

CONSTRUCTION PLANS FOR SANITARY SEWER MAIN EXTENSION FRANKLIN, INDIANA

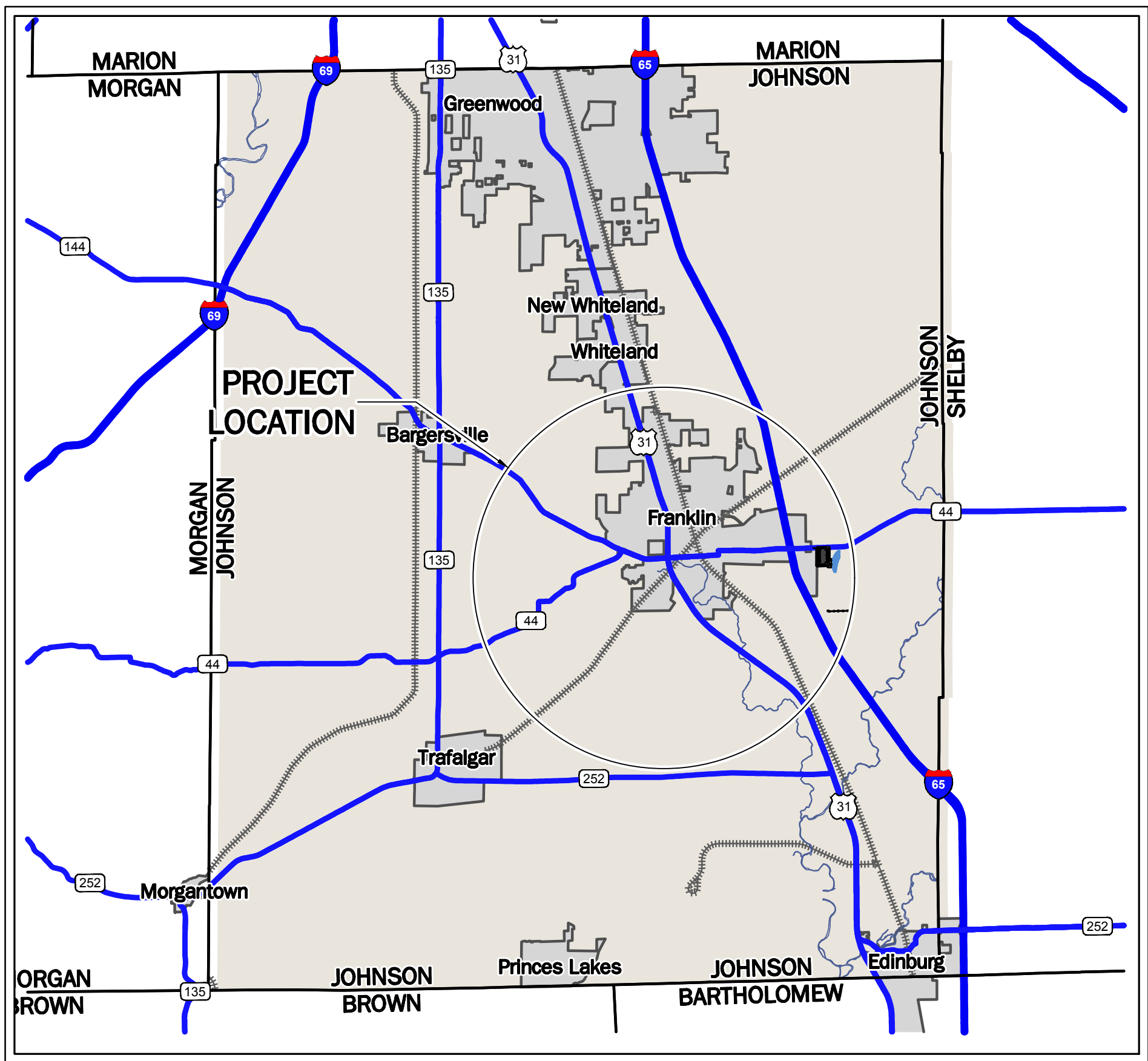
**OAKLEAF
FARMS, LLC**



CR600 SANITARY SEWER MAIN EXTENSION

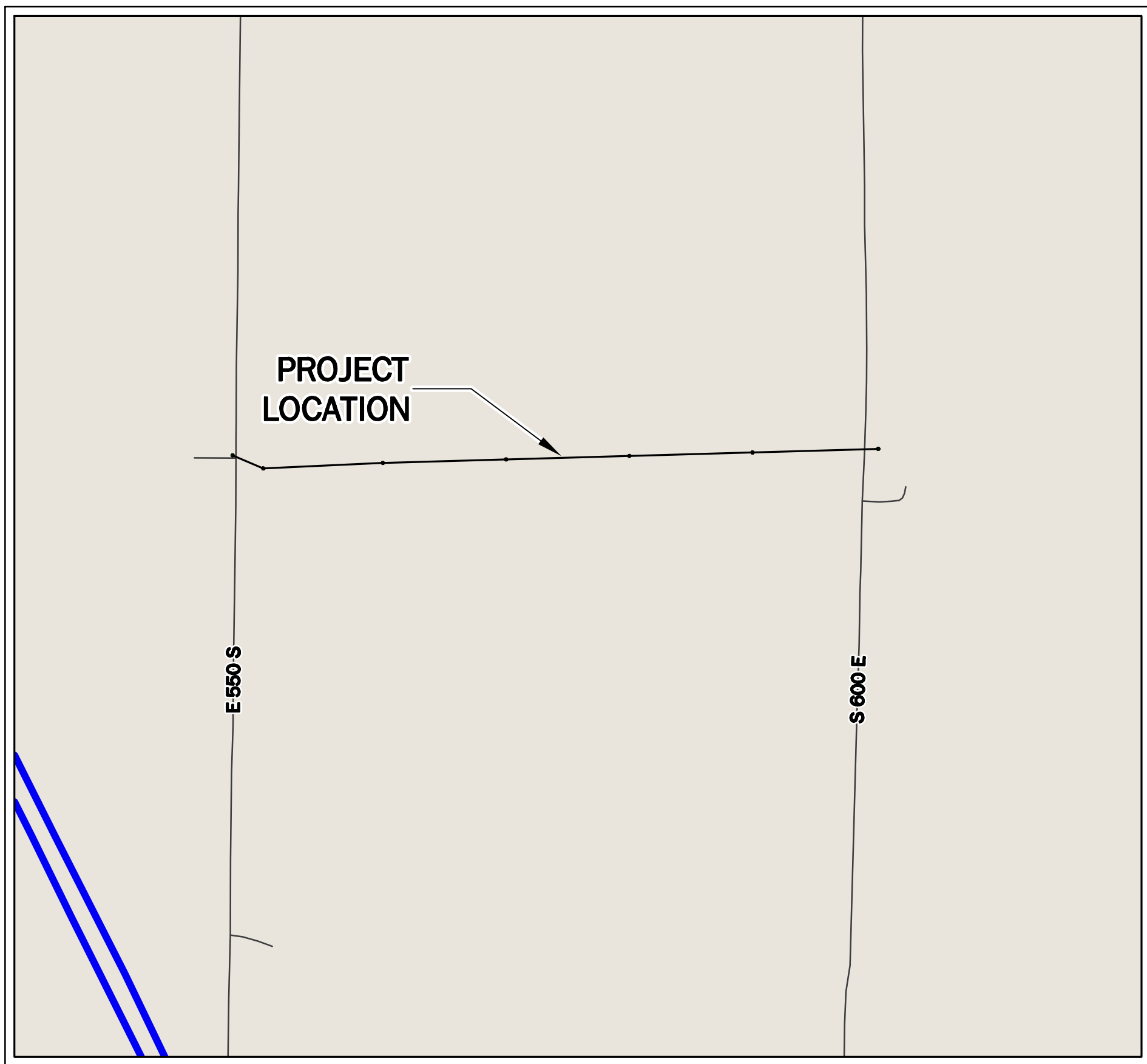
FRANKLIN, IN

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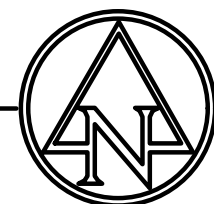
LOCATION MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE



BENCHMARK DATA

(NABD '88)
HELD OPUS SOLUTION 18-83940150 FOR BASE
#1000 FOR INGCs JOHNSON COUNTY, IN

ASI TBM #32
CHISELED 'X' ON SW BOLT OF FIRE HYDRANT
EAST SIDE OF SARTRAM PARKWAY; ±300'
SOUTH OF 44.
ELEV = 731.40

ASI TBM #50
MAG SPIKE SET IN WEST SIDE UTILITY POLE
AT SW CORNER OF 44 AND COUNTY ROAD 525 E.
ELEV = 725.59

ASI TBM #51
MAG SPIKE SET IN SOUTH SIDE UTILITY POLE
#40792 SOUTH SIDE OF 44 AND ±400'
WEST OF MAILBOX #5557.
ELEV = 721.56

ASI TBM #52
CHISELED SQUARE ON WEST CORNER OF
SOUTH END OF CONCRETE HEADWALL OF BOX
CULVERT UNDER SR 44 LOCATED ±600'
SOUTHWEST OF COUNTY ROAD 600 E.
ELEV = 720.38

ASI TBM #53
MAG SPIKE SET IN WEST SIDE UTILITY POLE
#5012 ON WEST SIDE OF COUNTY ROAD
525 E AND ±900' SOUTH OF SR 44.
ELEV = 735.00

ASI TBM #54
MAG SPIKE SET IN NW SIDE UTILITY POLE
#121P2002 ON WEST SIDE OF COUNTY ROAD
525 E AND ±200' NORTH OF SOUTH PROPERTY LINE.
ELEV = 724.93

GENERAL NOTES

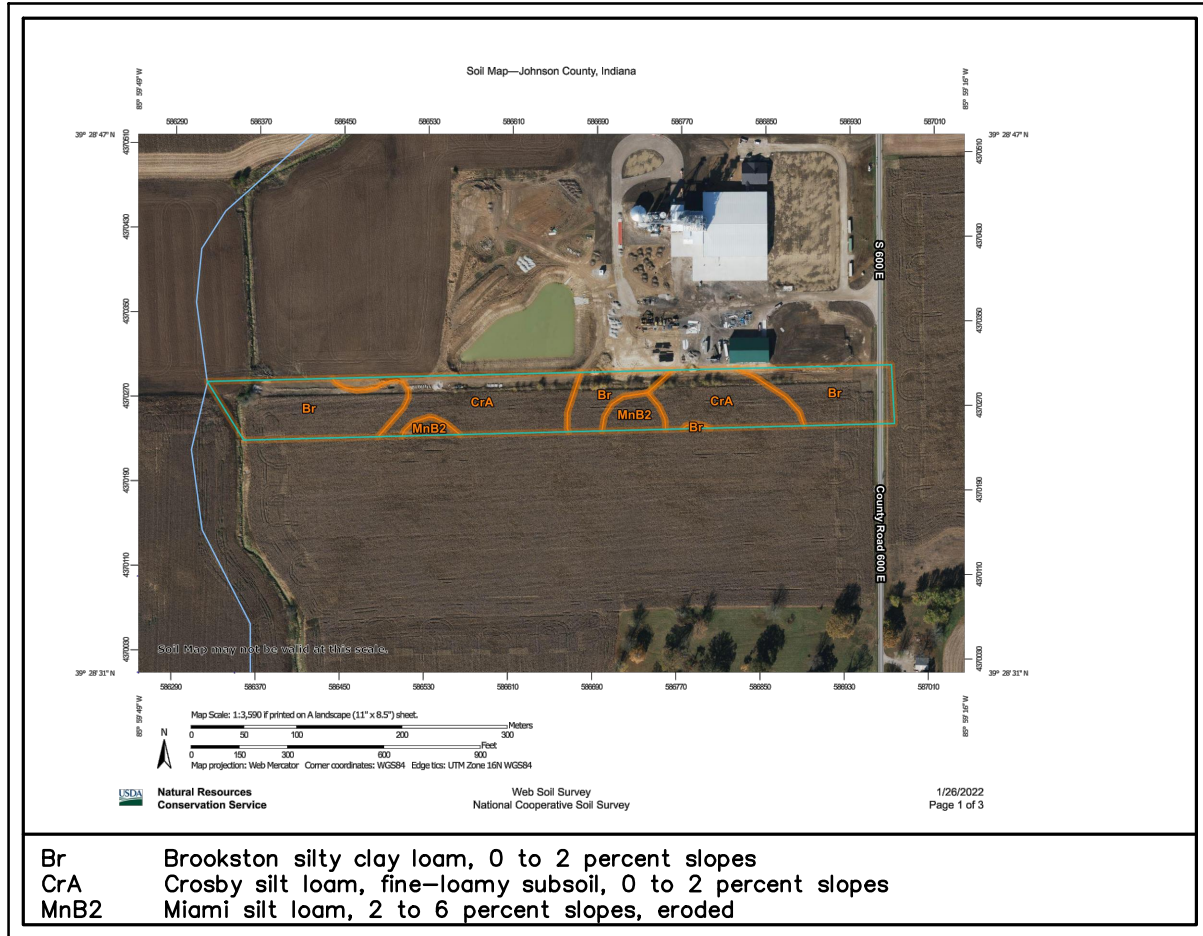
1. CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
2. CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.
3. SEE SHEET C002 GENERAL NOTES FOR MORE INFORMATION.

!! CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

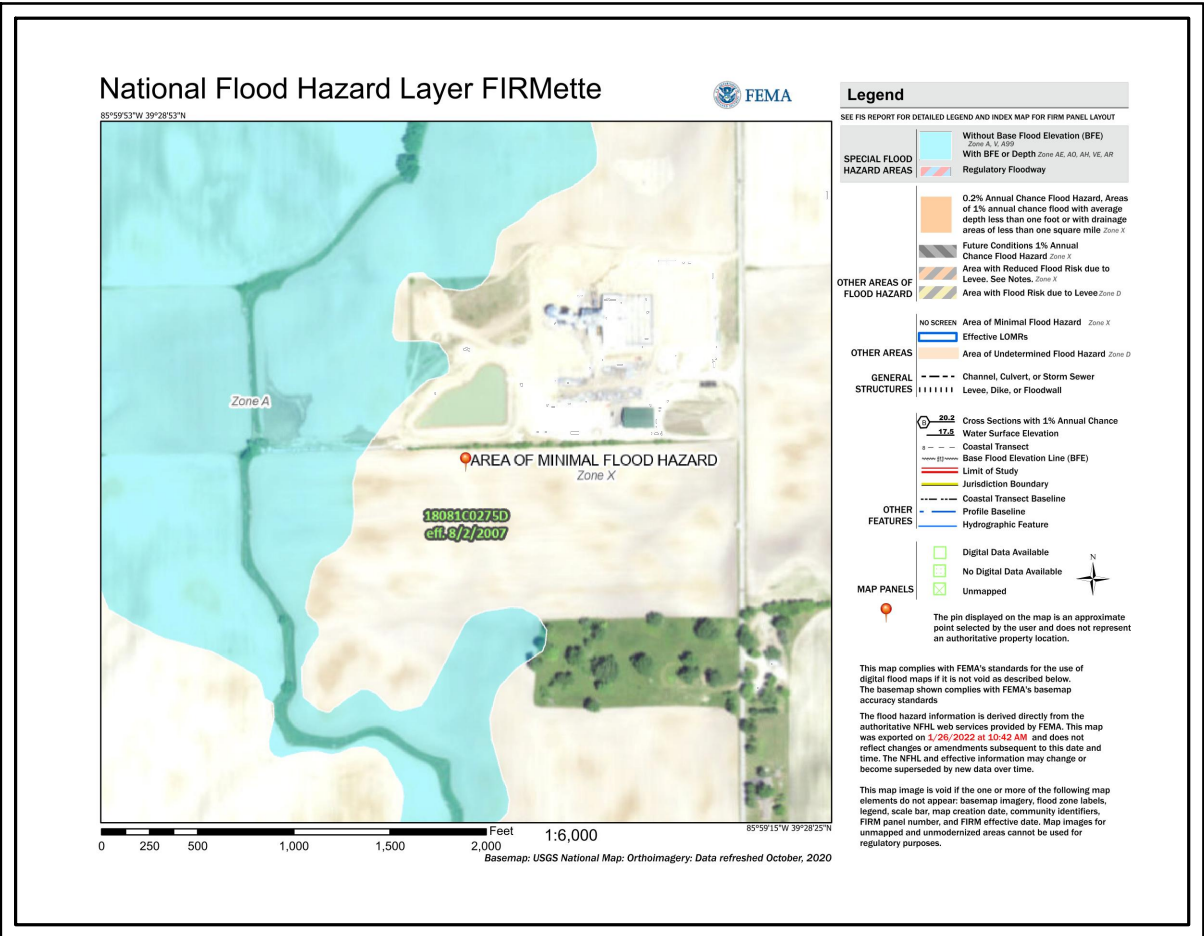
CALL TOLL FREE
"811" OR 1-800-382-5544
— INDIANA UNDERGROUND

UTILITY CONTACTS			
UTILITY	COMPANY	CONTACT	PHONE
COMMUNICATIONS	CENTURYLINK (CTCLC)	BRUCE EMERICK	(574) 926-1247
ELECTRIC	JOHNSON COUNTY REMC	KEVIN SHELLEY	(317) 736-5174
GAS	VECTREN	JON EASTHAM	(765) 287-2119
SANITARY SEWER	CITY OF FRANKLIN, DPW	SALLY BROWN	(317) 736-3640
STORM SEWER	CITY OF FRANKLIN, DPW	SALLY BROWN	(317) 736-3640
WATER	INDIANA AMERICAN WATER	RYAN MOORE	(317) 885-2404



SOILS MAP

NOT TO SCALE



FEMA MAP

NOT TO SCALE

DRAWING FILE: P:\2020\010620 - Drawing Civil\Construction Documents\2020.01062 CE C002.CN.dwg
EDITED BY: JOLASHUK
PLOT DATE: 1/26/2022
PLOT SCALE: 1:2-8849

GENERAL NOTES

- ALL WORK TO CONFORM TO FEDERAL, STATE AND LOCAL REGULATIONS.
- CONTRACTOR SHALL KEEP ADJOINING PROPERTIES CLEAN OF CONSTRUCTION DEBRIS AND CONSTRUCTION TRAFFIC AT ALL TIMES.
- THE CONTRACTOR SHALL PROTECT AND NOT DESTROY THE BASE SURVEY CONTROL POINTS DURING DEMOLITION AND CONSTRUCTION.
- ALL UTILITY INFORMATION SHALL BE VERIFIED BY THE CONTRACTOR. CONTACT ENGINEER IMMEDIATELY IF ANY VARIATION EXISTS.
- MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT AGAINST DAMAGE DURING DEMOLITION AND CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.

EXISTING TOPOGRAPHY NOTES

- EXISTING TOPOGRAPHY IS PROVIDED BY: AMERICAN STRUCTUREPOINT, PROJECT:2020.01062 DATED: 12-01-2021

DEMOLITION NOTES

- CLEAR AND GRUB ALL TREES AND VEGETATION NECESSARY FOR CONSTRUCTION.
- PROTECT TREES TO REMAIN DURING CONSTRUCTION.
- PLANT MATERIALS TO REMAIN, TO BE PROTECTED BY TREE FENCE WHICH ENCOMPASSES IT'S DRIP LINE. NO CONSTRUCTION EQUIPMENT, MATERIALS OR DEBRIS SHALL BE LOCATED WITHIN TREE PROTECTION BOUNDARIES. NO DEMOLITION CAN OCCUR UNTIL TREE PROTECTION IS APPROVED BY THE OWNER.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, FENCES, CONCRETE, ASPHALT PAVEMENT AND OTHER MISCELLANEOUS APPURTENANCES OFF SITE, UNLESS NOTED TO REMAIN ON THE CONTRACT DRAWINGS.
- DEMOLISH FOUNDATIONS AND OTHER BELOW-GRADE CONSTRUCTION, INCLUDING CONCRETE SLABS, TO A DEPTH OF NOT LESS THAN 48 INCHES BELOW LOWEST FOUNDATION LEVEL.
- COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES, WITH COMPACTED GRANULAR BACKFILL.
- THE USE OF ANY TYPE OF EXPLOSIVES WILL NOT BE PERMITTED.
- CONDUCT DEMOLITION AND CONSTRUCTION OPERATIONS TO ENSURE MINIMAL INTERFERENCE WITH STREETS, WALKS AND OTHER ADJACENT OCCUPIED FACILITIES.
- DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED FACILITIES WITHOUT PERMISSION FROM THE LOCAL AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS, IF REQUIRED BY GOVERNING AUTHORITIES.
- ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION AND CONSTRUCTION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT STRUCTURES AND OTHER FACILITIES AND INJURY TO PERSONS.
- PROMPTLY REPAIR DAMAGE TO ADJACENT FACILITIES CAUSED BY DEMOLITION AND CONSTRUCTION OPERATIONS.
- ALL UTILITIES TO BE REMOVED SHALL BE DISCONNECTED AND CAPPED AT THE NEAREST CONNECTION POINT.
- NO ON-SITE BURNING IS PERMITTED.
- CONTRACTOR SHALL USE MEASURES TO CONTROL DUST AT ALL TIMES.
- DEMOLITION ITEMS INCLUDE BUT ARE NOT LIMITED TO DEMOLITION ITEMS INDICATED ON THIS PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR RELOCATE ITEMS WHICH INTERFERE WITH NEW CONSTRUCTION.
- ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING DEMOLITION.

SITE NOTES

- ALL PARKING STRIPES ARE TO BE 4" PAINTED (WHITE). ADA ACCESSIBLE PARKING STRIPES SHALL BE 4" PAINTED (BLUE).
- ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT OR FACE OF CURB, UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS ARE TO FACE OF BRICK OR FACING MATERIAL, WHERE APPLICABLE.
- ALL DIMENSIONS ARE PARALLEL WITH, OR PERPENDICULAR TO BASE LINES, PROPERTY LINES OR BUILDING LINES, UNLESS OTHERWISE NOTED.
- PROVIDE SMOOTH TRANSITIONS FROM NEW AREAS TO EXISTING FEATURES AS NECESSARY.
- RESURFACE OR RECONSTRUCT AT LEAST TO ORIGINAL CONDITIONS ALL AREAS WHERE THE EXISTING PAVEMENT OR LAWNS ARE DAMAGED DURING CONSTRUCTION FROM TRAFFIC BY CONTRACTORS, SUBCONTRACTORS OR SUPPLIERS AFTER CONSTRUCTION WORK IS COMPLETE.
- EXISTING PAVEMENT TO BE SAW CUT IN ALL AREAS WHERE INDICATED NEW PAVEMENT TO JOIN EXISTING.
- THE EDGE OF THE EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING ASPHALT.
- CONCRETE SAW CUTTING SHALL BE DONE AS SOON AS POURED CONCRETE HAS CURED AND CAN SUPPORT WEIGHT. PROVIDE A NEAT CUT WHICH IS TRUE IN ALIGNMENT.
- ALL JOINTS ARE TO CONTINUE THROUGH THE CURB.
- RADIAL JOINTS SHALL BE NO SHORTER THAN 1.5'.
- CONTRACTOR SHALL USE A THICKENED EXPANSION JOINT AROUND THE PERIMETER OF ANY BLOCK OUT IN THE CONCRETE PAVING.
- ALL CONSTRUCTION JOINTS SHALL BE SAWN, CLEANED OF DEBRIS, BLOWN DRY AND IMMEDIATELY SEALED WITH THE APPROPRIATE SEALANT ACCORDING TO MANUFACTURER'S DIRECTIONS.
- ALL MATERIALS TO BE IN ACCORDANCE WITH LOCAL DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS RELATIVE TO MATERIAL, MIX, PLACEMENT AND WORKMANSHIP.
- ALL SIDEWALKS SHALL COMPLY WITH ADA STANDARDS. MAXIMUM GROSS SLOPE OF 1:50 AND MAXIMUM LONGITUDINAL SLOPE OF 1:20.
- CHAMFER ALL ENDS OF CURBS.

GRADING NOTES

- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH), SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION. SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATIONS OF UTILITIES FOR THEIR OWN WORK.
- CONTRACTOR TO ADJUST ALL EXISTING SURFACE INFRASTRUCTURE (HYDRANTS, VALVES, HANDHOLES, CASTINGS, IRRIGATION SYSTEM, UTILITY PEDESTALS, ETC.) AS REQUIRED TO MEET PROPOSED GRADE AT HIS/HER OWN COST.
- AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL SHALL BE PERFORMED BY A LOADED TANDEM PNEUMATIC TIRE DUMP TRUCK MINIMUM GROSS VEHICLE WEIGHT OF 15 TONS. THE TIRES SHALL BE OPERATED AT INFLATION PRESSURES BETWEEN 70-80 PSI UNLESS OTHERWISE NOTED BY THE GEOTECHNICAL ENGINEER. THE TIRES SHALL BE INFLATED WITH AIR ONLY. NO LIQUID SHALL BE USED. THE PROOFROLL SHALL BE COMPLETED UNDER INSPECTION OF SOILS FIRM TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. THE NECESSITY FOR SUBDRAINS AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
- PROVIDE POSITIVE DRAINAGE WITHOUT PONDING IN ALL AREAS. AFTER INSTALLATION, CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, STANDING WATER CONDITIONS.
- ALL PROPOSED SPOT ELEVATIONS OR CONTOURS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
- SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
- TRENCHES FOR ALL STORM DRAIN LINES SHALL BE BACKFILLED COMPLETELY WITH SELECT GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
- CONTRACTOR TO PERPETUATE ANY SUBSURFACE DRAIN TILES OR PIPES ENCOUNTERED DURING CONSTRUCTION AND PROVIDE POSITIVE OUTLET TO DOWNSTREAM RECEIVING SYSTEM. CONTRACTOR TO NOTIFY THE ENGINEER WITH ANY CIRCUMSTANCES WHERE THIS CANNOT BE ACCOMPLISHED.
- DUE TO SITE CONSTRAINTS, THE EARTHWORK FOR THE SITE AS DESIGNED MAY OR MAY NOT BALANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE EXISTING CONDITIONS AND INCLUDE IN THEIR BID ALL EARTHWORK COSTS INCLUDING IMPORTS AND/OR EXPORTS NECESSARY TO MAKE THE SITE BALANCE.
- CONTRACTOR TO STABILIZE EXPOSED EARTH AS INDICATED BY THE STORMWATER POLLUTION PREVENTION PLAN OR GOVERNING AUTHORITY.

