

**OHIO SCENIC RIVERS PROGRAM
GENERALIZED UNDERGROUND UTILITY LINE AND
PIPELINE CROSSING CONDITIONS FOR
STATE WILD, SCENIC AND RECREATIONAL RIVERS**

THESE CONDITIONS SHOULD BE INCORPORATED INTO THE GENERAL NOTES OF THE PROJECT PLAN SET. THESE CONDITIONS SHOULD BE IMPLEMENTED BEFORE EARTHWORK COMMENCES AND ADHERED TO FOR THE DURATION OF THE PROJECT.

1. PROJECT DESIGN

A. METHOD: ALL WILD, SCENIC AND RECREATIONAL RIVER CROSSINGS SHOULD BE ACCOMPLISHED THROUGH THE USE OF DIRECTIONAL DRILLING OR OTHER SUB-SURFACE INSTALLATION TECHNIQUES WHERE EVER POSSIBLE. SUFFICIENT GEOTECHNICAL DATA SHOULD BE DEVELOPED FOR ALL PROPOSED STREAM AND RIVER CROSSING SITES SHOWING THE SOILS, GEOLOGY AND STRATIFICATION OF THE PROPOSED CROSSING LOCATIONS. AN EXPLORATION PLAN SHOULD BE SUBMITTED TO OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) SHOWING THE PROPOSED LOCATIONS OF THE PIPELINE CROSSING AND HAVE A DETAILED DESCRIPTION OF THE SUBSURFACE FEATURES ALONG THE CROSSING TO ENSURE A SUCCESSFUL BORE. SUCH DATA CAN BE EXTREMELY IMPORTANT TO FACILITATE CROSSINGS ON STATE SCENIC RIVERS, ESPECIALLY IN AREAS WHERE RIVERS FLOW THROUGH GLACIATED REGIONS OF THE STATE AND HAVE CHANNELS AND RIVER VALLEYS COMPRISED OF PREDOMINATELY UNCONSOLIDATED GLACIAL MATERIALS WHICH CAN BE HIGHLY SUSCEPTIBLE TO FRAC-OUTS.

B. STREAM CROSSINGS OF STATE SCENIC RIVERS AND THEIR PERENNIAL TRIBUTARIES (BORING): FOR STREAM CROSSINGS THAT ARE COMPLETED THROUGH DIRECTIONAL DRILLING OR OTHER SUB-SURFACE INSTALLATION TECHNIQUES, BORE PITS SHOULD BE LOCATED BEYOND THE 100 YEAR FLOOD ELEVATION OF THE STATE SCENIC RIVER AND THEIR TRIBUTARIES. THIS WILL GREATLY REDUCE THE POSSIBILITY OF BORE PITS BEING INUNDATED DURING A FLOOD EVENT. ALL BORING AND EXCAVATED MATERIALS FROM THE BORE PIT SHOULD ALSO BE STORED BEYOND THE BOUNDARY OF THE 100 YEAR FLOODPLAIN TO REDUCE THE RISK OF THESE MATERIALS BEING INUNDATED AND WASHED BACK INTO THE RIVER OR TRIBUTARY. ANY STOCK PILES OF EXCAVATED MATERIALS SHOULD BE PROTECTED WITH APPROPRIATE SEDIMENT AND EROSION CONTROLS TO REDUCE RUNOFF. THE BORE PITS SHOULD BE RECLAIMED AND SEEDED AND MULCHED WITHIN TWO DAYS FOLLOWING THE COMPLETION OF THE CROSSING. COMPLETION OF THE CROSSING SHOULD BE DEFINED AS THE PLACEMENT OF PIPE IN THE TUNNEL FROM BORE PIT TO BORE PIT, EACH END OF THE CROSSING. BORE PITS AND OTHER DISTURBED AREAS LOCATED WITHIN THE WOODEN RIPARIAN CORRIDOR OF STATE SCENIC RIVERS OR THEIR TRIBUTARY STREAMS SHOULD ALSO BE REVEGETATED WITH NATIVE TREE SPECIES. A LIST OF NATIVE TREES CAN BE PROVIDED BY REGIONAL SCENIC RIVER MANAGERS.

C. STREAM CROSSINGS OF INTERMITTENT/EPHEMERAL TRIBUTARIES (NON-BORING): WHERE THE TRENCH CROSSES A STREAM WITH A SOLID OR LAYERED ROCK BOTTOM, THE CONTRACTOR SHOULD SAW CUT THE TRENCH EDGES TO A MINIMUM DEPTH OF 4 INCHES. THE TRENCH SHOULD BE BACKFILLED WITH CONCRETE ENCASEMENT AS INDICATED IN THE STREAM CROSSING DETAIL ON THE APPROVED PLANS. THE CONTRACTOR SHOULD ALSO PROVIDE NECESSARY MEANS TO PREVENT FRACTURING OF THE BEDROCK DUE TO EQUIPMENT CROSSINGS.

D. IN-STREAM WORK AND OPEN TRENCH STREAM CROSSINGS: STREAM CROSSINGS SHOULD BE CONSTRUCTED DURING DRY PERIODS OR PERIODS OF EXTREMELY LOW FLOW (AUGUST 1 THROUGH OCTOBER 31). STREAM CROSSINGS SHOULD NOT BE PERFORMED FROM MARCH 15-JUNE 30 UNLESS THE STREAMBED IS DRY. STABILIZATION OF THE CROSSING AREA SHOULD BE CONDUCTED IMMEDIATELY UPON COMPLETION OF THE STREAM CROSSING. SOIL OR EROSION CONTROL MATTING SHOULD BE UTILIZED TO STABILIZE STREAM BANKS AT CROSSING LOCATIONS. STREAM BANKS AND BOTTOMS SHOULD BE RESTORED TO PREVIOUSLY EXISTING CONTOURS AND ELEVATIONS. STREAM ELEVATIONS SHOULD BE DETERMINED BEFORE IN-STREAM WORK COMMENCES TO ENSURE THAT ALL FILL MATERIAL AND DEBRIS IS COMPLETELY REMOVED BEFORE CONSTRUCTION IS COMPLETED. RESTORATION SHOULD ALSO INCLUDE TREE PLANTINGS WITH SPECIES FROM THE APPROVED SCENIC RIVER TREE LIST.

