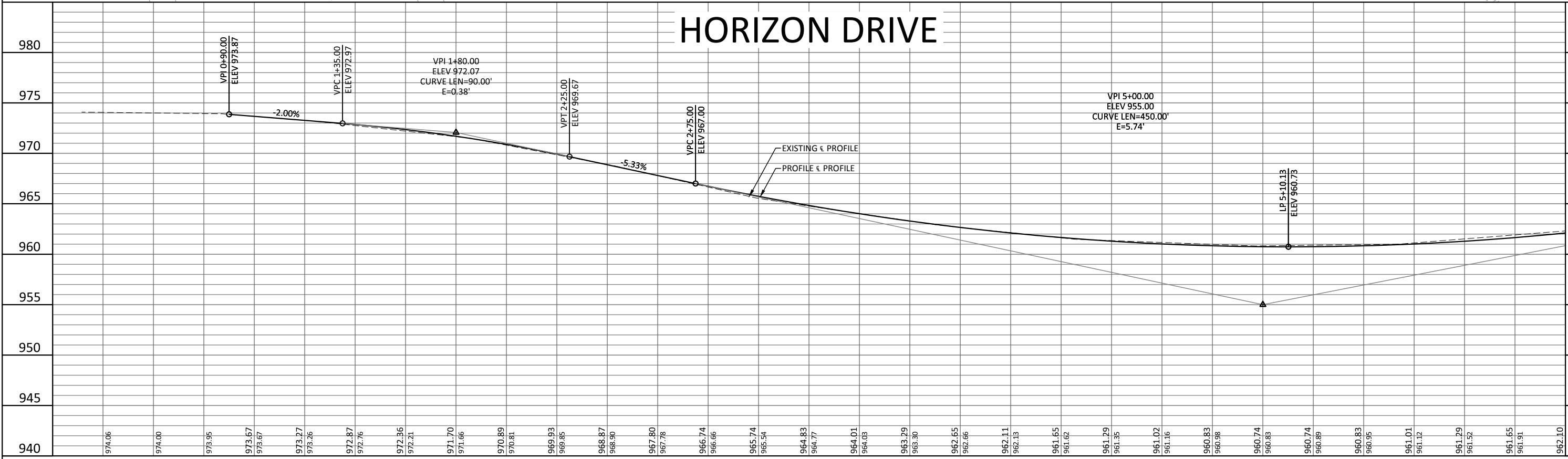
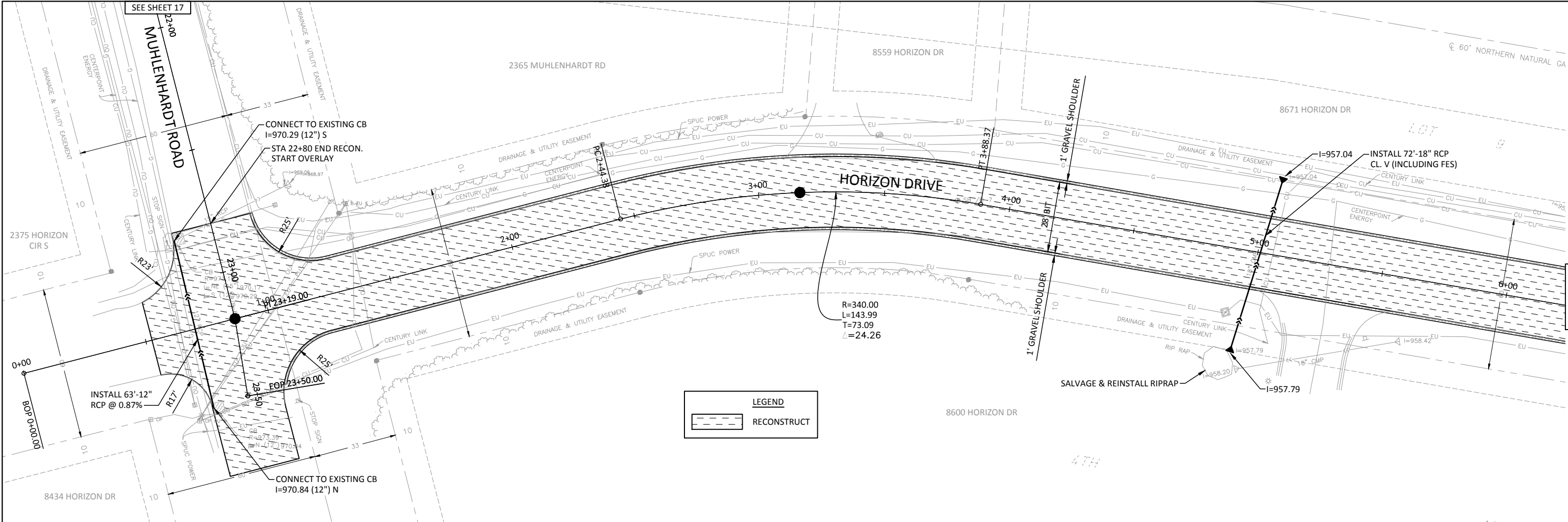