UTILITY NOTES

- SITE UTILITIES SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH), SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION. SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATIONS OF UTILITIES FOR THEIR OWN WORK.
- CONTRACTOR TO ADJUST ALL EXISTING SURFACE INFRASTRUCTURE (HYDRANTS, VALVES, HANDHOLES, CASTINGS, IRRIGATION SYSTEM, UTILITY PEDESTALS, ETC.) AS REQUIRED TO MEET PROPOSED GRADE.
- ALL UTILITY MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL STANDARDS FOR EACH UTILITY AGENCY HAVING JURISDICTION.
- TRENCHES FOR ALL UTILITY LINES SHALL BE BACKFILLED COMPLETELY WITH SELECT GRANULAR MATERIAL IF THE TOP OF THE TRENCH IS WITHIN 5 FEET OF PAVEMENT.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES AND CONDUITS TO AVOID CONFLICTS AND PROVIDE REQUIRED MINIMUM DEPTHS OF COVER. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL BENDS WITH THRUST BLOCKS REQUIRED TO ASSURE PROPER INSTALLATION OF WATER MAINS AND LATERALS.
- IN THE EVENT OF A CONFLICT BETWEEN WATER LINES AND STORM DRAINS, THE CONTRACTOR SHALL EITHER ADJUST THE WATER LINE DOWNWARD IN SUCH A MANNER SO THAT THE PIPE MANUFACTURER'S RECOMMENDATIONS ON PIPE DEFLECTION AND JOINT STRESS ARE NOT EXCEEDED OR THE CONTRACTOR SHALL PROVIDE APPROPRIATE BENDS AND CROSSINGS.
- ALL COORDINATES AND DIMENSIONS ARE TO THE CENTERLINE OF UTILITIES AND STRUCTURES.
- ALL PROPOSED STORM SEWER AND DRAINAGE APPURTENANCES SHALL BE IN CONFORMANCE WITH THE CITY OF FRANKLIN STORMWATER SPECIFICATIONS, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE STORMWATER SPECIFICATIONS SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE STORMWATER SPECIFICATIONS.

EROSION CONTROL NOTES

- CONTRACTOR SHALL INSTALL ALL PERIMETER SILT FENCE AND SEDIMENT CONTROL BARRIERS PRIOR TO CLEARING AND GRADING.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
- LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING RE-GRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
- SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN RECEIVING WATER. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
- WASTE AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTE AND UNUSED BUILDING MATERIALS IS REQUIRED.
- SEDIMENT BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
- SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND RE-DISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
- IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- THE SITE IS LOCATED WITHIN A FLOODPLAIN, FLOODWAY OR FLOODWAY FRINGE AS INDICATED ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR JOHNSON COUNTY, IN, MAP NUMBER 18081C0275D, DATED AUGUST 2, 2007.
- SCHEDULE OF EARTHWORK ACTIVITIES:
 - THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED AS SOON AS POSSIBLE. UN-VEGETATED AREAS THAT ARE SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FIFTEEN (15) DAYS OR MORE MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITH MEASURES APPROPRIATE FOR THE SEASON TO MINIMIZE EROSION POTENTIAL. ALTERNATIVE MEASURES TO SITE STABILIZATION ARE ACCEPTABLE IF THE PROJECT SITE OWNER OR THEIR REPRESENTATIVE CAN DEMONSTRATE THEY HAVE IMPLEMENTED EROSION AND SEDIMENT CONTROL MEASURES ADEQUATE TO PREVENT SEDIMENT DISCHARGE.
 - TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIMES OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
 - INSTALL INLET PROTECTION AROUND INLETS IMMEDIATELY UPON COMPLETION OF THE STRUCTURE. REMOVE INLET PROTECTION FOR PAVING OPERATION. REPLACE INLET PROTECTION AFTER PAVING IS COMPLETE. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON SEEDED AREAS BEHIND THE CURB.
- PRIOR TO COMPLETION OF THE PROJECT, CONTRACTOR SHALL CLEAN OUT ALL STORM DRAINAGE STRUCTURES AND RESTORE ALL DITCHES AND PONDS TO DESIGNED GRADES.
- CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROL BARRIERS ONCE CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED.
- ALL PROPOSED EROSION AND SEDIMENT CONTROL SHALL BE IN CONFORMANCE WITH THE CITY OF FRANKLIN STORMWATER SPECIFICATIONS, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE STORMWATER SPECIFICATIONS SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE STORMWATER SPECIFICATIONS.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE INSPECTOR.

EXISTING LEGEND

- Combination Pole
- Gas Marker
- Guy Wire
- Tree
- Overhead Electric Line

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(NAVD '88)
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ASI TBM #54
MAG SPIKE SET IN NW SIDE UTILITY POLE
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525 E AND ±200' NORTH OF SOUTH PROPERTY LINE.
ELEV = 724.93

OAKLEAF
FARMS, LLC



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INC.

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www.structurepoint.com

CR600 SANITARY
SEWER MAIN
EXTENSION

FRANKLIN, IN

XX/XX/20XX

CERTIFIED BY

ISSUANCE INDEX

DATE:
1/26/2022
PROJECT PHASE:

REVISION SCHEDULE

NO.	DESCRIPTION	DATE

Project Number 2020.01062

GENERAL NOTES

C002

GENERAL NOTES:

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CALL TOLL FREE
"811" OR 1-800-382-5544
- INDIANA UNDERGROUND -