E. TRENCH OPENING: NO MORE THAN 500 FEET OF TRENCH SHOULD BE OPEN AT ANY GIVEN TIME. TRENCH OPENING, INSTALLATION OF PIPE AND BACKFILLING SHOULD OCCUR SO AS TO MINIMIZE THE AMOUNT OF AREA DISTURBED. ALL OPEN TRENCHES SHOULD IMMEDIATELY BE BACKFILLED AND SEEDED AND MULCHED WITHIN SEVEN DAYS OF COMPLETION OF PIPE INSTALLATION.

F. MITIGATION FOR STREAM IMPACTS: IN ADDITION TO THE PRECEDING BEST MANAGEMENT PRACTICES OUTLINED ABOVE, ADDITIONAL MITIGATION MAY BE REQUIRED TO OFFSET THE NEGATIVE IMPACTS TO STATE SCENIC RIVERS AND THEIR TRIBUTARIES CAUSED DURING THE INSTALLATION OF THE UTILITY LINE. ANY MITIGATION REQUIRED UNDER SECTIONS 401 AND 404 OF THE CLEAN WATER ACT FOR SCENIC RIVER STREAM CROSSINGS SHOULD BE IMPLEMENTED AS PROTECTION OR RESTORATION PROJECTS WITHIN THE ASSOCIATED WATERSHED, PREFERABLY DIRECTLY ON THE DESIGNATED SCENIC RIVER SECTIONS. THIS WILL HELP TO ENSURE THE LONG TERM PROTECTION OF THESE SENSITIVE, HIGH QUALITY RIVER SYSTEMS. THE REGIONAL SCENIC RIVERS MANAGER MAY BE ABLE TO ASSIST WITH THE IDENTIFICATION AND IMPLEMENTATION OF LOCAL MITIGATION PROJECTS.

2. DIRECTIONAL DRILL BEST MANAGEMENT PRACTICES

A. WORK HOURS: THE DRILLING OPERATION WILL BE DURING DAYLIGHT HOURS IN ORDER TO FACILITATE MONITORING OF FRAC-OUTS IN THE STATE SCENIC RIVER AND SURROUNDING AREAS.

B. OPERATION: THE DRILLING OPERATOR MUST USE THE MINIMAL AMOUNT OF PRESSURE OR GALLONS PER MINUTE OF DRILLING FLUID NECESSARY FOR THE DRILLING, TO HELP REDUCE THE PROBABILITY OF FRAC-OUTS.

C. INSPECTION: DURING THE OPERATION, THE DRILLING CREW MUST MONITOR THE STATE SCENIC RIVER FOR ANY FRAC-OUTS. THE RIVER SHOULD BE INSPECTED EVERY HALF HOUR AND THE TIME RECORDED IN A LOGBOOK THAT CAN BE REVIEWED BY OTHER INSPECTORS.

3. BEST MANAGEMENT PRACTICES

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP): A NOTICE OF INTENT (NOI) MUST BE SUBMITTED TO OBTAIN COVERAGE UNDER A GENERAL STORMWATER PERMIT. IF THE PROJECT WILL RESULT IN A LAND DISTURBANCE GREATER THAN ONE ACRE, THE NOI MUST BE SUBMITTED 21 DAYS PRIOR TO CONSTRUCTION. COPIES OF NOI FORMS AND INSTRUCTIONS CAN BE FOUND AT [HTTP://EPA.OHIO.GOV/DSW/STORM/STORMFORM.ASP](http://epa.ohio.gov/dsw/storm/stormform.asp). A SWPPP MUST BE DEVELOPED SPECIFIC FOR THE PROJECT. THE SWPPP MUST BE DEVELOPED TO ADDRESS SEDIMENT AND EROSION CONTROLS IN COMPLIANCE WITH THE GENERAL STORM WATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES. THE SWPPP MUST BE SUBMITTED FOR REVIEW TO THE ATTENTION OF THE APPROPRIATE DISTRICT OFFICES OHIO EPA STORM WATER COORDINATOR, PRIOR TO CONSTRUCTION. IF THE PROJECT IS WITHIN THE CLEVELAND RIVER OR BIG DAWB CREEK WATERSHED, SPECIFIC GUIDELINES FOR STORM WATER PERMITS CAN BE FOUND AT THE ABOVE WEB ADDRESS.

B. EROSION CONTROLS: A SEDIMENT AND EROSION CONTROL PLAN SHOULD BE DEVELOPED FOR THE SITE AND IMPLEMENTED BEFORE EARTHWORK COMMENCES. ONCE THE SITE IS CLEARED AND GRUBBED, TEMPORARY SEDIMENT AND EROSION CONTROLS SHOULD BE IMPLEMENTED AND MAINTAINED UNTIL FINAL SITE STABILIZATION IS ACHIEVED. PARTICULAR ATTENTION SHOULD BE GIVEN TO ANY DRAINAGE WAYS, DITCHES AND STREAMS THAT COULD CONVEY SEDIMENT LOADED WATER DIRECTLY TO STATE SCENIC RIVERS. PROPERLY INSTALLED (FRAMED AND ENTRENCHED) SEDIMENT FENCE SHOULD BE UTILIZED AROUND THE WORK SITE PERIMETER AND STORM WATER INLETS. APPROPRIATELY DESIGNED ROCK-CHECK DAMS AND OTHER EROSION CONTROLS SHOULD BE UTILIZED IN DITCHES AND DRAINAGE WAYS. ALL TEMPORARY SEDIMENT AND EROSION CONTROLS SHOULD BE REMOVED UPON COMPLETION OF SITE STABILIZATION. ANY AREA WHERE THE UTILITY LINE HAS BEEN COMPLETELY INSTALLED, STABILIZATION WILL BE REQUIRED WITHIN SEVEN DAYS. ALL DENuded AREAS, INCLUDING DITCHES, CULVERTS AND RIVER/STREAM BANKS, SHOULD BE PERMANENTLY SEEDED AND MULCHED (OR FIBER MAT) IMMEDIATELY UPON COMPLETION OF EARTHWORK OR TEMPORARILY SEEDED AND MULCHED (OR FIBER MAT). FOR THE DISTURBED AREAS WITHIN 120 FEET OF THE STREAM, TEMPORARY AND/OR PERMANENT EROSION CONTROL COVER SHOULD BE REQUIRED WITHIN TWO DAYS FOLLOWING THE INSTALLATION OF THE UTILITY LINE. TEMPORARY SEEDED AND MULCHING SHOULD BE NO MORE THAN 500 FEET BEHIND THE POINT OF INSTALLATION OF THE UTILITY LINE AT ANY GIVEN TIME. STRAW BALES SHOULD NOT BE PERMITTED AS A FORM OF EROSION CONTROL. ACCESS ROADS CONSTRUCTED ON SLOPES SHOULD BE GRADED TO PREVENT EROSION FROM SURFACE RUNOFF.