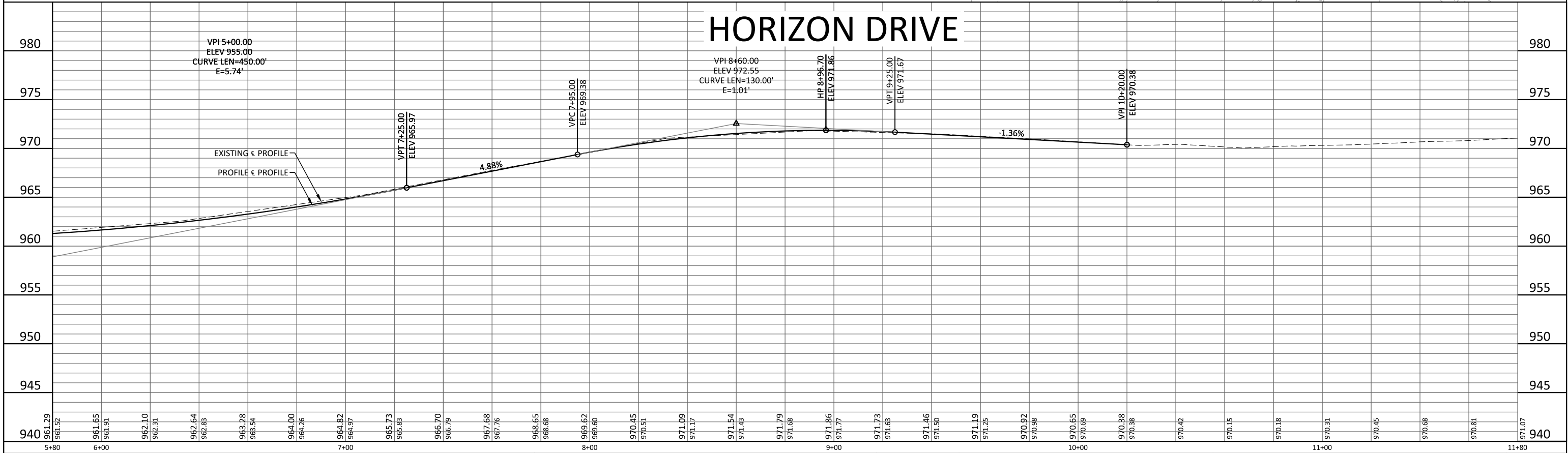
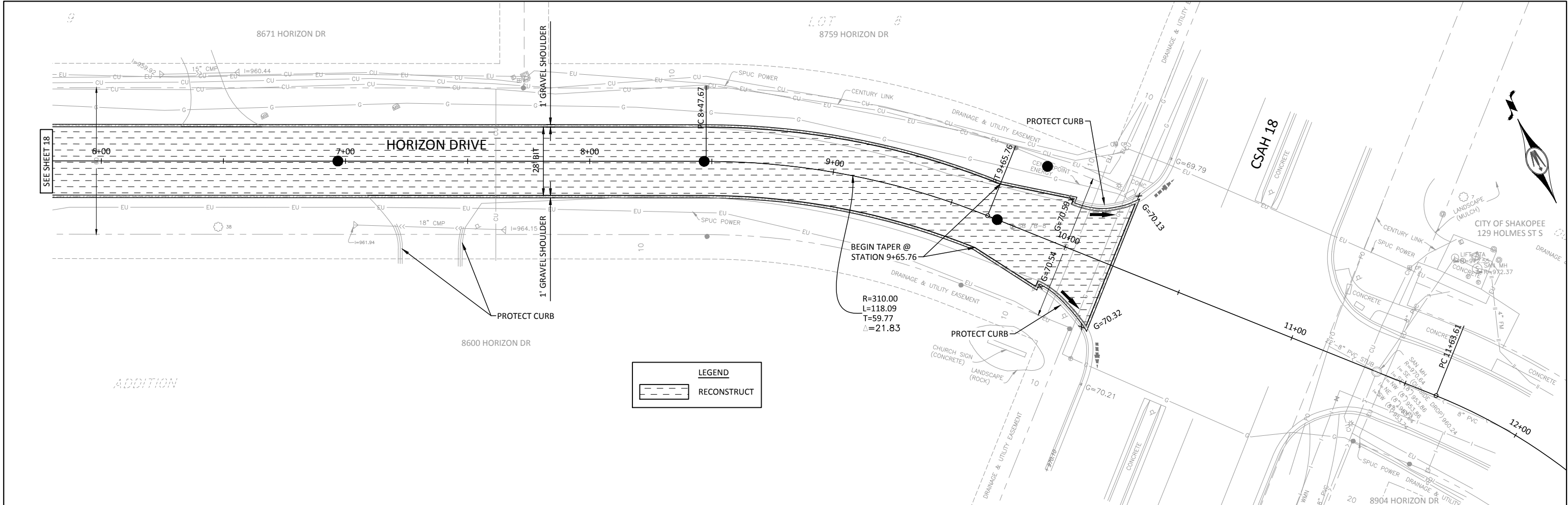












0 20 40  
HORIZ. SCALE FEET

0 5 10  
VERT. SCALE FEET

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CHASKA, MINNESOTA 55318  
Phone: (952) 448-8838  
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www.bolton-menk.com

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JEFFREY WEYANDT  
LIC. NO. 41342 DATE XX/XX/XXXX

DESIGNED  
KED

DRAWN  
DDS

CHECKED  
JJW

CITY OF SHAKOPEE, MINNESOTA

WHISPERING OAKS SANITARY SEWER EXTENSION

HORIZON DRIVE  
STREET CONSTRUCTION

SHEET  
19  
OF  
26

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STAGING NARRATIVE:

GENERAL NOTES:

- ACCESS TO RESIDENCES & BUSINESSES SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE CONTRACT.
- THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED. IN PLACE SIGNING MUST ALSO BE MAINTAINED OR TEMPORARILY RELOCATED FOR CONSTRUCTION ACTIVITIES.
- FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
- QUANTITIES FOR TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION ONLY. THE ITEM "TRAFFIC CONTROL" COVERS ALL DEVICES SHOWN ON THE PLAN SHEETS AND OTHER SETUPS REQUIRED BY THE CONTRACTOR'S OPERATIONS SUCH AS, BUT NOT LIMITED TO, MILLING & PAVING UNDER TRAFFIC, TEMPORARY ROAD CLOSURES, ADJUSTMENTS TO THE TRAFFIC CONTROL PLAN FOR CONSTRUCTION OPERATIONS, STAGED UTILITY INSTALLATION, TRANSITIONING TRAFFIC FROM ONE STAGE TO ANOTHER, AND PAVEMENT MARKING INSTALLATION.
- THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MN MUTCD) AND INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS. TRAFFIC CONTROL NOT IN COMPLIANCE WITH MMUTCD WILL BE SUBJECT TO VIOLATION IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- TWO (2) ADDITIONAL "ROAD CLOSED TO THRU TRAFFIC" BARRICADE ASSEMBLIES WITH FLASHERS, FOUR (4) ADDITIONAL TYPE III BARRICADES, AND TEN (10) ADDITIONAL BARRELS SHALL BE AVAILABLE FOR USE BY THE PROJECT ENGINEER AT HIS DISCRETION AND SHALL BE INCLUDED IN THE PRICE BID FOR TRAFFIC CONTROL.
- LONGITUDINAL DROPOFFS SHALL BE SIGNED AS SHOWN IN THE "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" FIELD MANUAL UNLESS OTHERWISE REQUIRED BY THE MMUTCD.
- ALL EXCAVATIONS SHALL BE BACKFILLED AT THE END OF EACH DAY. A TEMPORARY AGGREGATE SURFACE SHALL BE INSTALLED AND MAINTAINED ON THE ROADWAY FOR LOCAL VEHICULAR TRAFFIC.
- BITUMINOUS RAMPING SHALL BE PROVIDED AT DRIVEWAY LOCATIONS, AT SIDE STREETS, AND AT PROJECT TERMINI. THE PLACEMENT AND REMOVAL OF THESE RAMPS SHALL BE CONSIDERED INCIDENTAL.
- PAVING OF THE WEARING COURSE SHALL BE COMPLETED UNDER TRAFFIC.
- THOROUGHLY CLEAN AND PREPARE THE BITUMINOUS SURFACE FOR BITUMINOUS TACK COAT TO THE SATISFACTION OF THE ENGINEER (INCIDENTAL).
- PLACE BITUMINOUS TACK COAT IN SECTIONS. PLACING TACK COAT ALONG THE ENTIRE LENGTH OF PAVING AT ONE TIME WILL NOT BE ALLOWED. TACK ALL VERTICAL EDGES WHEN TYING INTO DRIVEWAYS, EXISTING ROADWAYS, ETC.
- REMOVE EROSION CONTROL DEVICES AFTER TURF HAS ESTABLISHED.

STAGE 1: MUHLENHARDT ROAD CONSTRUCTION (MCGUIRE CIRCLE TO CSAH 16)




- PLACE TRAFFIC CONTROL ACCORDING TO STAGING & TRAFFIC CONTROL DETOUR PLANS FOR STAGE 1. ALL TRAFFIC CONTROL SHALL BE IN COMPLIANCE WITH MMUTCD GUIDELINES.
- INSTALL TEMPORARY EROSION & SEDIMENT CONTROL STRUCTURES AS NEEDED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- MAINTAIN LOCAL TRAFFIC AT ALL TIMES AS IDENTIFIED IN THE STAGING PLANS.
- REMOVE, SALVAGE, OR PROTECT ITEMS AS IDENTIFIED IN THE PLAN.
- DETERMINE LIMITS OF PATCHING IN FIELD WITH ENGINEER.
- REMOVE ALL TRAFFIC CONTROL SHOWN IN STAGING & TRAFFIC CONTROL & DETOUR PLANS FOR STAGE 1.




STAGE 2: MUHLENHARDT ROAD CONSTRUCTION (HORIZON DRIVE TO MCGUIRE CIRCLE)


- PLACE TRAFFIC CONTROL ACCORDING TO STAGING & TRAFFIC CONTROL DETOUR PLANS FOR STAGE 2. ALL TRAFFIC CONTROL SHALL BE IN COMPLIANCE WITH MMUTCD GUIDELINES.
- INSTALL TEMPORARY EROSION & SEDIMENT CONTROL STRUCTURES AS NEEDED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- MAINTAIN LOCAL TRAFFIC AT ALL TIMES AS IDENTIFIED IN THE STAGING PLANS.
- REMOVE, SALVAGE, OR PROTECT ITEMS AS IDENTIFIED IN THE PLAN.
- DETERMINE LIMITS OF PATCHING IN FIELD WITH ENGINEER.
- REMOVE ALL TRAFFIC CONTROL SHOWN IN STAGING & TRAFFIC CONTROL & DETOUR PLANS FOR STAGE 2.