EARTHWORK:		
A. GENERAL		
1. EARTHWORK INCLUDES CLEARING, CRUBBING, SUBGRADE PREPARATION, REMOVAL OF TREES AND VEGETATION (INCLUDING STUMPS), PROTECTION OF TREES TO REMAIN, STRIPPING AND STORAGE OF TOPSOIL, FILL COMPACTION AND ROUGH GRADING OF ENTIRE SITE AS INDICATED ON DRAWINGS.		
2. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.		
3. CONTRACTOR SHALL PROVIDE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFF THE SITE AS MAY BE NECESSARY TO PRODUCE THE GRADES REQUIRED AS SHOWN ON THE DRAWINGS. FILL OBTAINED FROM OFF SITE MUST BE SUITABLE SOIL AS DEFINED IN THE SPECIFICATIONS OR AS OTHERWISE APPROVED BY OWNER.		
4. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS CURRENT STATE AND SHALL REMOVE ALL TRASH, RUBBISH, AND DEBRIS FROM THE SITE PRIOR TO STARTING EXCAVATION.		
5. EXCEPT FOR STRIPPED TOPSOIL AND OTHER MATERIALS INDICATED TO BE STOCKPILED OR OTHERWISE REMAIN OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.		
6. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, DRIVES, FACILITIES, ETC. WITHOUT OWNER PERMISSION OR AUTHORITY HAVING JURISDICTION.		
7. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING EARTHWORK AND CLEARING OPERATIONS. EROSION CONTROL MEASURES SHOULD BE PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION.		
8. CONTRACTOR SHALL CAREFULLY MAINTAIN ALL BENCHMARKS, MONUMENTS, AND OTHER REFERENCE POINTS. IF DISTURBED, CONTRACTOR SHALL ENGAGE LICENSED LAND SURVEY FOR REPLACEMENT OF REFERENCE POINTS.		
9. WHERE THESE SPECIFICATIONS CONFLICT WITH CITY OF FRANKLIN STANDARDS, THE STANDARDS OF THE JURISDICTION HAVING AUTHORITY SHALL PREVAIL.		
B. MATERIALS		
1. CONTRACTOR TO PROVIDE BORROW SOIL MATERIALS WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE FROM EXCAVATIONS.		
2. SATISFACTORY (OR SUITABLE) SOILS: SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM ACCORDING TO ASTM D2487, OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION AND OTHER DELETERIOUS MATERIAL.		
3. UNSATISFACTORY (OR UNSUITABLE) SOILS: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, MH, OH, AND PT ACCORDING TO ASTM D 2487, OR A COMBINATION OF THESE GROUPS. UNSATISFACTORY SOILS ALSO INCLUDES SATISFACTORY SOILS NOT MAINTAINED WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION.		
C. EXECUTION		
1. CONTRACTOR SHALL LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVED OR ABANDONED IN PLACE. DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER UNLESS PERMISSION IS GRANTED. NOTIFY OWNER AT LEAST TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.		
2. REMOVE OBSTRUCTIONS, TREES, SHRUBS, AND OTHER VEGETATION AS REQUIRED FOR NEW CONSTRUCTION. STRIP TOPSOIL TO DEPTH AS REQUIRED IN THE FIELD TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS. STOCKPILE TOPSOIL, AS REQUIRED, IN A SEPARATE AREA. DO NOT INTERMINGLE WITH SUBSOIL AND GRADE STOCKPILES TO DRAIN SURFACE WATER.		
3. REMOVE EXISTING ABOVE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND NECESSARY TO FACILITATE NEW CONSTRUCTION.		
4. PROTECT SUBGRADES AND FOUNDATION SOILS FROM FREEZING TEMPERATURES, FROST, AND PONDING WATER.		
5. EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS FOR ALL STRUCTURES, WALKS, PAVEMENTS, AND UTILITY TRENCHES.		
6. CONTRACTOR SHALL FURNISH AND OPERATE ALL DEWATERING MEASURES REQUIRED TO FACILIATE NEW CONSTRUCTION AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.		
7. PROOF ROLL SUBGRADE BELOW BUILDING PAVEMENTS WITH A PNEUMATIC-TIRED DUMP TRUCK TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF ROLL WET OR SATURATED SUBGRADES. RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES AS DIRECTED BY ENGINEER OR OWNER REPRESENTATIVE, WITHOUT ADDITIONAL COMPENSATION.		
8. BACKFILL ALL UTILITY TRENCHES BENEATH PAVEMENT (AND WITHIN 5') WITH GRANULAR MATERIAL.		
9. SOIL FILL: USE SATISFACTORY SOIL MATERIAL UNDER ALL WALKS, PAVEMENTS, STEPS, RAMPS, BUILDING SLABS, FOOTINGS, AND FOUNDATIONS.		
10. UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL SOIL LAYER BEFORE COMPACTION TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT. DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTORY SATISFACTORY SOIL MATERIAL THAT EXCEEDS OPTIMUM MOISTURE CONTENT BY 2 PERCENT AND IS TOO WET TO COMPACT TO SPECIFIED UNIT WEIGHT.		
11. COMPACTION OF SOIL BACKFILLS AND FILLS ARE TO BE IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS. WHERE NO GEOTECHNICAL REPORT EXISTS, COMPACT ALL FILL MATERIAL BELOW STRUCTURES, PAVEMENTS, WALKS, UTILITY TRENCHES AND STEPS (AND WITHIN 5 FEET OF SAID AREAS) TO 98 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-698 (STANDARD PROCTOR DENSITY). COMPACT ALL FILL MATERIALS BELOW TURF OR UNPAVED AREAS TO 90 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-698 (STANDARD PROCTOR DENSITY). ALL FILL MATERIALS TO BE COMPACTED IN MAXIMUM 8-INCH LIFTS.		
12. SITE ROUGH GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING. FINISH SUBGRADES TO REQUIRED ELEVATIONS WITHIN THE FOLLOWING TOLERANCES: i. TURF OR UNPAVED AREAS: PLUS OR MINUS 1 INCH ii. WALKS: PLUS OR MINUS 1/2 INCH iii. PAVEMENTS: PLUS OR MINUS 1/2 INCH iv. INSIDE BUILDING LINES: FINISH SUBGRADE TO A TOLERANCE OF 1/4 INCH WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE		
13. QUALITY CONTROL: QUALIFIED GEOTECHNICAL ENGINEER TO BE ENGAGED AS TESTING AGENCY AS DIRECTED BY OWNER		
14. REPAIR AND REESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME ERODED, RUTTED, SETTLED, OR WHERE THEY LOSE COMPACTION DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER		
ASPHALT PAVING:		
A. GENERAL		
1. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.		
2. USE MATERIALS AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS.		
B. PRODUCTS		
1. AGGREGATES		
i. COURSE AGGREGATE: ASTM D 692/D92M, SOUND; ANGULAR CRUSHED STONE, CRUSHED GRAVEL, OR CURED, CRUSHED BLAST-FURNANCE SLAG.		
ii. FINE AGGREGATE: ASTM D 1073 OR AASHTO M 29, SHARP-EDGED NATURAL SAND OR SAND PREPARED FROM STONE, GRAVEL, CURED BLAST-FURNANCE SLAG, OR COMBINATIONS THEREOF. a. FOR HOT-MIX ASPHALT, LIMIT NATURAL SAND TO A MAXIMUM OF 20 PERCENT BY WEIGHT OF THE TOTAL AGGREGATE MASS.		
iii. MINERAL FILLER: ASTM D 242 OR AASHTO M 17, ROCK OR SLAG DUST, HYDRAULIC CEMENT, OR OTHER INERT MATERIAL.		
2. ASPHALT MATERIALS		
i. ASPHALT BINDER: AASHTO M 320, PG 64-22 (OR AS OTHERWISE RECOMMENDED BY INDOT STANDARDS)		
ii. ASPHALT CEMENT: PER INDOT STANDARDS		
iii. OUTBACK PRIME COAT: PER INDOT STANDARDS		
iv. EMULSIFIED ASPHALT PRIME COAT: PER INDOT STANDARDS		
v. TACK COAT: PER INDOT STANDARDS		
vi. WATER: POTABLE MIXES WITH A HISTORY OF SATISFACTORY PERFORMANCE IN GEOGRAPHICAL AREA WHERE PROJECT IS LOCATED.		
vii. UNDERSEALING ASPHALT: ASTM D 3141; PUMPING CONSISTENCY.		
3. AUXILIARY MATERIALS		
i. RECYCLED MATERIALS FOR HOT-MIX ASPHALT MIXES: RECLAIMED ASPHALT PAVEMENT; RECLAIMED, UNBOUND AGGREGATE BASE MATERIAL; AND RECYCLED ASPHALT SHINGLES FROM SOURCES AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS, EQUAL TO PERFORMANCE OF REQUIRED HOT-MIX ASPHALT PAVING PRODUCED FROM ALL NEW MATERIALS.		
ii. HERBICIDE: COMMERCIAL CHEMICAL FOR WEED CONTROL, REGISTERED BY THE EPA, AND NOT CLASSIFIED AS "RESTRICTED USE" FOR LOCATIONS AND CONDITIONS OF APPLICATION. PROVIDE IN GRANULAR, LIQUID, OR WETTABLE POWDER FORM.		
iii. SAND: ASTM D 1073 OR AASHTO M 29, GRADE NO. 2 OR NO. 3.		
4. MIXES		
i. RECYCLED CONTENT OF HOT-MIX ASPHALT: PER INDOT STANDARDS		
ii. HOT-MIX ASPHALT: DENSE-GRADED, HOT-LAID, HOT-MIX ASPHALT PLANT MIXES APPROVED BY INDOT AND COMPLYING WITH THE FOLLOWING REQUIREMENTS: a. PROVIDE MIXES WITH A HISTORY OF SATISFACTORY PERFORMANCE IN GEOGRAPHICAL AREA WHERE PROJECT IS LOCATED. b. BASE COURSE: 25.0 MM OR 19.0 MM (AS INDICATED ON DRAWINGS) c. SURFACE COURSE: 9.5MM		
C. EXECUTION		
1. EXAMINATION		
i. VERIFY THAT SUBGRADE IS DRY AND IN SUITABLE CONDITION TO BEGIN PAVING.		
ii. PROOF-ROLL SUBGRADE BELOW PAVEMENTS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES. PROOFROLL TO BE PERFORMED BY QUALIFIED GEOTECHNICAL ENGINEER. a. COMPLETELY PROOF-ROLL SUBGRADE IN ONE DIRECTION LIMIT VEHICLE SPEED TO 3 MPH.		
b. PROOF ROLL WITH A LOADED 10-WHEEL, TANDEM-AXLE DUMP TRUCK WEIGHING NOT LESS THAN 15 TONS		
c. EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS, AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY ENGINEER, AND REPLACE WITH COMPACTED BACKFILL OR FILL AS DIRECTED.		
d. PROCEED WITH PAVING ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.		
2. SURFACE PREPARATION		
i. GENERAL: IMMEDIATELY BEFORE PLACING ASPHALT MATERIALS, REMOVE LOOSE AND DELETERIOUS MATERIAL FROM SUBSTRATE SURFACES. ENSURE THAT PREPARED SUBGRADE IS READY TO RECEIVE PAVING.		
ii. HERBICIDE TREATMENT: APPLY HERBICIDE ACCORDING TO MANUFACTURER'S RECOMMENDED RATES AND WRITTEN APPLICATION INSTRUCTIONS. APPLY TO DRY, PREPARED SUBGRADE OR SURFACE OF COMPACTED-AGGREGATE BASE BEFORE APPLYING PAVING MATERIALS. a. MIX HERBICIDE WITH PRIME COAT IF FORMULATED BY MANUFACTURER FOR THAT PURPOSE2 OUTBACK PRIME COAT: APPLY UNIFORMLY OVER SURFACE OF COMPACTED UNBOUND-AGGREGATE BASE COURSE AT A RATE OF 0.15 TO 0.50 GAL./SQ. YD. APPLY ENOUGH MATERIAL TO PENETRATE AND SEAL, BUT NOT FLOOD, SURFACE. ALLOW PRIME COAT TO CURE. a. IF PRIME COAT IS NOT ENTIRELY ABSORBED WITHIN 24 HOURS AFTER APPLICATION, SPREAD SAND OVER SURFACE TO BLOT EXCESS ASPHALT. USE ENOUGH SAND TO PREVENT PICKUP UNDER TRAFFIC. REMOVE LOOSE SAND BY SWEEPING BEFORE PAVEMENT IS PLACED AND AFTER VOLATILES HAVE EVAPORATED. b. PROTECT PRIMED SUBSTRATE FROM DAMAGE UNTIL READY TO RECEIVE PAVING.		
iv. TACK COAT: APPLY UNIFORMLY TO SURFACES OF EXISTING PAVEMENT AT A RATE OF 0.05 TO 0.15 GAL./SQ. YD. a. ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT-MIX ASPHALT PAVING. b. AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.		
3. PLACING HOT-MIX ASPHALT		
i. MACHINE PLACE HOT-MIX ASPHALT ON PREPARED SURFACE, SPREAD UNIFORMLY, AND STRIKE OFF. PLACE ASPHALT MIX BY HAND IN AREAS INACCESSIBLE TO EQUIPMENT IN A MANNER THAT PREVENTS SEGREGATION OF MIX. PLACE EACH COURSE TO REQUIRED GRADE, CROSS SECTION, AND THICKNESS WHEN COMPACTED. a. PLACE HOT-MIX ASPHALT BASE COURSE IN NUMBER OF LIFTS AND THICKNESSES INDICATED. b. PLACE HOT-MIX ASPHALT SURFACE COURSE IN SINGLE LIFT. c. SPREAD MIX AT A MINIMUM TEMPERATURE OF 250 DEG F d. BEGIN APPLYING MIX ALONG CENTERLINE OF CROWN FOR CROWNED SECTIONS AND ON HIGH SIDE OF ONE-WAY SLOPES UNLESS OTHERWISE INDICATED. e. REGULATE PAYER MACHINE SPEED TO OBTAIN SMOOTH, CONTINUOUS SURFACE FREE OF PULLS AND TEARS IN ASPHALT-PAVING MAT. f. PLACE PAVING IN CONSECUTIVE STRIPS NOT LESS THAN 10 FEET WIDE UNLESS INFILL EDGE STRIPS OF A LESSER WIDTH ARE REQUIRED. a. AFTER FIRST STRIP HAS BEEN PLACED AND ROLLED, PLACE SUCCEEDING STRIPS AND EXTEND ROLLING TO OVERLAP PREVIOUS STRIPS. OVERLAP MIX PLACEMENT ABOUT 1 TO 1-1/2 INCHES FROM STRIP TO STRIP TO ENSURE PROPER COMPACTION OF MIX ALONG LONGITUDINAL JOINTS. b. COMPLETE A SECTION OF ASPHALT BASE COURSE BEFORE PLACING ASPHALT SURFACE COURSE.		
iii. PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAYER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT-MIX ASPHALT TO PREVENT SEGREGATION OF MIX; USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.		
4. JOINTS		
i. CONSTRUCT JOINTS TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING PAVING SECTIONS. CONSTRUCT JOINTS FREE OF DEPRESSIONS, WITH SAME TEXTURE AND SMOOTHNESS AS OTHER SECTIONS OF HOT-MIX ASPHALT COURSE. a. CLEAN CONTACT SURFACES AND APPLY TACK COAT TO JOINTS. b. OFFSET LONGITUDINAL JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 6 INCHES c. OFFSET TRANSVERSE JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 24 INCHES d. CONSTRUCT TRANSVERSE JOINTS AT EACH POINT WHERE PAYER ENDS A DAY'S WORK AND RESUMES WORK AT A SUBSEQUENT TIME. CONSTRUCT THESE JOINTS USING EITHER "BULKHEAD" OR "PAPERED" METHOD ACCORDING TO AASHTO M 22, FOR BOTH "ENDING A LANE" AND "RESUMPTION OF PAVING OPERATIONS." e. COMPACT JOINTS AS SOON AS HOT-MIX ASPHALT WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT. f. COMPACT ASPHALT AT JOINTS TO A DENSITY WITHIN 2 PERCENT OF SPECIFIED COURSE DENSITY.		
5. COMPACTION		
i. GENERAL: BEGIN COMPACTION AS SOON AS PLACED HOT-MIX PAVING WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT. COMPACT HOT-MIX PAVING WITH HOT, HAND TAMPERS OR WITH VIBRATORY-PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS. a. COMPLETE COMPACTION BEFORE MIX TEMPERATURE COOLS TO 185 DEG F		
ii. BREAKDOWN ROLLING: BEGIN BREAKDOWN ROLLING IMMEDIATELY AFTER ROLLING JOINTS AND OUTSIDE EDGE. EXAMINE SURFACE IMMEDIATELY AFTER BREAKDOWN ROLLING FOR INDICATED CROWN, GRADE, AND SMOOTHNESS. CORRECT LAYDOWN AND ROLLING OPERATIONS TO COMPLY WITH REQUIREMENTS. i. INTERMEDIATE ROLLING: BEGIN INTERMEDIATE ROLLING IMMEDIATELY AFTER BREAKDOWN ROLLING WHILE HOT-MIX ASPHALT IS STILL HOT ENOUGH TO ACHIEVE SPECIFIED DENSITY. CONTINUE ROLLING UNTIL HOT-MIX ASPHALT COURSE HAS BEEN UNIFORMLY COMPACTED TO THE FOLLOWING DENSITY: a. AVERAGE DENSITY: 98 PERCENT OF REFERENCE LABORATORY DENSITY ACCORDING TO ASTM D 6927 OR AASHTO T 245, BUT NOT LESS THAN 94 PERCENT OR GREATER THAN 100 PERCENT. b. AVERAGE DENSITY: 92 PERCENT OF REFERENCE MAXIMUM THEORETICAL DENSITY ACCORDING TO ASTM D 2041, BUT NOT LESS THAN 90 PERCENT OR GREATER THAN 96 PERCENT.		
iv. FINISH ROLLING: FINISH ROLL PAVED SURFACES TO REMOVE ROLLER MARKS WHILE HOT-MIX ASPHALT IS STILL WARM.		
v. EDGE SHAPING: WHILE SURFACE IS BEING COMPACTED AND FINISHED, TRIM EDGES OF PAVEMENT TO PROPER ALIGNMENT. BEVEL EDGES WHILE ASPHALT IS STILL HOT; COMPACT THOROUGHLY.		
vi. REPAIRS: REMOVE PAVED AREAS THAT ARE DEFECTIVE OR CONTAMINATED WITH FOREIGN MATERIALS AND REPLACE WITH FRESH, HOT-MIX ASPHALT. COMPACT BY ROLLING TO SPECIFIED DENSITY AND SURFACE SMOOTHNESS.		
viii. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED.		
viii. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.		
6. INSTALLATION TOLERANCES		
i. PAVEMENT THICKNESS: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN THE FOLLOWING TOLERANCES: a. BASE COURSE: PLUS OR MINUS 1/2 INCH b. SURFACE COURSE: PLUS 1/4 INCH NO MINUS.		
ii. PAVEMENT SURFACE SMOOTHNESS: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS: a. BASE COURSE: 1/4 INCH b. SURFACE COURSE: 1/8 INCH c. CROWNED SURFACES: TEST WITH CROWNED TEMPLATE CENTERED AND AT RIGHT ANGLE TO CROWN. MAXIMUM ALLOWABLE VARIANCE FROM TEMPLATE IS 1/4 INCH		
7. FIELD QUALITY CONTROL		
i. TESTING AGENCY: CONTRACTOR TO ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS.		
ii. THICKNESS: IN-PLACE COMPACTED THICKNESS OF HOT-MIX ASPHALT COURSES WILL BE DETERMINED ACCORDING TO ASTM D 3549.		
iii. SURFACE SMOOTHNESS: FINISHED SURFACE OF EACH HOT-MIX ASPHALT COURSE WILL BE TESTED FOR COMPLIANCE WITH SMOOTHNESS TOLERANCES.		
iv. IN-PLACE DENSITY: TESTING AGENCY WILL TAKE SAMPLES OF UNCOMPACTED PAVING MIXTURES AND COMPACTED PAVEMENT ACCORDING TO ASTM D 979 OR AASHTO T 168. a. REFERENCE MAXIMUM THEORETICAL DENSITY WILL BE DETERMINED BY AVERAGING RESULTS FROM FOUR SAMPLES OF HOT-MIX ASPHALT-PAVING MIXTURE DELIVERED DAILY TO SITE, PREPARED ACCORDING TO ASTM D 2041, AND COMPACTED ACCORDING TO JOB-MIX SPECIFICATIONS.		
b. IN-PLACE DENSITY OF COMPACTED PAVEMENT WILL BE DETERMINED BY TESTING CORE SAMPLES ACCORDING TO ASTM D 1188 OR ASTM D 2726.		
v. ONE CORE SAMPLE WILL BE TAKEN FOR EVERY 1000 SQ. YD. OR LESS OF INSTALLED PAVEMENT, WITH NO FEWER THAN THREE CORES TAKEN.		
vi. FIELD DENSITY OF IN-PLACE COMPACTED PAVEMENT MAY ALSO BE DETERMINED BY NUCLEAR METHOD ACCORDING TO ASTM D 2950 AND CORRELATED WITH ASTM D 1188 OR ASTM D 2726.		
vii. REPLACE AND COMPACT HOT-MIX ASPHALT WHERE CORE TESTS WERE TAKEN.		
viii. REMOVE AND REPLACE OR INSTALL ADDITIONAL HOT-MIX ASPHALT WHERE TEST RESULTS OR MEASUREMENTS INDICATE THAT IT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS.		
DEMOLITION:		
A. GENERAL		
THE CONTRACTOR SHALL REMOVE AND DISPOSE OFF SITE, ALL EXISTING STRUCTURES, FENCES, CONCRETE AND PAVEMENT ON SITE, UNLESS NOTED TO REMAIN ON THE CONTRACT DRAWINGS.		
THE CONTRACTOR SHALL PROTECT AND NOT DESTROY PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.		
B. SUMMARY		
THIS SECTION REQUIRES REMOVAL AND DISPOSAL, OFF SITE, OF THE FOLLOWING: 1. ASPHALT PARKING LOT. 2. MISCELLANEOUS CONCRETE, STORM SEWER, PLANT MATERIAL, UNDERGROUND CONDUITS, SITE LIGHTS, ETC., LOCATED ON SITE.		
C. SUBMITTALS		
SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT AND DIVISION 1 SPECIFICATION SECTIONS. 1. A PROPOSED SCHEDULE OF OPERATIONS COORDINATION FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES AS REQUIRED. 2. PROVIDE A DETAILED SEQUENCE AND SCHEDULE OF DEMOLITION AND REMOVAL WORK TO BE COMPLETED.		
D. JOB CONDITIONS		
1. SALVAGED MATERIALS: ITEMS OF SALVAGEABLE VALUE TO CONTRACTOR MAY BE REMOVED FROM STRUCTURE AS WORK PROGRESSES. TRANSPORT SALVAGED ITEMS FROM THE SITE AS THEY ARE REMOVED. 2. STORAGE OR SALE OF REMOVED ITEMS WILL NOT BE PERMITTED ON SITE.		
3. EXPLOSIVES: USE OF ANY TYPE OF EXPLOSIVES WILL NOT BE PERMITTED.		
3. TRAFFIC: CONDUCT DEMOLITION OPERATIONS AND REMOVAL OF DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. a. DO NOT CLOSE OR OBSTRUCT ROADS, STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM THE LOCAL AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS, IF REQUIRED BY GOVERNING AUTHORITIES.		
4. PROTECTIONS: ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, AND OTHER FACILITIES AND INJURY TO PERSONS.		
5. DAMAGES: PROMPTLY REPAIR ANY DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS.		
6. UTILITY SERVICES. MAINTAIN EXISTING UTILITIES TO STAY IN SERVICE AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DISCONNECT, CAP AND REMOVE UTILITY SERVICES PER LOCAL REQUIREMENTS. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTIONS HAVE BEEN COMPLETED TO THE SATISFACTION OF LOCAL UTILITIES.		
E. DEMOLITION		
1. BELOW-GRADE CONSTRUCTION: DEMOLISH FOUNDATION WALLS AND OTHER BELOW-GRADE CONSTRUCTION, INCLUDING CONCRETE SLABS, TO A DEPTH OF NOT LESS THAN 48 INCHES BELOW LOWEST FOUNDATION LEVEL. 2. FILLING VOIDS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION STRUCTURES.		
F. DISPOSAL OF DEMOLISHED MATERIALS		
1. GENERAL: REMOVE WEEKLY FROM SITE ACCUMULATED DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS. 2. REMOVAL: TRANSPORT MATERIALS REMOVED FROM DEMOLITION OPERATIONS AND LEGALLY DISPOSE OF OFF-SITE.		
SANITARY:		
A. ALL SANITARY MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF FRANKLIN STANDARDS AND SPECIFICATIONS, LATEST EDITION.		