C. STORAGE OF FUELS, PETROCHEMICALS AND EQUIPMENT: IDLE EQUIPMENT, PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS SHOULD NOT BE STORED IN THE FLOODPLAIN OR NEAR ANY DRAINAGE WAYS, DITCHES OR STREAMS THAT COULD CONVEY SUCH MATERIALS TO STATE SCENIC RIVERS OR ANY OF THEIR TRIBUTARIES. PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS SHOULD NOT BE DISCHARGED INTO ANY STATE SCENIC RIVER, THEIR FLOODPLAINS OR ANY OF THEIR TRIBUTARY DRAINAGE WAYS, DITCHES OR STREAMS. REFUELING OF EQUIPMENT SHOULD NOT OCCUR IN FLOODPLAINS OR NEAR ANY TRIBUTARY DRAINAGE WAYS, DITCHES OR STREAMS.

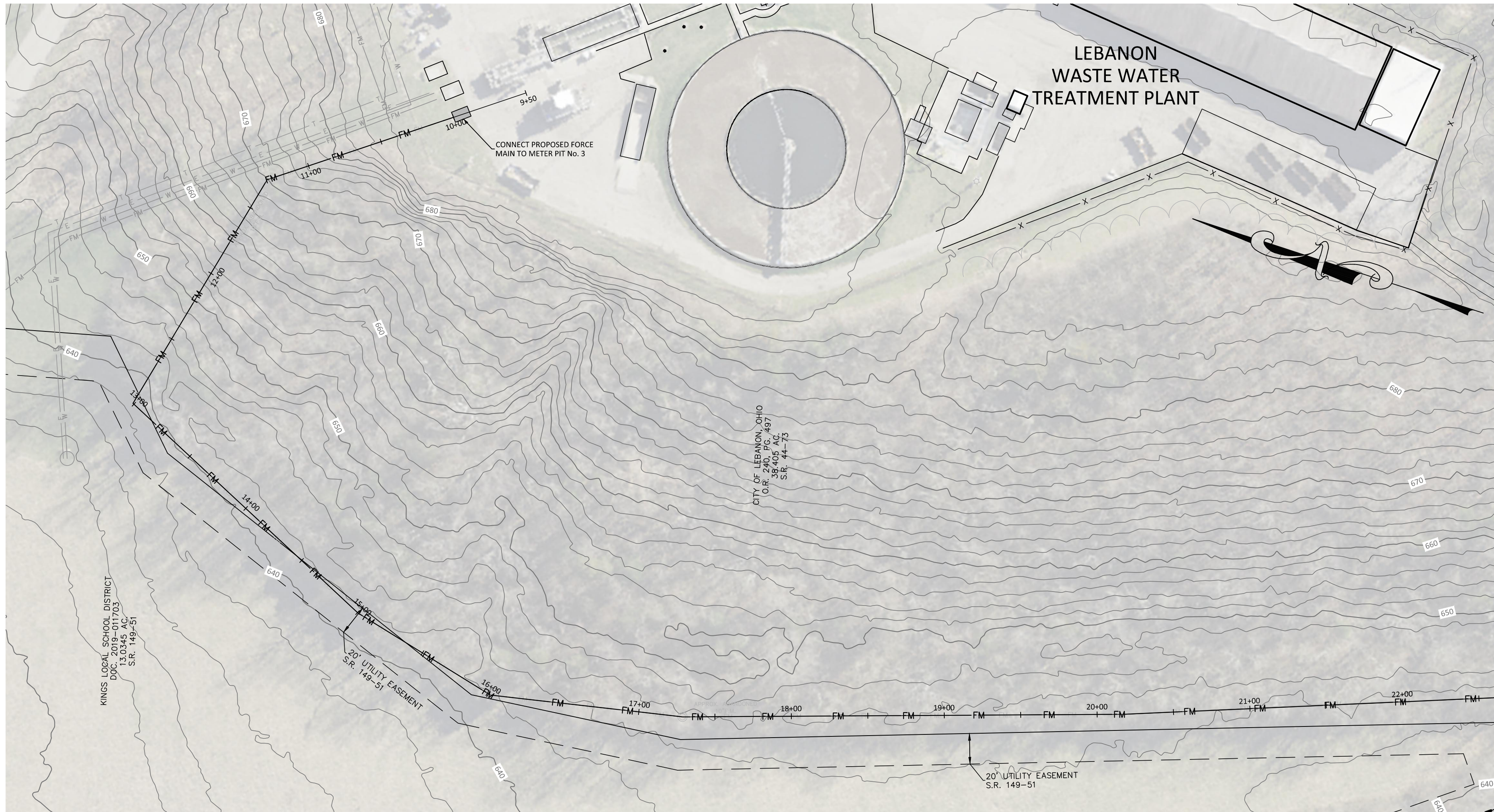
D. SPILL PREVENTION: THE PERMITTEE SHOULD DEVELOP A SPILL PREVENTION COUNTERMEASURE AND CONTINGENCY PLAN (SPCC) IN THE EVENT OF A SPILL OR BREAK IN AN EQUIPMENT HYDRAULIC LINE WHICH MAY DISCHARGE INTO WATERS OF THE STATE. ALL SPILLS MUST BE REPORTED TO THE OHIO SPILL LINE (1-800-282-9378) IN ACCORDANCE WITH OAC 3750.06.

E. TRENCH AND GROUNDWATER DE-WATERING: NO WASTEWATER OF ANY KIND SHOULD BE DIRECTLY DISCHARGED INTO STATE SCENIC RIVERS OR ANY OF THEIR TRIBUTARY STREAMS, DRAINAGE WAYS OR DITCHES. ANY WATER PUMPED FROM OPEN TRENCHES SHOULD BE PASSED THROUGH A SEDIMENT IMPOUNDMENT STRUCTURE THAT PROVIDES FOR COMPLETE SETTLEMENT OF ALL SUSPENDED SOLIDS OR PUMPED ONTO A VEGETATED AREA A SUFFICIENT DISTANCE FROM THE STREAM SO AS TO PROVIDE FOR COMPLETE INFILTRATION. ADEQUATE OUTLET PROTECTION MUST BE PROVIDED FOR EACH IMPOUNDMENT. THERE SHOULD BE NO DISCHARGES OF TURBID WATER TO STATE SCENIC RIVERS OR THEIR TRIBUTARIES.