STAGE 3: HORIZON DRIVE CONSTRUCTION (MUHLENHARDT ROAD TO CSAH 18)




- PLACE TRAFFIC CONTROL ACCORDING TO STAGING & TRAFFIC CONTROL DETOUR PLANS FOR STAGE 3. ALL TRAFFIC CONTROL SHALL BE IN COMPLIANCE WITH MMUTCD GUIDELINES.
- INSTALL TEMPORARY EROSION & SEDIMENT CONTROL STRUCTURES AS NEEDED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- MAINTAIN LOCAL TRAFFIC AT ALL TIMES AS IDENTIFIED IN THE STAGING PLANS.
- REMOVE, SALVAGE, OR PROTECT ITEMS AS IDENTIFIED IN THE PLAN.
- DETERMINE LIMITS OF SUBGRADE EXCAVATION WORK IN FIELD WITH ENGINEER.
- MAKE SUBGRADE CORRECTIONS PER TYPICAL SECTION OR AS DEEMED NECESSARY BY THE ENGINEER.
- REMOVE ALL TRAFFIC CONTROL SHOWN IN STAGING & TRAFFIC CONTROL & DETOUR PLANS FOR STAGE 3.

(J1)	TRAFFIC CONTROL - DEVICES		
LEGEND	DESIGNATION	SIZE	COLOR
	TYPE III	6" MIN	ORANGE ON WHITE
	TYPE "A"	FLASHER	
	DRUM	18' X 36"	WHITE ON ORANGE

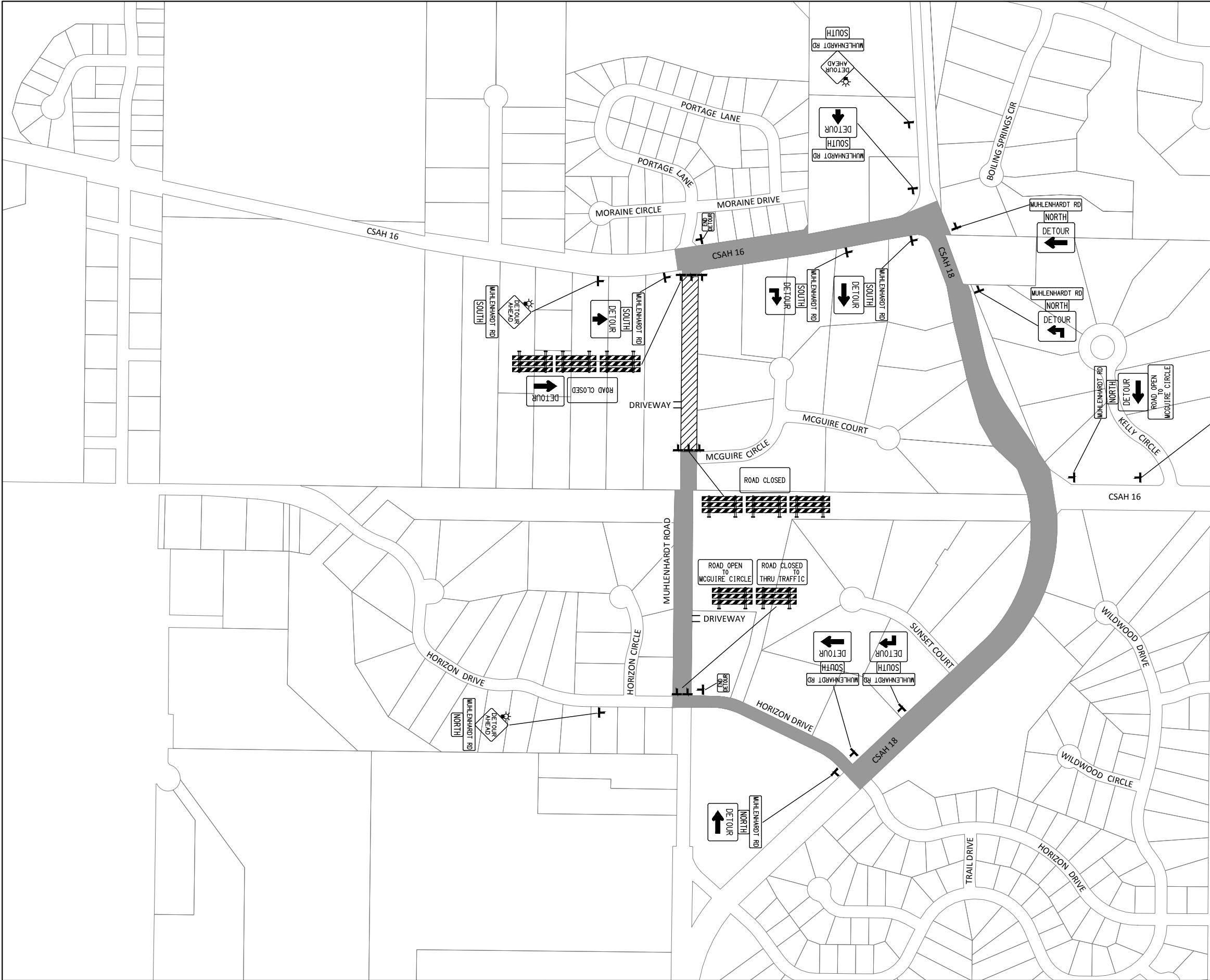
(J2)	TRAFFIC CONTROL - "G" SERIES		
LEGEND	DESIGNATION	SIZE	COLOR
	CUSTOM	VARIES" X 30"	BLACK ON ORANGE
	CUSTOM	VARIES X 9"	BLACK ON ORANGE
	CUSTOM	VARIES X 9"	BLACK ON ORANGE