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EDIT DATE: 1/26/2022
EDITED BY: JOLASHUK
PLOT DATE: 1/26/2022 4:07 AM
PLOT SCALE: 1:1

OAKLEAF FARMS, LLC



AMERICAN
STRUCTUREPOINT
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TEL 317.547.5580 | FAX 317.543.0270
www.structurepoint.com

CR600 SANITARY SEWER MAIN EXTENSION

FRANKLIN, IN

XX/XX/20XX
CERTIFIED BY

ISSUANCE INDEX	
DATE:	1/26/2022
PROJECT PHASE:	---

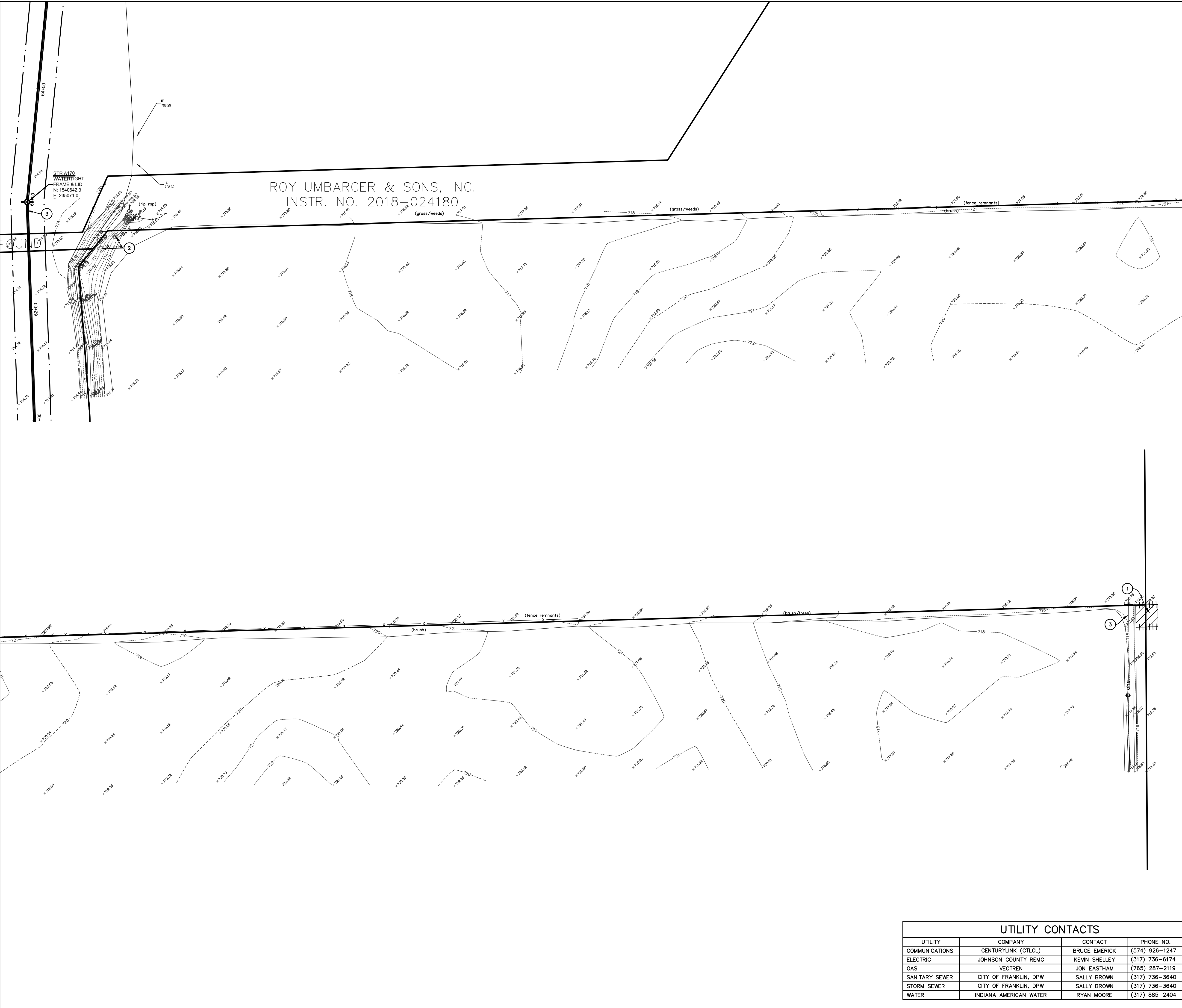
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Project Number 2020.01062

SPECIFICATIONS

C003

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0' 40' 80'
SCALE: 1"=40'

EXISTING LEGEND

- Combination Pole
- Gas Marker
- Guy Wire
- Tree
- Overhead Electric Line

BENCHMARK DATA

(NAVD '88)
HELD OPUS SOLUTION 18-83940150 FOR BASE
#1000 FOR INGS JOHNSON COUNTY, IN

ASI TBM #32
CHISELED "X" ON SW BOLT OF FIRE HYDRANT
EAST SIDE OF BARTRAM PARKWAY; ±300'
SOUTH OF SR 44.
ELEV = 731.40

ASI TBM #50
MAG SPIKE SET IN WEST SIDE UTILITY POLE
AT SW CORNER OF SR 44 AND COUNTY ROAD 525 E.
ELEV = 725.39

ASI TBM #51
MAG SPIKE SET IN SOUTH SIDE UTILITY POLE
#40792 SOUTH SIDE OF SR 44 AND ±400'
WEST OF MAILBOX #5557.
ELEV = 721.56

ASI TBM #52
CHISELED SQUARE ON WEST CORNER OF
NW END OF CONCRETE HEADWALL OF BOX
CULVERT UNDER SR 44 LOCATED ±600'
SOUTHWEST OF COUNTY ROAD 600 E.
ELEV = 720.38

ASI TBM #53
MAG SPIKE SET IN WEST SIDE UTILITY POLE
#06135 ON WEST SIDE OF COUNTY ROAD
525 E AND ±900' SOUTH OF SR 44.
ELEV = 735.00

ASI TBM #54
MAG SPIKE SET IN NW SIDE UTILITY POLE
#12P1002 ON WEST SIDE OF COUNTY ROAD
525 E AND ±200' NORTH OF SOUTH PROPERTY LINE.
ELEV = 724.93

DEMOLITION LEGEND

- PAVEMENT TO BE SAWCUT
- EXISTING ASPHALT TO BE REMOVED

KEYNOTES

- EXISTING ASPHALT PAVEMENT AND BASE MATERIAL TO BE REMOVED (SAWCUT FOR CLEAN EDGE).
- EXISTING TREE TO BE REMOVED.
- PROTECT EXISTING UTILITY THROUGHOUT DURATION OF CONSTRUCTION.

GENERAL NOTES:

- CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
- CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.
- SEE SHEET C002 GENERAL NOTES FOR MORE INFORMATION.