F. CLEARING AND GRUBBING: CLEARING AND GRUBBING IN THE AREAS DIRECTLY ADJACENT TO ANY OF THE STREAM CROSSINGS OR ANY STATE SCENIC RIVER SHOULD NOT TAKE PLACE UNTIL 72 HOURS BEFORE INSTALLATION OF THE UTILITY CROSSING. ALL STREAMBANK VEGETATION SHOULD BE LEFT UNDISTURBED TO THE MAXIMUM EXTENT POSSIBLE. AREAS WHERE VEGETATION IS REMOVED SHOULD BE REVEGETATED WITH NATIVE TREE SPECIES. ANY DISTURBED STREAMBANKS SHOULD BE RETURNED TO PREVIOUSLY EXISTING CONTOURS AND ELEVATIONS. A NATIVE TREE SPECIES LIST CAN BE PROVIDED BY THE APPROPRIATE REGIONAL SCENIC RIVERS MANAGER. TREES SHOULD BE ONE INCH IN DIAMETER AND BALLED BURLAP NURSERY STOCK. AFTER A FULL GROWING SEASON FOR THE TREES, ANY STAKES AND GUIDE WIRES SHOULD BE REMOVED AND PROPERLY DISPOSED OF. ANY TREES THAT DIE DURING THE FIRST GROWING SEASON SHOULD BE REPLACED. CARE SHOULD BE TAKEN NOT TO GRUB OR SCUFF TREE TRUNKS OR DAMAGE ANY STANDING TREES.

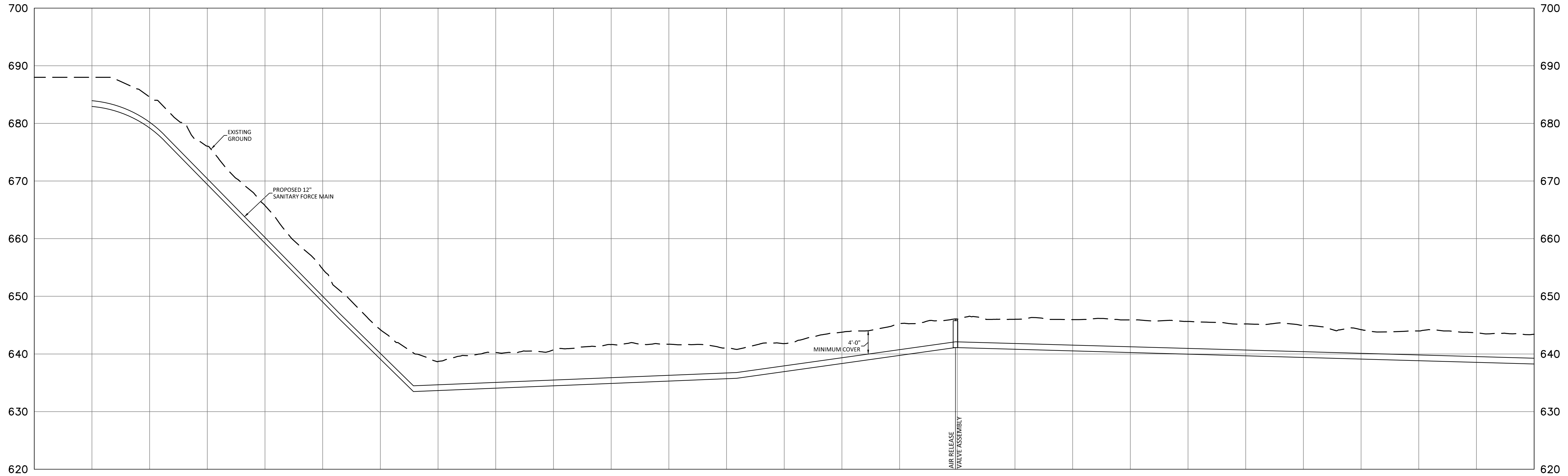
G. EQUIPMENT CROSSING: ALL EQUIPMENT CROSSINGS SHOULD BE CONSTRUCTED WITH WASHED OR NON-ERODIBLE FILL A MINIMUM OF THREE INCHES IN DIAMETER. EQUIPMENT OR VEHICLE CROSSING OF ALL STREAMS WITHOUT THE USE OF A STABILIZED NON-ERODIBLE CROSSING WILL BE PROHIBITED.

H. NOTIFICATION: THE APPROPRIATE REGIONAL SCENIC RIVER MANAGER SHOULD BE INVITED TO A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR PRESENT AND BE NOTIFIED OF THE PROJECT START DATE ONE WEEK PRIOR TO THE COMMENCEMENT OF WORK. PERIODIC INSPECTIONS OF THE PROJECT SHOULD TAKE PLACE TO ENSURE SCENIC RIVER REQUIREMENTS ARE BEING MET. THE APPROPRIATE REGIONAL SCENIC RIVERS MANAGER SHOULD ALSO BE CONTACTED ONE WEEK PRIOR TO COMPLETION OF THE PROJECT TO CONDUCT A FINAL SITE INSPECTION. THE FINAL SITE INSPECTION SHOULD BE SCHEDULED WHILE THE CONTRACTOR IS PRESENT TO ENSURE THAT FINAL SITE STABILIZATION HAS BEEN ACHIEVED.



PLAN
1"=50'

9+50 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 22+50

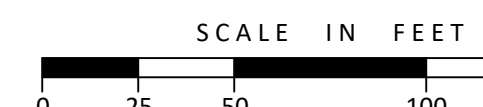


SAN FORCE MAIN STA: 9+50 TO 22+50
1"=50' HOR. / 1"=10' VERT.