(J4)	TRAFFIC CONTROL - "R" SERIES		
LEGEND	DESIGNATION	SIZE	COLOR
	R11-4	60" X 30"	BLACK ON WHITE

(J3)	TRAFFIC CONTROL - "M" SERIES		
LEGEND	DESIGNATION	SIZE	COLOR
	M4-9mATL	30" x 24"	BLACK ON ORANGE
	M4-9mATR	30" x 24"	BLACK ON ORANGE
	M4-9mR	30" x 24"	BLACK ON ORANGE
	M4-9mL	30" x 24"	BLACK ON ORANGE
	M4-9mT	30" x 24"	BLACK ON ORANGE
	M3-1a	24" X 12"	WHITE ON BLUE
	M3-2a	24" X 12"	WHITE ON BLUE
	M3-3a	24" X 12"	WHITE ON BLUE
	M3-4a	24" X 12"	WHITE ON BLUE
	M4-8a	24" X 18"	BLACK ON ORANGE

(J5)	TRAFFIC CONTROL - "W" SERIES		
LEGEND	DESIGNATION	SIZE	COLOR
	W20-1	48" X 48"	BLACK ON ORANGE
	W20-3	48" X 48"	BLACK ON ORANGE
	W20-2	48" X 48"	BLACK ON ORANGE



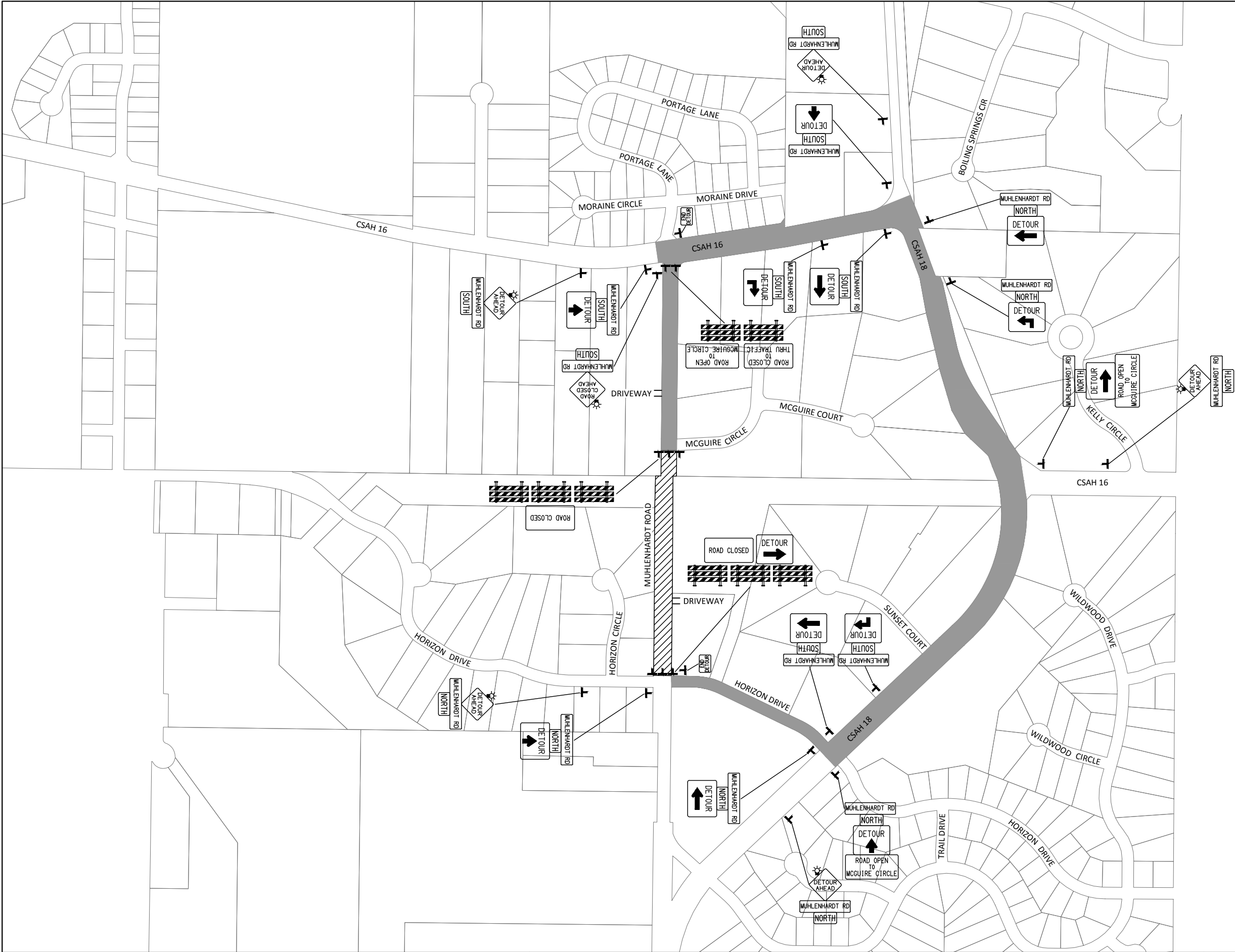


STAGE 1:  
WORK BETWEEN CSAH 16 AND MCGUIRE CIRCLE.  
ACCESS TO MCGUIRE CIRCLE WILL BE PROVIDED FROM  
THE SOUTH. MUHLENHARDT ROAD WILL BE  
COMPLETELY CLOSED BETWEEN CSAH 16 AND  
MCGUIRE CIRCLE WITH THE EXCEPTION OF ONE  
PROPERTY ON THE WEST SIDE OF MUHLENHARDT  
ROAD THAT NEEDS ACCESS. THE CONTRACTOR SHALL  
COORDINATE ACCESS WITH THIS PROPERTY OWNER.