UTILITY CONTACTS

UTILITY	COMPANY	CONTACT	PHONE NO.
COMMUNICATIONS	CENTURYLINK (CTLCL)	BRUCE EMERICK	(574) 926-1247
ELECTRIC	JOHNSON COUNTY REMC	KEVIN SHELLEY	(317) 736-6174
GAS	VECTREN	JON EASTHAM	(765) 287-2119
SANITARY SEWER	CITY OF FRANKLIN, DPW	SALLY BROWN	(317) 736-3640
STORM SEWER	CITY OF FRANKLIN, DPW	SALLY BROWN	(317) 736-3640
WATER	INDIANA AMERICAN WATER	RYAN MOORE	(317) 885-2404

CAUTION

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

CALL TOLL FREE
811 OR 1-800-382-5544
INDIANA UNDERGROUND

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www.structurepoint.com

CR600 SANITARY SEWER MAIN EXTENSION

FRANKLIN, IN

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PROJECT PHASE:

REVISION SCHEDULE

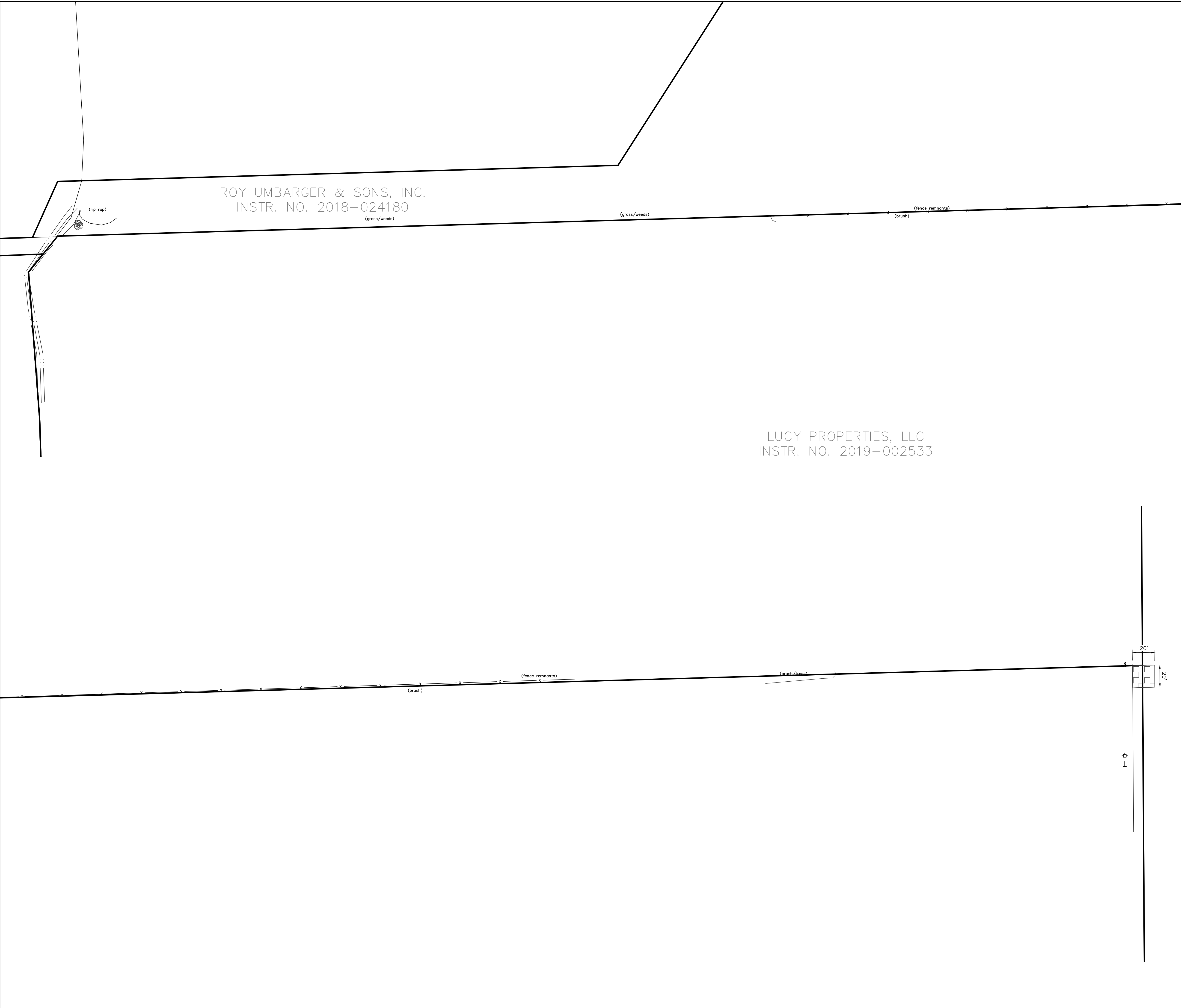
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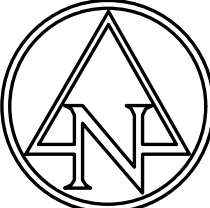
Project Number 2020.01062

EXISTING TOPOGRAPHY & DEMOLITION PLAN

C100

PLOT DATE: 1/26/2022 8:08 AM
PLOT SCALE: 1"=40'
EDIT DATE: 1/26/2022
EDITED BY: JOLASHUK
DRAWING FILE: P:\2020\010620 Drawing Civil\Construction Documents\2020.01062 CE C200.SP.dwg








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
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EXISTING LEGEND

Combination Pole

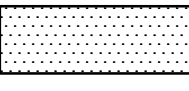
Gas Marker


Guy Wire


Tree

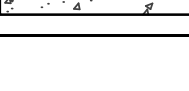
Overhead Electric Line

SITE LEGEND


LIGHT DUTY ASPHALT PAVEMENT

HEAVY DUTY ASPHALT PAVEMENT

RIGHT OF WAY ASPHALT PAVEMENT

CONCRETE PAVEMENT

OAKLEAF
FARMS, LLC



AMERICAN
STRUCTUREPOINT
INC.

9025 River Road, Suite 200 | Indianapolis, Indiana 46240
TEL 317.547.5580 | FAX 317.543.0270
www.structurepoint.com

CR600 SANITARY
SEWER MAIN
EXTENSION

FRANKLIN, IN

XX/XX/20XX

CERTIFIED BY

ISSUANCE INDEX

DATE:

1/26/2022

PROJECT PHASE:

REVISION SCHEDULE

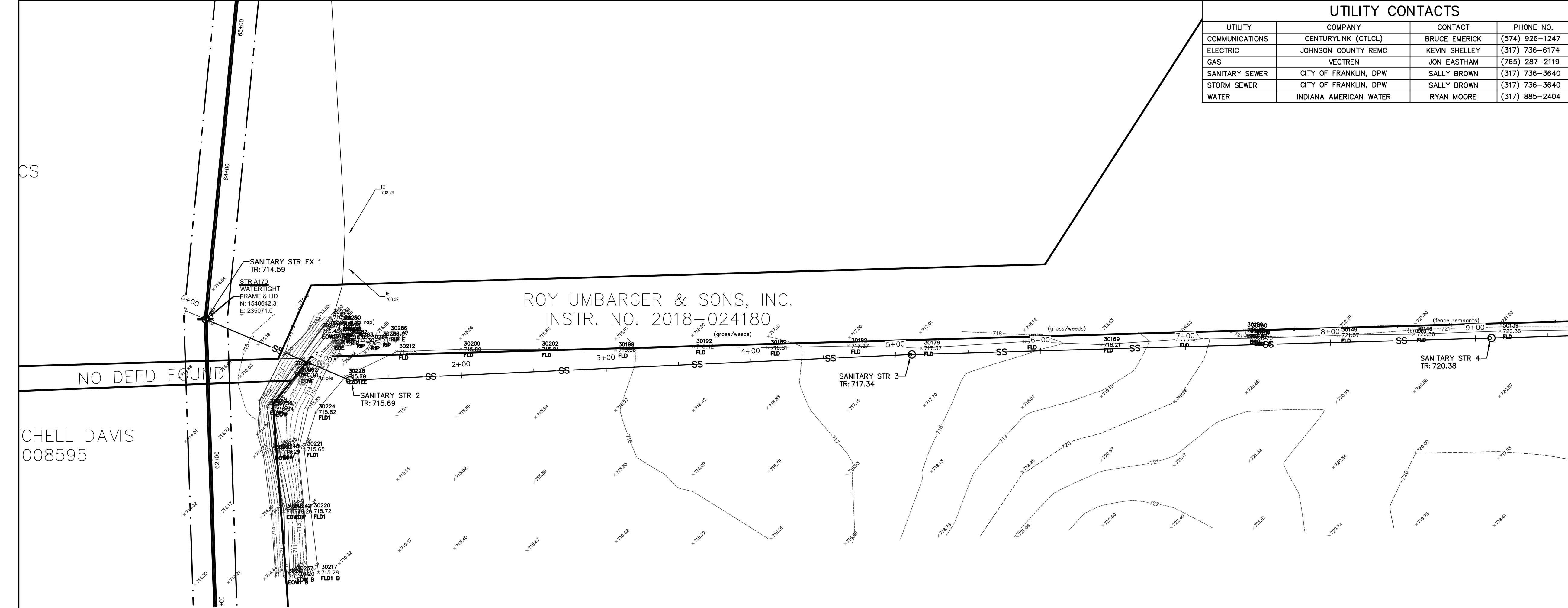
NO.	DESCRIPTION	DATE

Project Number

2020.01062

SITE PLAN

C200



UTILITY CONTACTS			
UTILITY	COMPANY	CONTACT	PHONE NO.
COMMUNICATIONS	CENTURYLINK (CTLCL)	BRUCE EMERICK	(574) 926-1247
ELECTRIC	JOHNSON COUNTY REMC	KEVIN SHELLEY	(317) 736-6174
GAS	VECTREN	JON EASTHAM	(765) 287-2119
SANITARY SEWER	CITY OF FRANKLIN, DPW	SALLY BROWN	(317) 736-3640
STORM SEWER	CITY OF FRANKLIN, DPW	SALLY BROWN	(317) 736-3640
WATER	INDIANA AMERICAN WATER	RYAN MOORE	(317) 885-2404

EXISTING LEGEND

Combination Pole

Gas Marker

Guy Wire

Tree

Overhead Electric Line

BENCHMARK DATA

(NAVD '88)
HELD OPUS SOLUTION 18-83940150 FOR BASE
#1000 FOR INGCs JOHNSON COUNTY, IN

ASI TBM #32
CHISELED "X" ON SW BOLT OF FIRE HYDRANT
EAST SIDE OF BARTRAM PARKWAY; ±300'
SOUTH OF SR 44.
ELEV = 731.40

ASI TBM #50
MAG SPIKE SET IN WEST SIDE UTILITY POLE
AT SW CORNER OF SR 44 AND COUNTY ROAD 525 E.
ELEV = 725.39

ASI TBM #51
MAG SPIKE SET IN SOUTH SIDE UTILITY POLE
#40792 SOUTH SIDE OF SR 44 AND ±400'
WEST OF MAILBOX #5557.
ELEV = 721.56

ASI TBM #52
CHISELED SQUARE ON WEST CORNER OF
NW END OF CONCRETE HEADWALL OF BOX
CULVERT UNDER SR 44 LOCATED ±600'
SOUTHWEST OF COUNTY ROAD 600 E.
ELEV = 720.38

ASI TBM #53
MAG SPIKE SET IN WEST SIDE UTILITY POLE
#06135 ON WEST SIDE OF OF COUNTY ROAD
525 E AND ±900' SOUTH OF SR 44.
ELEV = 735.00

ASI TBM #54
MAG SPIKE SET IN NW SIDE UTILITY POLE
#12P1002 ON WEST SIDE OF COUNTY ROAD
525 E AND ±200' NORTH OF SOUTH PROPERTY LINE.
ELEV = 724.93

OAKLEAF FARMS, LLC

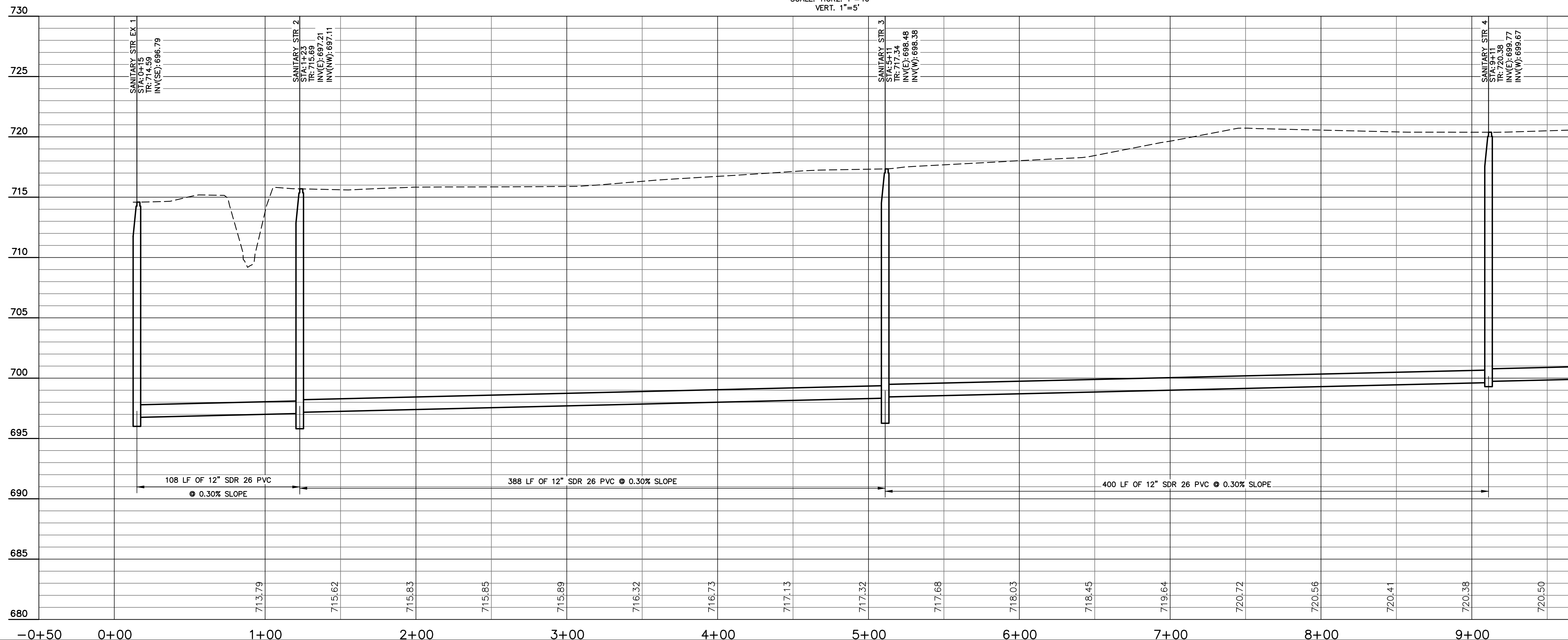
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TEL 317.547.5580 | FAX 317.543.0270
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CR600 SANITARY
SEWER MAIN
EXTENSION