LEGEND
EXISTING FEATURES

- MANHOLE
- CATCH BASIN/DRAIN
- GUTTER INLET
- CLEAN OUT
- DOWNSPOUT
- UTILITY POLE
- ELECTRIC BOX
- TELEPHONE BOX
- CABLE TV BOX
- LIGHT POLE/LAMP POST
- TRAFFIC SIGNAL/BOX
- △ FIRE HYDRANT
- WATER VALVE/METER
- SPRINKLER/VALVE
- GAS VALVE/METER
- SIGN/SIGN POST
- FLAG POLE
- MAIL BOX
- ▽ PARKING METER
- GUARD POST
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- ST- STORM SEWER
- W- WATER LINE
- G- GAS LINE
- E- ELECTRIC LINE
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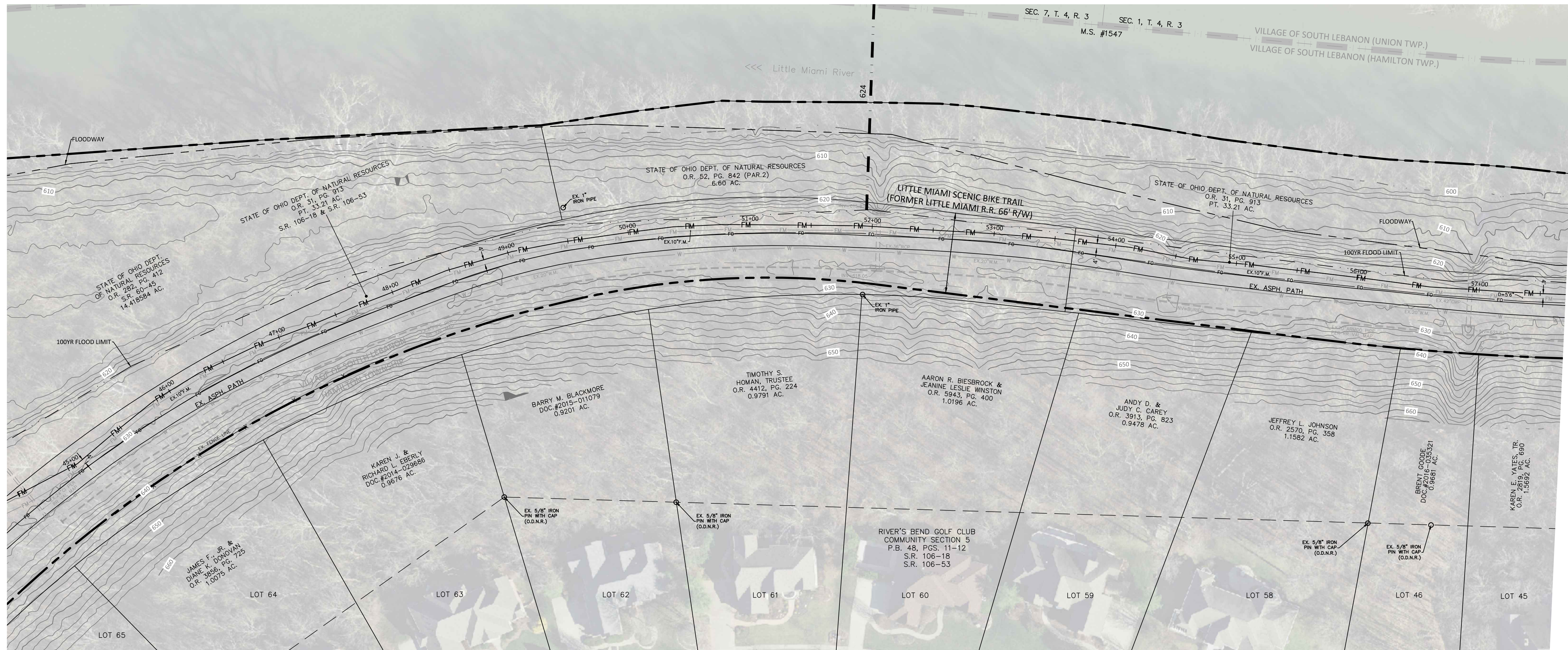


Issue/Revision	No.	Date

**RIVER CORRIDOR
PUBLIC SANITARY SEWER EXTENSION
THE VILLAGE OF SOUTH LEBANON
WARREN COUNTY, OHIO**

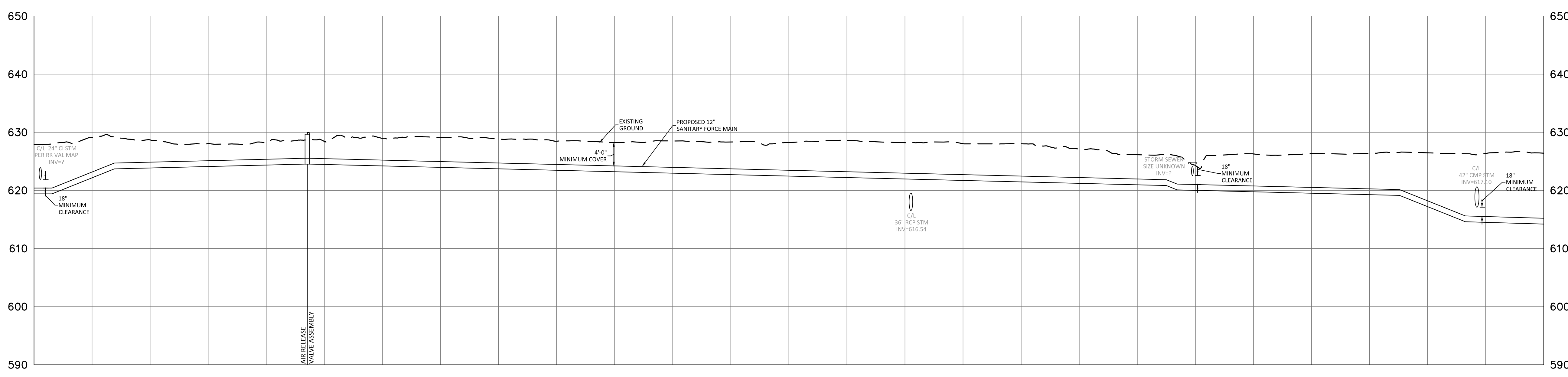
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- LEGEND**
EXISTING FEATURES
- MANHOLE
 - ◻ CATCH BASIN/DRAIN
 - ◻ GUTTER INLET
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PLAN
1"=50'

44+50 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 57+50



SAN FORCE MAIN STA: 44+50 TO 57+50
1"=50' HOR. / 1"=10' VERT.