LEGEND

PROJECT AREA

DETOUR ROUTE



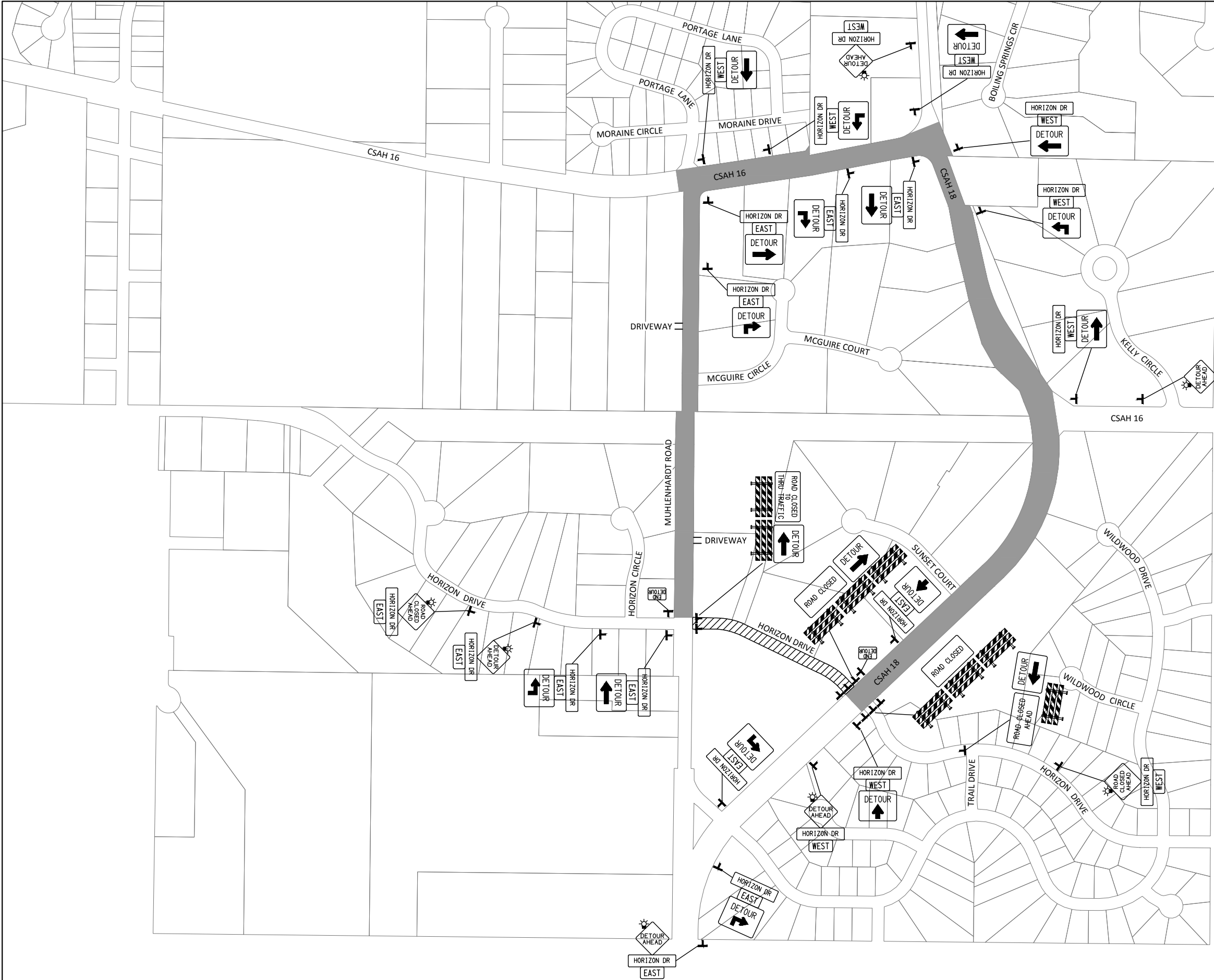
STAGE 2A:  
WORK BETWEEN HORIZON DRIVE AND MCGUIRE CIRCLE.  
ACCESS TO MCGUIRE CIRCLE WILL BE PROVIDED FROM  
THE NORTH. MUHLENHARDT ROAD WILL BE COMPLETELY  
CLOSED BETWEEN HORIZON DRIVE AND MCGUIRE CIRCLE  
WITH THE EXCEPTION OF ONE PROPERTY ON THE EAST  
SIDE OF MUHLENHARDT ROAD THAT NEEDS ACCESS. THE  
CONTRACTOR SHALL COORDINATE ACCESS WITH THIS  
PROPERTY OWNER.

STAGE 2B:  
WORK AT THE INTERSECTION OF HORIZON DRIVE AND MUHLENHARDT ROAD.  
THE CONTRACTOR WILL BE PERMITTED TO CLOSE THE INTERSECTION OF  
HORIZON DRIVE AND MUHLENHARDT ROAD FOR 3 DAYS. ADVANCED  
WARNING SIGNS SHALL BE PLACED ON HORIZON DRIVE AT LEAST 5 DAYS  
PRIOR TO CLOSING THE INTERSECTION.

LEGEND

PROJECT AREA

DETOUR ROUTE

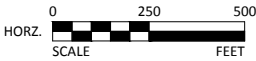


STAGE 3:  
HORIZON DRIVE.  
ACCESS MUST BE MAINTAINED TO THE PROPERTIES ADJACENT  
TO HORIZON DRIVE AT ALL TIMES. THE CONTRACTOR WILL BE  
PERMITTED TO COMPLETELY CLOSE HORIZON DRIVE AT CSAH  
18 FOR 10 DAYS TO COMPLETE THE BORING UNDER CSAH 18.