FRANKLIN, IN

PROPOSED SANITARY



GENERAL NOTES:

1. CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.

2. CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.

3. SEE SHEET C002 GENERAL NOTES FOR MORE INFORMATION.

!! CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

CALL TOLL FREE
"811" OR 1-800-382-5544
- INDIANA UNDERGROUND -

XX/XX/20XX

CERTIFIED BY

ISSUANCE INDEX

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1/26/2022

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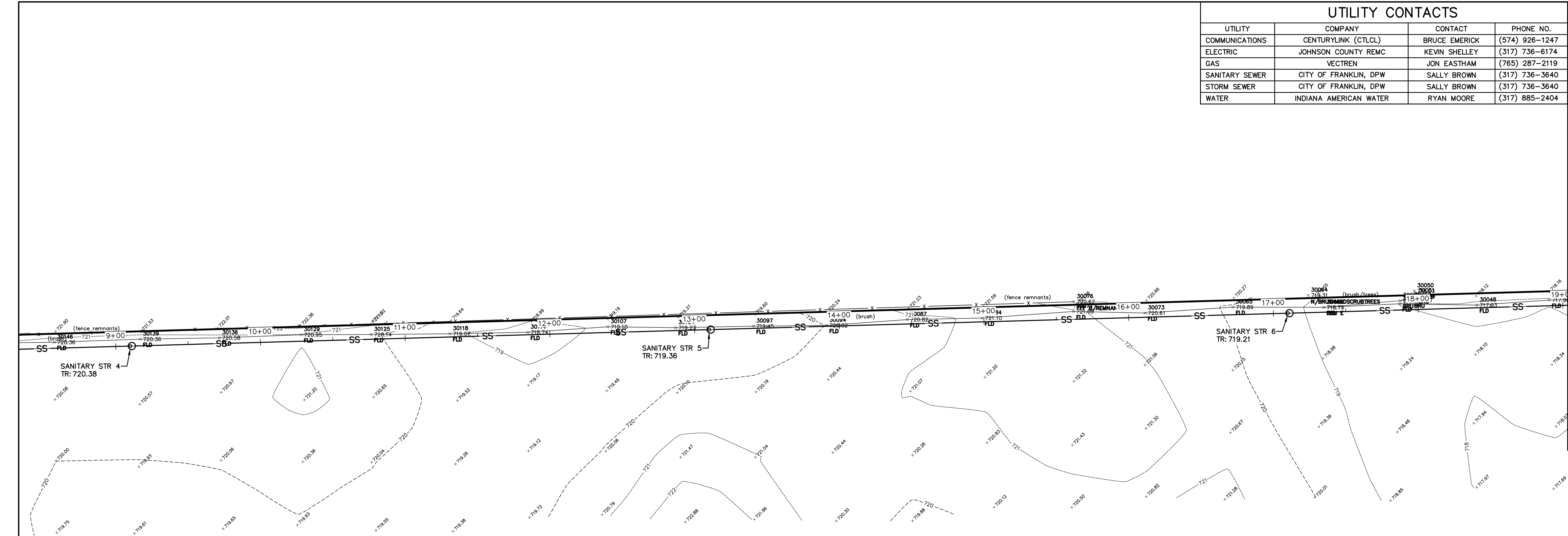
Project Number 2020.01062

SANITARY SEWER
PLAN & PROFILE

C410

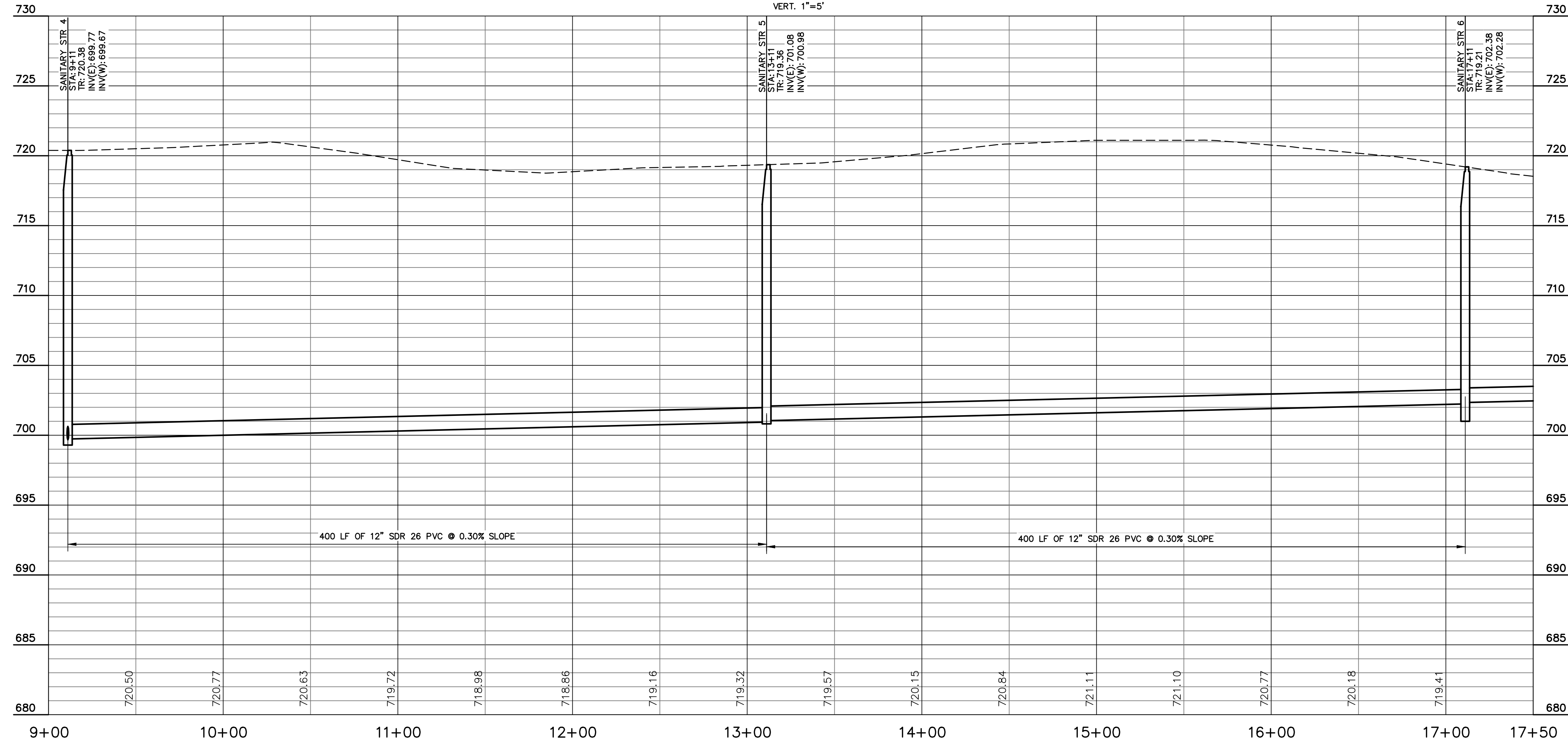
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EDIT DATE: 1/26/2022
EDITED BY: JOLASHUK



PROPOSED SANITARY

SCALE: HORIZ. 1"=40'
VERT. 1"=5'



UTILITY CONTACTS			
UTILITY	COMPANY	CONTACT	PHONE NO.
COMMUNICATIONS	CENTURYLINK (CTLCL)	BRUCE EMERICK	(574) 926-1247
ELECTRIC	JOHNSON COUNTY REMC	KEVIN SHELLEY	(317) 736-6174
GAS	VECTREN	JON EASTHAM	(765) 287-2119
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STORM SEWER	CITY OF FRANKLIN, DPW	SALLY BROWN	(317) 736-3640
WATER	INDIANA AMERICAN WATER	RYAN MOORE	(317) 885-2404

EXISTING LEGEND

- Combination Pole
- Gas Marker
- Guy Wire
- Tree
- Overhead Electric Line

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CR600 SANITARY
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ISSUANCE INDEX

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NO.	DESCRIPTION	DATE

Project Number 2020.01062

SANITARY SEWER
PLAN & PROFILE

C411

GENERAL NOTES:

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- SEE SHEET C002 GENERAL NOTES FOR MORE INFORMATION.

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CALL TOLL FREE
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- INDIANA UNDERGROUND -

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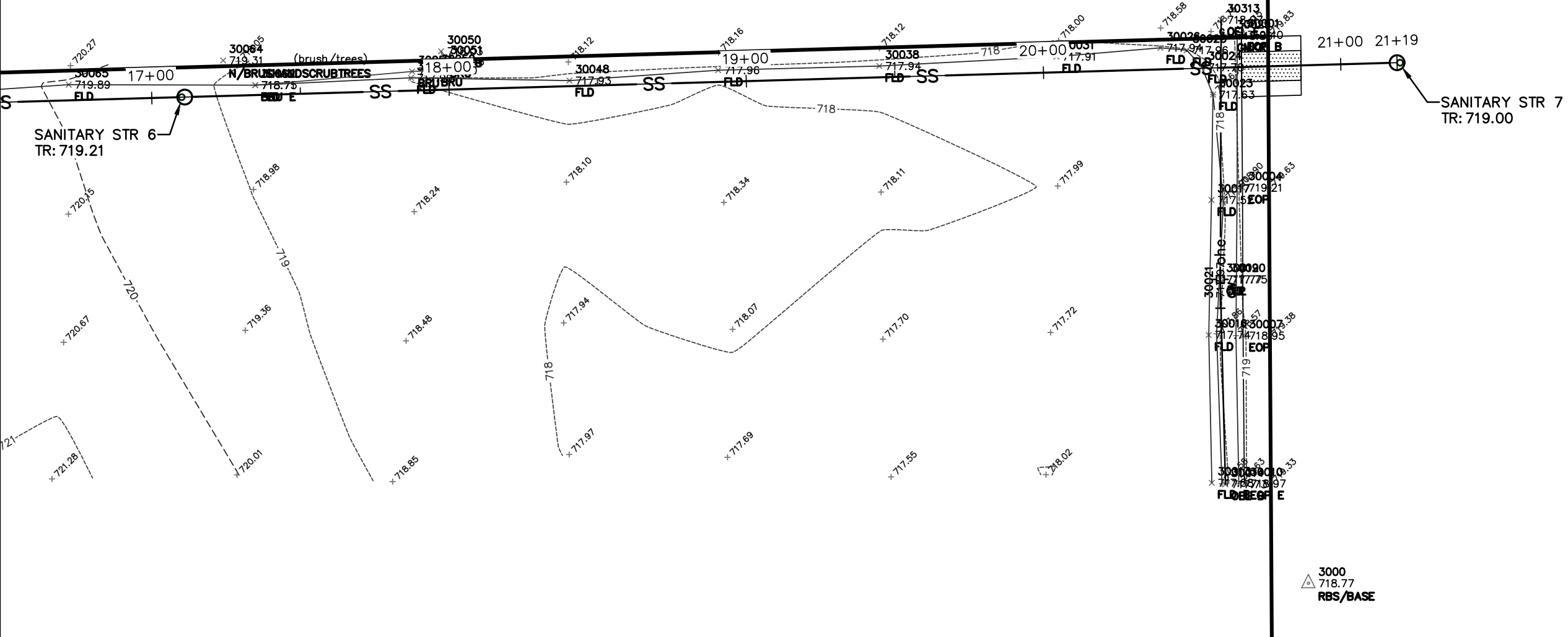
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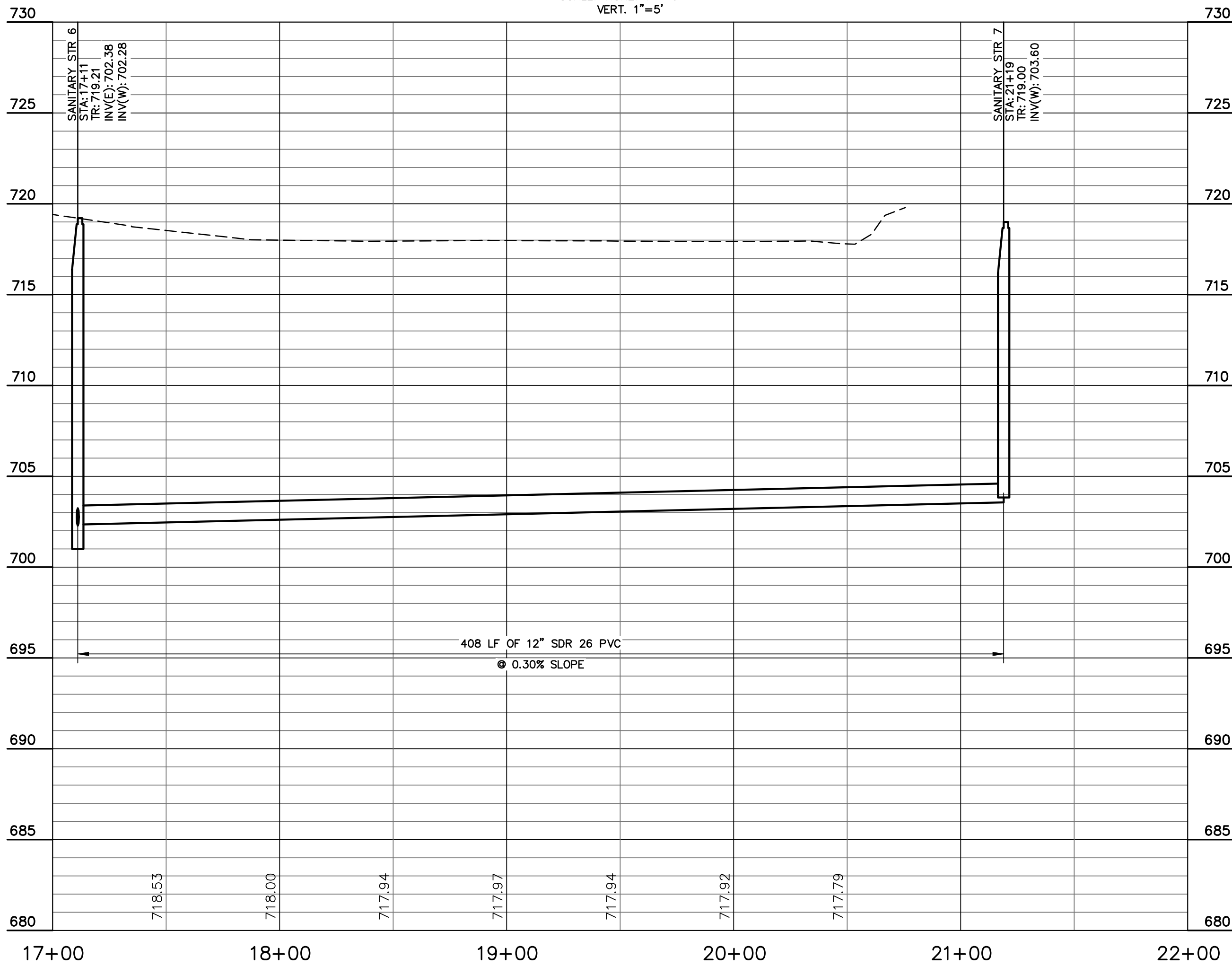
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- INDIANA UNDERGROUND -