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McGill Smith Punshon

- Architecture 3700 Park 42 Drive Suite 1908
- Engineering Cincinnati OH 45241
- Landscaping Cincinnati OH 45241
- Planning Phone 513.759.0004
- Surveying www.mspsdesign.com

Project Manager RA
Drawn By STG
DWG 06308124-PRE-00
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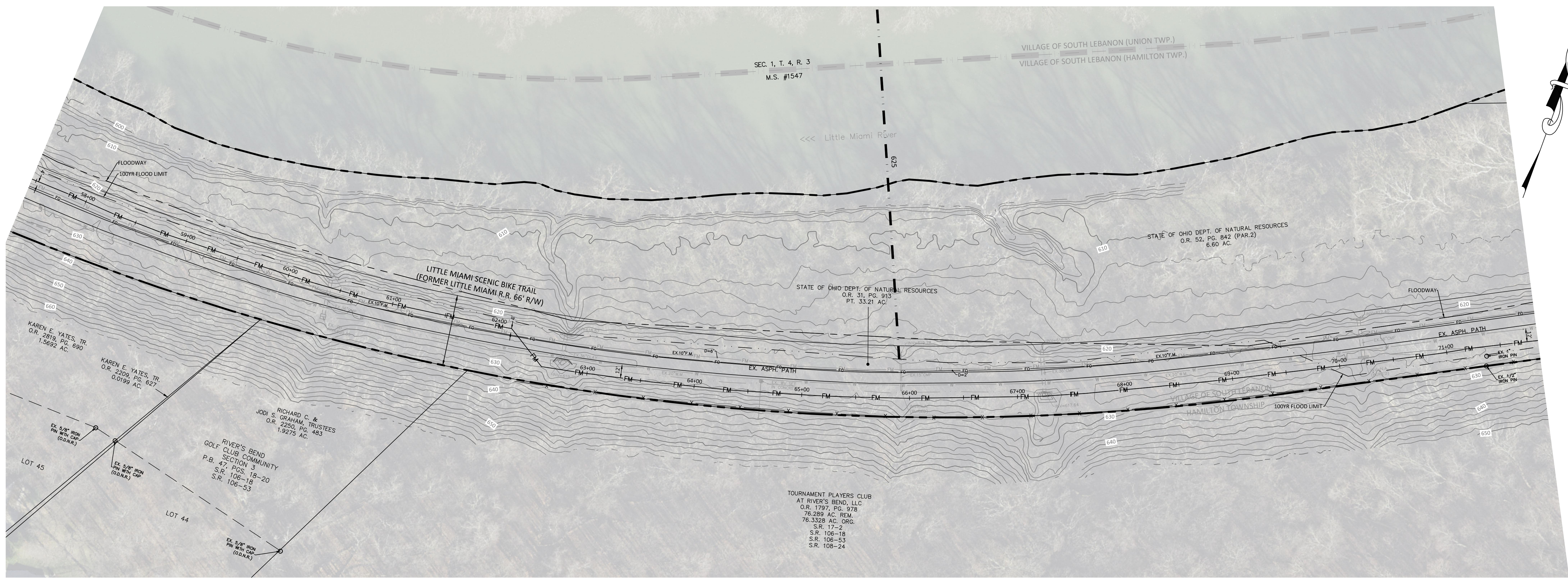
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THE VILLAGE OF SOUTH LEBANON
WARREN COUNTY, OHIO

Sheet Title

PLAN & PROFILE

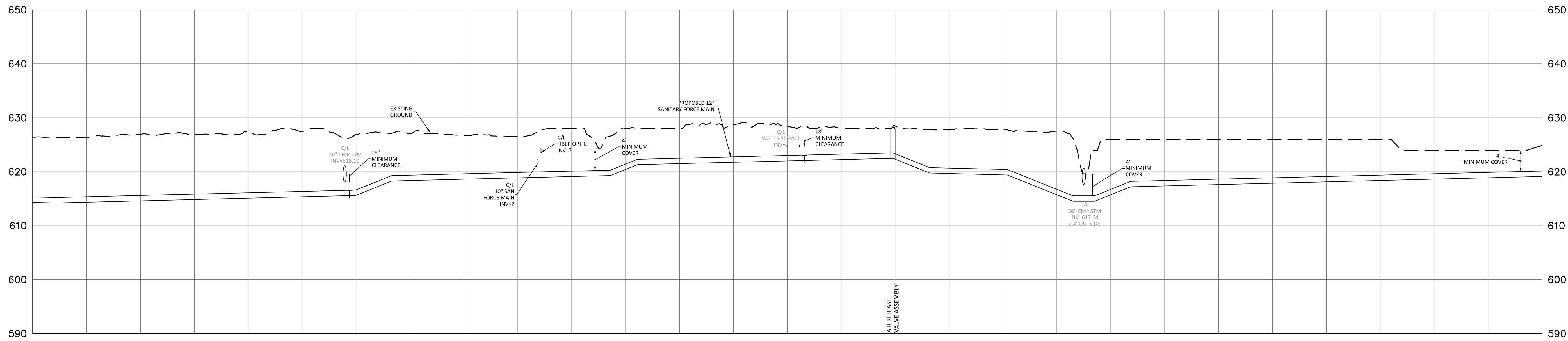
Project Number 06308.12
Drawing Scale 1" = 50'
Sheet Number 5 / 16
File Number 06308

- LEGEND**
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- MANHOLE
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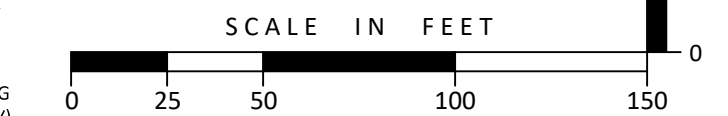
PLAN
1"=50'

57+50 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 71+50



SAN FORCE MAIN STA: 57+50 TO 71+50
1"=50' HOR. / 1"=10' VERT.