LEGEND

PROJECT AREA

DETOUR ROUTE



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JEFFREY WEYANDT  
LIC. NO. 41342 DATE XX/XX/XXXX

DESIGNED KED
DRAWN DDS
CHECKED JJW

CITY OF SHAKOPEE, MINNESOTA
WHISPERING OAKS SANITARY SEWER EXTENSION
HORIZON DRIVE
STAGE 3 TRAFFIC CONTROL PLAN







Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN RI00001 as they apply to this project. All provisions of the permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the permit is available at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/construction-stormwater/mpca-to-re-issue-construction-stormwater-general-permit.html>

SWPPP AMENDMENTS

Permittee must amend SWPPP as necessary to include additional requirements to correct problems identified or address the following situations.

- There is a change in design, construction, operation, maintenance, weather or seasonal conditions.
- Inspections or investigations by site owner or operators, USEPA or MPCA officials determine the SWPPP is not minimizing discharge of pollutants to surface waters or underground waters or discharges are causing water quality standard exceedances.
- The SWPPP is not achieving the objectives of minimizing pollutants in stormwater discharges associated with construction activity, or the SWPPP is not consistent with the terms and conditions of the permit.
- The MPCA determines that the project's stormwater discharges may cause, have reasonable potential to cause, or contribute to non-attainment of any applicable water quality standard, or the SWPPP does not incorporate the applicable requirements of the permit.

EROSION PREVENTION PRACTICES

The location of areas not to be disturbed must be delineated on the project before site work begins.

Disturbance on steep slopes (>33.3%) shall be minimized. Where required, techniques such as phasing and stabilizing practices designed for steep slopes shall be used.

All exposed soils must be stabilized as soon as possible, but in no case later than 14 days after the construction activity has temporarily or permanently ceased.

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period.

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Stabilization of the remaining portions of any temporary or permanent ditches or swales within 14 calendar days after connecting to a surface water or property edge and construction in that portion of the ditch has temporary or permanently ceased.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of a temporary or permanent drainage ditch. Refer to erosion and sediment control plan for temporary and permanent stabilization measures for ditches and swales.

Stormwater discharges shall be directed to vegetated areas where feasible. Velocity dissipation devices shall be used at discharge point.

Phased construction will be used to extent practical or as indicated in the plans to minimize exposed soils.

Rapid stabilization shall be of type and quantity indicated in the project specifications. Additional rapid stabilization may be necessary to minimize erosion throughout the duration of the project. Type and quantity shall be determined by the engineer or inspector prior to installation. In extreme cases, the contractor shall use any available rapid stabilization to immediately mitigate erosion, then further remedy the situation with approval by owner or engineer.

SEDIMENT CONTROL PRACTICES

Practices must be established on all down gradient perimeters and be located up gradient of any buffer zones. Perimeter controls must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All sediment controls practices shall be re-installed if they have been adjusted or removed to accommodate short-term activities and replaced immediately after the short term activity has ceased. Short term activities shall be performed as quickly as possible. Sediment control practices shall be re-installed even before the next precipitation event if the activity is not complete.

All storm drains must be protected by appropriate BMPs during construction until all sources to the inlet have

been stabilized. Inlet protection may be removed for specific safety concerns identified by the Permittee or jurisdictional authority. The removal shall be documented in the SWPPP and retained on site. Temporary stockpiles must have silt fence or other effective sediment controls and shall not be placed in surface waters or natural buffers.

Vehicle tracking BMPs shall be installed to minimize track out of sediment from the construction site. Method shall be approved by engineer prior to commencement of construction activities. Street sweeping shall be used if vehicle tracking BMPs are not adequate to prevent sediment from being tracked onto the street.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

A 50 foot natural buffer, or redundant BMPs (where a buffer is infeasible) must be maintained when a surface water is located within 50 feet of disturbance activities and site runoff flows to the surface water.

If polymers, flocculants, or other sedimentation treatment chemicals are used on site, 1) conventional erosion and sediment controls shall be sowed prior to chemical placement, 2) chemicals shall be chosen based on soil types, and expected turbidity, pH, and flow rate of stormwater flowing into the treatment system, and 3) chemicals shall be used with accepted engineering practices and dosing specifications.

TEMPORARY SEDIMENTATION BASINS

The temporary sedimentation basin shall be constructed and made operational prior to disturbance of 10 or more acres draining to a common location.

Temporary sedimentation basins are required prior to runoff leaving the construction site or entering surface waters when 10 or more acres of disturbed soils drain to a common location. The basin must provide 3,600 cubic feet of "storage below the outlet per acre drained. If hydraulic calculations are available, the temporary sedimentation basin must provide a storage volume equivalent to the 2-year, 24-hour storm, but in no case less than 1800 cubic feet per acre drained. The temporary sedimentation basin must be constructed and made operational concurrent with the start of soil disturbance up gradient of the pond. The temporary sedimentation basin shall be designed to prevent short circuiting. The outfall shall be designed to remove floatable debris, allow for complete drawdown of the pond for maintenance activities, and have energy dissipation. The emergency spillway shall be stabilized.

Temporary sedimentation basins shall be situated outside of surface waters and any required buffer zone, and must be designed to avoid draining wetlands, unless the impact is in compliance with the requirements of this permit.

Excessive sediment-laden water that is not properly filtered will not be permitted to discharge from site.

DEWATERING AND BASIN DRAINING

Turbid or sediment-laden waters related to dewatering or basin draining shall be discharged to a temporary or permanent sedimentation basin on the project site unless infeasible. The temporary or permanent basin may discharge to surface waters if the basin water has been visually checked to ensure adequate treatment has been obtained in the basin and that the nuisance conditions will not result from the discharge. Discharge points shall be adequately protected from erosion and proper velocity dissipation provided.

All water from dewatering or basin-draining activities must be discharged in a manner that does not cause nuisance conditions, erosion in the receiving channels or on down slope properties, or inundation in wetlands causing significant adverse impacts to the wetland.

If filters with backwash waters are used, the backwash water shall be hauled away for disposal, returned to the beginning of the treatment process, or incorporated into site in a manner that does not cause erosion. Backwash water may be discharged to sanitary sewer if permission is granted by the sanitary sewer authority.

POLLUTION PREVENTION

Building products that have the potential to leach pollutants must be under cover to prevent discharge or protected by an effective means designed to minimize contact with stormwater.

Pesticides, herbicides, insecticides, fertilizers, treatment chemicals, and landscape materials must be under cover.

Hazardous materials and toxic waste must be properly stored in sealed containers to prevent spills, leaks or other discharge. Restricted access storage areas must be provided to prevent vandalism.

Solid waste must be stored, collected and disposed of in compliance with Minn. R. CH 7035.

Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.

Discharge of spilled or leaked chemicals, including fuel, from any area where chemicals or fuel will be loaded or unloaded shall be prevented using drip pans or absorbents. Supplies shall be available at all times to clean up discharged materials and that an appropriate disposal method must be available for recovered spilled materials.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. Runoff from the washing area shall be contained in a sediment basin or other similarly effective controls and waste from the washing activity must be properly disposed of. No engine degreasing is allowed on site. Effective containment for all liquid and solid wastes generated by concrete and other washout operations related to construction activity shall be effectively contained. Liquid and solid washout waste shall not contact the ground, and containment must be designed so that it does not result in runoff from the washout operations or areas. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

INFESTED WATERS:

MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification from MN DNR that an Infested Waters Permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Water Permit or written notification that in Infested Water is not required is obtained.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at least once every 7 days during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted within 7 days.

All inspections and maintenance conducted during construction must be recorded within 24 hours in writing and records must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

Where parts of the project site have permanent cover, but work remains on other parts of the site, inspections may be reduced on these areas to once per month.

Where the site has permanent cover on all exposed areas and no construction activity is occurring anywhere on site, the site must be inspected during non-frozen conditions at least once per month for 12 months. Following the 12th month of permanent cover and no construction activity, inspections shall be terminated until construction activity resumes or notification from MPCA has been issued that erosion has been detected at the site.

During frozen ground conditions, inspections may be suspended and shall resume within 24 hours after runoff occurs or 24 hours prior to resuming construction activity, whichever is first.

Inspection and maintenance shall resume until another Permittee has obtained coverage under this Permit or the project has undergone Final Stabilization, and an NOT has been submitted.

All erosion prevention and sediment control BMPs shall be inspected to ensure integrity and effectiveness during all routine and post-rainfall inspections. All non-functioning BMPs must be repaired, replaced, or supplemented with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow access.

All perimeter control devices must be repaired, replaced, or supplemented when they become non-functional or the sediment reaches one-half (1/2) of the height of the device. These repairs must be made by the end of the next business day after discovery, or as soon as field conditions allow.

Temporary and permanent sediment basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches one-half (1/2) the storage volume. Drainage and sediment removal must be completed within 72 hours of discovery, or as soon as field conditions allow.

Surface waters, including drainage ditches and conveyance systems, must be inspected for erosion and sediment deposition during each inspection. All deltas and sediment deposited in drainage ways, catch basins, and other drainage systems shall be removed. The removal and stabilization must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints. The Permittee is responsible for obtaining all applicable permits prior to conducting any work in surface waters.

Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all paved surfaces both on and off site within 24-hours of discovery, or if applicable, within a shorter time to comply with the permit.

Streets and other areas adjacent to the project must be inspected for evidence of off-site accumulations of sediment. If sediment is present, it must be removed in a manner and at a sufficient frequency to minimize off-site impacts.

All infiltration areas must be inspected to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

FINAL STABILIZATION

Final Stabilization is not complete until all of the following requirements have been met:

- All soil disturbing activities at the site have been completed and all soils are stabilized by a uniform perennial vegetative cover with a density of 70% of its expected final growth density over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions.
- Permanent stormwater management system is constructed, meets all requirements of the Permit, and is operating as designed. Temporary or permanent sedimentation basins that are to be used as permanent water quality management basins have been cleaned of any accumulated sediment. All sediment has been removed from conveyance systems, and ditches are stabilized with permanent cover.
- All temporary synthetic and structural erosion prevention and sediment control BMPs have been removed. BMPs designed to decompose on site may be left in place.
- For residential construction only, individual lots are considered finally stabilized if the structure(s) are finished, temporary erosion protection and down gradient perimeter control has been completed and the residence has been sold to the homeowner. Also, the "Homeowner Fact Sheet" has been provided to the homeowner



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REV	ISSUED FOR	DATE

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.		
JEFFREY WEYANDT		
LIC. NO.	41342	DATE XX/XX/XXXX

DESIGNED JGS
DRAWN MDS
CHECKED JJW

CITY OF SHAKOPEE, MINNESOTA
WHISPERING OAKS SANITARY SEWER EXTENSION
STORMWATER POLLUTION PREVENTION PLAN NARRATIVE - NON IMPAIRED