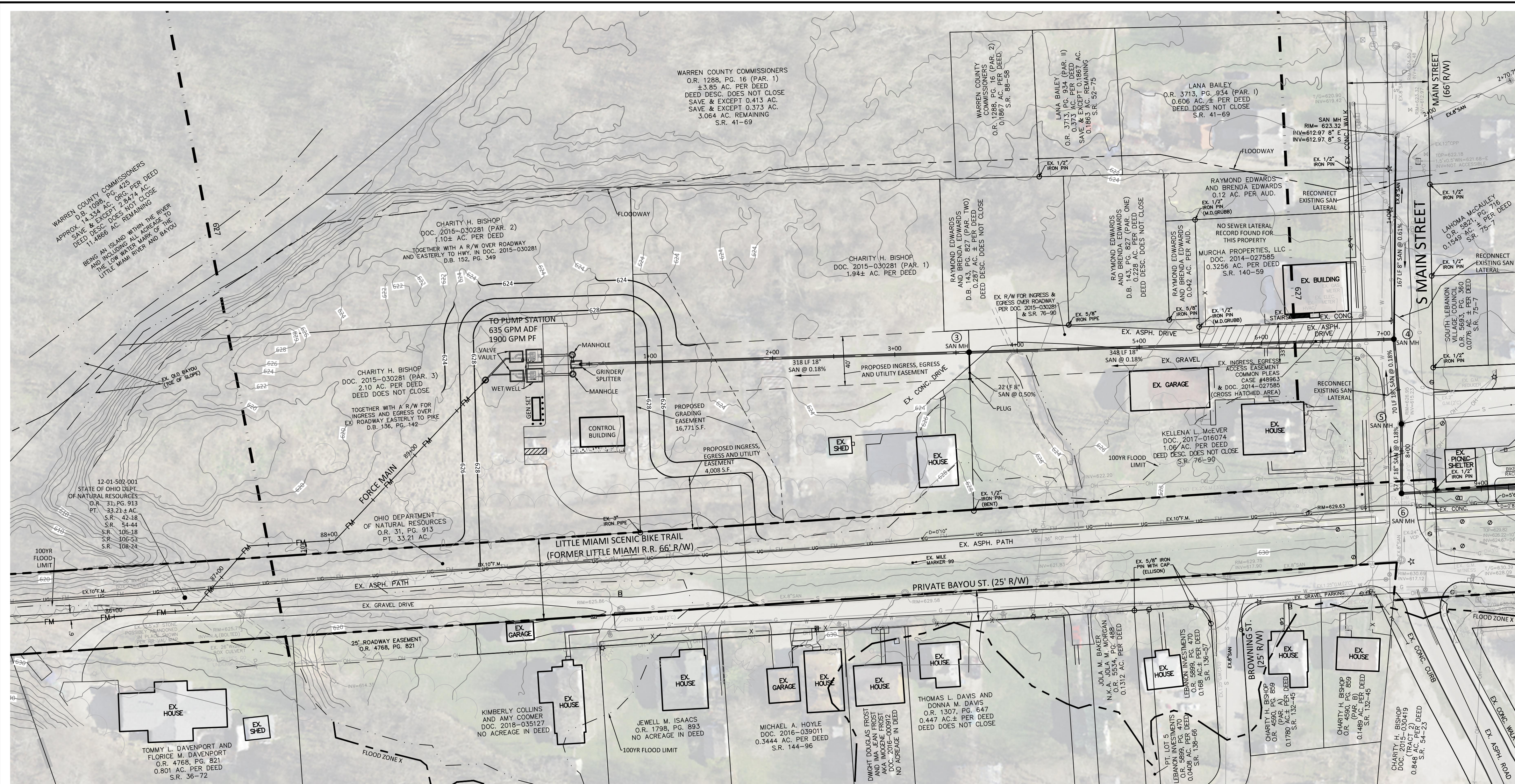
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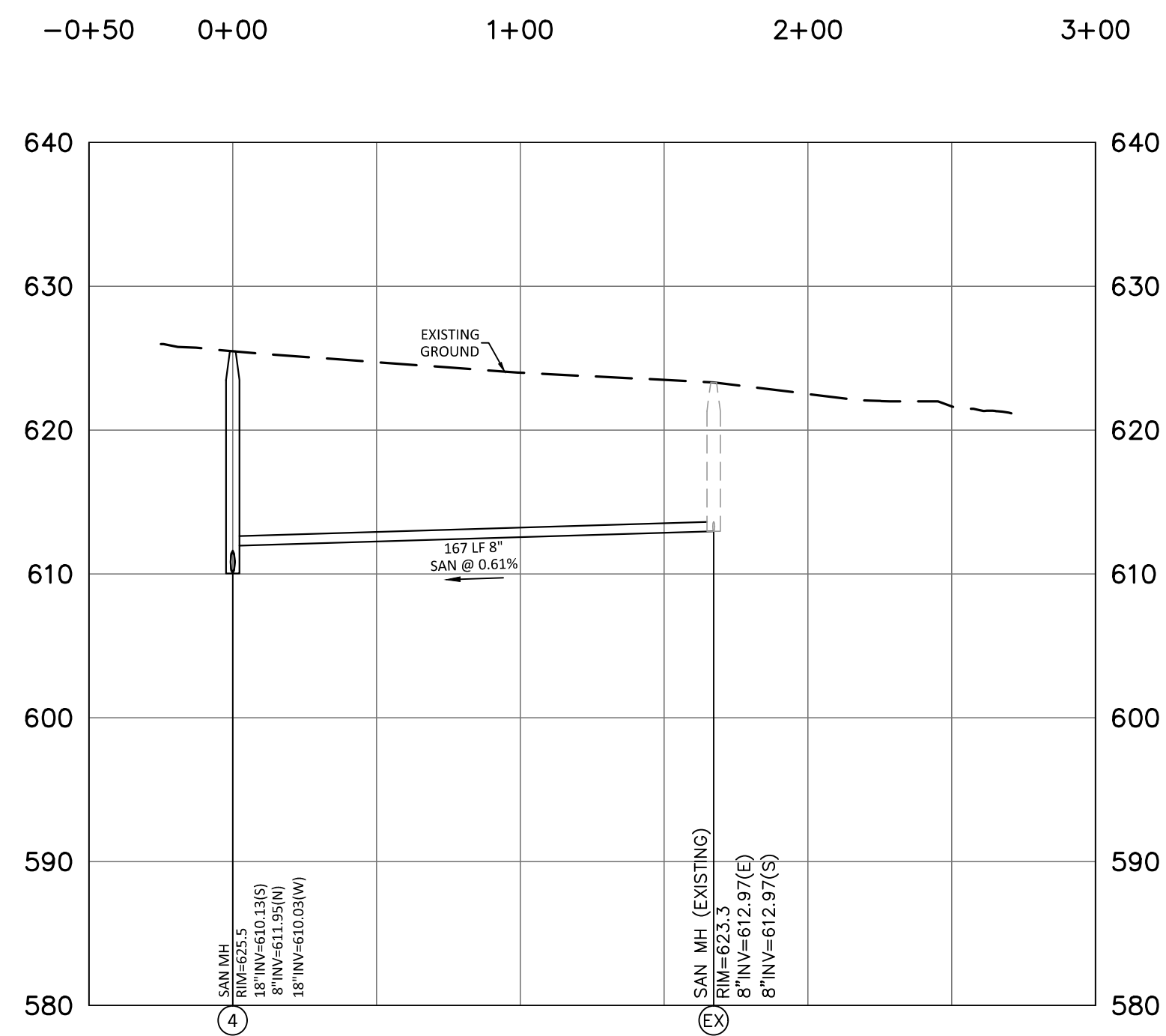
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THE VILLAGE OF SOUTH LEBANON
WARREN COUNTY, OHIO



PLAN
1"=50'

NOTE:
ZONING VARIANCE MAY
BE REQUIRED FOR THE
PUMP STATION USE.



PROFILE: MH 4 - EX MH
1"=50' HOR. / 1"=10' VERT.

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MSP DESIGN
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Landscape Architecture Cincinnati OH 45241
Planning Phone 513.759.0004
Surveying www.mspsdesign.com

Project Manager RA
Drawn By STG
DWG 06308124-PRE-00
X-Ref(s) ---

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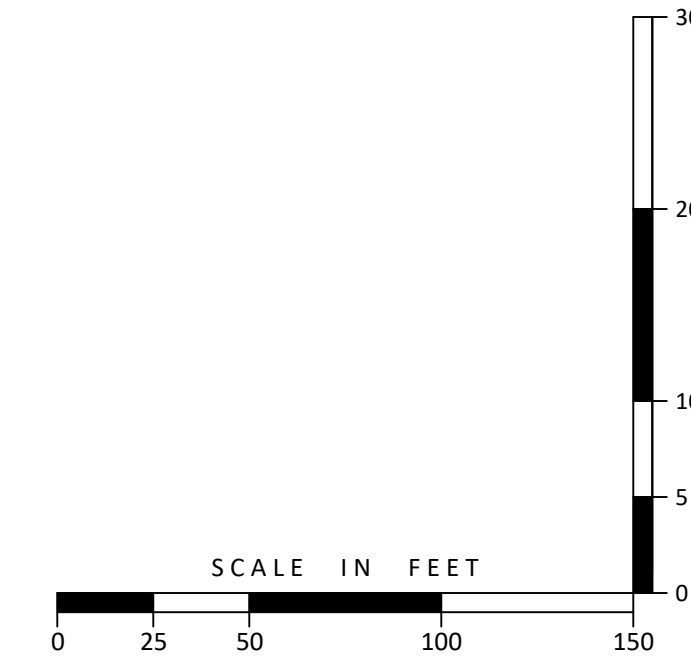
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PUBLIC SANITARY SEWER EXTENSION
THE VILLAGE OF SOUTH LEBANON
WARREN COUNTY, OHIO**



FORCEMAIN SHALL BE INSTALLED IN A SEPARATE TRENCH FROM ANY WATERMAIN AND SHALL BE A MINIMUM DISTANCE OF 10' MEASURED HORIZONTALLY FROM THE WATERMAIN

BACKFILL AND RESTORATION OF PAVEMENT MUST CONFORM TO THE APPLICABLE WARREN COUNTY ENGINEER OR ODOT SPECIFICATION

FORCEMAIN TRENCH DETAIL

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS	STANDARD NUMBER
MARCH, 2018	DEPARTMENT OF WATER & SEWER	S-20

MINIMUM 54' OF RESTRAINED JOINT PIPE (RJP) IS REQUIRED BEFORE AND AFTER ALL BENDS. REFER TO TABLE BELOW.

TABLE REQUIRED LENGTH OF RESTRAINED JOINTS d--DIAMETER OF PIPE l--LENGTH OF PIPE								
d	4"	6"	8"	10"	12"	16"	20"	24"
l	54'	54'	54'	54'	66'	98'	125'	145'

REQUIRED RESTRAINED JOINTS-DEAD END VALVES, PLUGS, CAPS & TEES

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS	STANDARD NUMBER
MARCH, 2018	DEPARTMENT OF WATER & SEWER	S-19

MINIMUM 54' OF RESTRAINED JOINT PIPE (RJP) IS REQUIRED BEFORE AND AFTER ALL BENDS. REFER TO TABLE BELOW.

RESTRAINT OPTIONS:
MECHANICAL JOINT W/ MEGALUGS OR FIELD LOC GASKETS.

TABLE REQUIRED LENGTH OF RESTRAINED JOINTS d--DIAMETER OF PIPE l--LENGTH OF PIPE								
d	4"	6"	8"	10"	12"	16"	20"	24"
l	54'	54'	54'	54'	66'	98'	125'	145'

REQUIRED RESTRAINED JOINTS FOR FORCEMAIN BENDS

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS	STANDARD NUMBER
MARCH, 2018	DEPARTMENT OF WATER & SEWER	S-18

CONTRACTOR SHALL PROVIDE A 5' LONG SECTION OF IMPERVIOUS BACKFILL USING NATIVE CLAYS OR OTHER APPROVED MATERIAL.

IMPERVIOUS BACKFILL MAY BE REQUIRED BY THE COUNTY SANITARY ENGINEER TO PREVENT GROUNDWATER FROM FOLLOWING THE TRENCH. IMPERVIOUS DAMS SHALL BE REQUIRED WHERE EXCESSIVE GROUND-WATER MAY DETRIMENTALLY AFFECT THE PROPER INSTALLATION OF THE SANITARY SEWER.

THE CONTRACTOR SHALL PLACE CUTOFF TRENCH DAMS OF NATIVE CLAY OR IMPERVIOUS SOIL ACROSS AND ALONG THE TRENCH AS SPECIFIED BY THE COUNTY SANITARY ENGINEER.

THE TRENCH DAMS SHALL BE CAREFULLY COMPACTED AND SHALL BE 5 FEET IN LENGTH (MEASURED ALONG THE TRENCH CENTERLINE) AND SHALL BE BENCHED INTO THE UNDISTURBED TRENCH SIDES.

IMPERVIOUS DAM DETAIL

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS	STANDARD NUMBER
MARCH, 2018	DEPARTMENT OF WATER & SEWER	S-21