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WATER	INDIANA AMERICAN WATER	RYAN MOORE	(317) 885-2404



PROPOSED SANITARY

SCALE: HORIZ. 1"=40'
VERT. 1"=5'



IDEM SANITARY SEWER SPECIFICATIONS

- Standard specifications of the Department of Transportation (INDOT) shall apply for all work and materials. Sanitary sewer pipe shall be installed in accordance with Section 715 of the current INDOT standard specifications handbook.
- Sanitary sewer gravity pipe, unless pressure rated pipe required per IAC or directional drilled pipe, shall be Polyvinyl Chloride (PVC) in accordance with ASTM D3034-89 with a minimum wall thickness designation of SDR 35 and installed per ASTM D3231-89 specification. PVC pipe used shall be grooved bell, spigot end, and gasketed. The pipe shall be made of PVC plastic having a cell classification of 12454B.
- PVC sanitary sewer gravity fittings shall also conform to the requirements of the ASTM D3034-89 specification. All fittings shall be molded in one piece with standard pipe bells, gasketed elastomeric joints, and spigot ends. Single piece molded PVC with standard pipe bells, gaskets, and spigot ends for back-to-back tee wyes are acceptable. Wall thickness of all fittings shall have a minimum designation of SDR 26. Gaskets for elastomeric joints shall be molded with a minimum cross-sectional area of 0.20 square inches and conform to ASTM F477 specification.
- All sanitary manholes shall be precast concrete manholes in accordance with ASTM C478 and Section 720 of the current INDOT standard specifications handbook. O-rings shall conform to C443. Double row of Kent Seal or equivalent shall also be applied to all joints and between riser rings and castings. Manhole step spacing shall be no more than 18-inches. Manholes shall be air tested for leakage in accordance with ASTM C1244-02, Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test.

- Installation and operation of vacuum equipment and indicating devices must be in accordance with manufacturers' recommendations and performance specifications which have been provided by the manufacturer and accepted by the City Engineer. The vacuum equipment must be capable of testing the entire manhole, including the casting and riser rings.
- With the vacuum tester set in place:
 - Connect the vacuum pump to the outlet port with the valve open.
 - Draw a vacuum of ten (10) inches of Hg. (5 psi) and close the valve.
- Accepted standards for leakage will be established from the elapsed time for a negative pressure change from ten (10) inches to nine (9) inches of mercury. The maximum allowable leakage rate for a four (4) foot diameter manhole must be in accordance with the following:

Minimum Elapsed Time for a:

Manhole Depth	Pressure Change of 1 Inch Hg
10 feet or less	60 seconds
>10 feet but <15 feet	75 seconds
>15 feet but <25 feet	90 seconds

For manholes five (5) feet in diameter, add an additional fifteen (15) seconds and for manholes six (6) feet in diameter, add an additional thirty (30) seconds to the time requirements for four (4) foot diameter manholes. For all manholes deeper than twenty-five (25) feet, the Engineer will determine the applicable minimum elapsed time.

- If the manhole fails the test, necessary repairs must be made. The vacuum test and repairs must be repeated until the manhole passes the test.
- If manhole joint sealants are pulled out during the vacuum test, the manhole must be disassembled and the joint sealants replaced.
- Manholes will be subject to visual inspection with all visual leaks being repaired.

- Butyl rubber coating with plastic wrap shall be applied around each manhole joint from 3- inches above to 3-inches below each joint. The appropriate primer shall be applied prior to applying the rubber coating. Inside joints to be filled with precoat plug material. Entire exterior surface of sanitary sewer manholes shall be sprayed with a bituminous coating and all exterior gap exposure of riser rings shall be back plastered or grouted with nonshrink grout.

- The manhole chimneys, including all riser rings shall be sealed using flex rib internal chimney seal manufactured by Cretex, NPC, or a City approved equal. The flex rib internal chimney seal shall extend from a minimum of 3-inches below the top of the cone section to 3-inches over the manhole casting frame or per manufacturers installation procedures if directed otherwise. Internal Chimney Seal shall be installed after manhole vacuum testing and prior to final acceptance. Water test may be done, per manufacturer or City's recommendation, to provide assurance that internal chimney seal is water tight.

- The casting elevations are set by plan, however, the castings are to be adjusted in the field by the City's representative should a discrepancy occur between plan grade and existing grade. New manhole ring(s) and cover shall be installed to establish grade. Maximum height of adjusting rings shall be 12-inch on existing structure adjustment and 10-inch maximum on new construction.

- Backfill around all installed or proposed manhole structures, sidewalks, bike paths and/or all paved areas shall be made with granular material (b-borrow) or No. 8 stone, up to 18-inches below crosssection thickness (which shall include "No. 53" stone depth). If more stringent backfill requirements are set out per city, town, county, specifications those standards shall be followed. Trench opening within 5-feet of the back of the curb of paved roadways, shall be backfilled with granular material or No. 8 stone in accordance with Section 211 of the current INDOT standard specifications handbook.

- The Contractor shall be responsible for verifying that all state highways, city, and county permits have been obtained by the developer prior to start of construction.

- Initial asbuilts shall be presented to the inspecting engineer prior to final submittal to the City for review, otherwise Contractor shall be required to furnish the developer's Engineer with a set of prints showing actual sewer locations and inverts including lateral location, depth, and length. Such asbuilt prints must be received by the Engineer before the final contract payment can be authorized.

- The sanitary sewer laterals and stubs termination shall be indicated on the surface with a detectable metal post set immediately above the said termination point if full connection is not immediately made.

- All sanitary sewer lines upon completion will be required to pass a low pressure air test. Said test shall be conducted according to ASTM F1417-92, and shall be witnessed by a City employee or the City's representative. The testing shall be in accordance with Table 1 as follows with 0.5 psi being added for each foot of water above the sewer line being tested. Sewer lines shall be subject to visual leak inspection at downstream manholes with all visual leaks being repaired and subject to televising requests by the City.

- Prior to final deflection test (mandrel test) all mainlines shall be cleaned and free of any debris. Deflection tests shall be performed on all flexible* pipe after the final backfill has been in place at least 30 days. No pipe shall exceed a vertical deflection of 5% deflection test results. (*The following are considered non-flexible pipes: concrete pipe, ductile iron pipe, and cast iron pipe). The deflection test shall be performed with a nine-point mandrel. Proving rings shall be available at time of test otherwise no testing will be allowed. All mandrel testing shall be witnessed by a City employee or the City's representative.

- The ends of all laterals are to be plugged water tight with a gasketed cap capable of withstanding a low pressure air test without leakage. Laterals shall be subject to visual leak inspection at downstream manholes with all visual leaks being repaired.

- Bedding for flexible pipe and rigid pipe shall be No. 8 crushed stone from 6-inches below to 12-inches above the pipe. Manholes shall be placed on no less than 6-inches of No. 8 crushed stone bedding.

- Water line, utility, and legal drain crossings and separations shall be in accordance with 327 IAC 3-6-9.
- The trench shall be opened sufficiently ahead of pipe laying to reveal obstruction, and shall be properly protected and/or barricaded when left unattended.

- No water shall be permitted to flow into the sanitary sewer system during construction. Contractor shall utilize a pump to keep the water level below the pipe. Pump discharge shall be directed to a storm outlet in accordance with state and federal laws and regulations (327 IAC 3-6-20). Any pipe entering existing sewers shall be plugged with screw type mechanical, braced plug until such time as all tests on the sewers and all punch list items are complete.

- All sewer laterals installed shall be bedded the same as the main line sewer.

- Forty-eight (48) hours notice shall be given to the City prior to the start of sewer construction. Also, 48 hours notice shall be given prior to doing any testing on the sewer.

- Manhole castings shall be stamped SANITARY SEWER (Neenah Casting R-1772 or East Jordan 10222IGS) and be self-sealing type. The casting flange shall be 34 inches and the clear opening shall be min. 20- 13/16 inches. Watertight castings shall be bolt- down East Jordan 10222IPT and also stamped SANITARY SEWER.

Size of Pipe	Minimum Constructed Slope
8-inch	0.40%
10-inch	0.28%
12-inch	0.22%
15-inch	0.15%
18-inch	0.12%

- The Contractor shall provide measurements of the slope of the sewer for each manhole section as construction progresses. Such measurements shall be certified by a Registered Land Surveyor or Engineer and be available on-site for observation by the City's Inspector. No more than three manhole sections can be constructed in advance of such measurements.

- In the event the Contractor does not meet the minimum slopes, the sewer section and any other affected sewer sections shall be reconstructed to meet such minimum slopes.

- Laterals are to be installed with a minimum 14 gauge tracer wire from the wye to the terminus. Upon lateral completion the contractor for the building or home will extend the wire from this terminus to the building cleanout adjacent to the building.

SANITARY STRUCTURE DATA TABLE

STR. NO.	STRUCTURE	CASTING TYPE	TOP OF RIM	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING PIPE L.F.	OUTGOING PIPE SIZE	OUTGOING GRADE (%)	CONNECT TO STRUCT	REMARKS
2	48" SANITARY MH	SEE DETAIL	715.69	12" PVC SDR 26 697.11 (NW) [EX 1]	12" PVC SDR 26 697.21 (E) [3]	388'	12"	-0.30%	3	
3	48" SANITARY MH	SEE DETAIL	717.34	12" PVC SDR 26 698.38 (W) [2]	12" PVC SDR 26 698.48 (E) [4]	400'	12"	-0.30%	4	
4	48" SANITARY MH	SEE DETAIL	720.38	12" PVC SDR 26 699.67 (W) [3]	12" PVC SDR 26 699.77 (E) [5]	400'	12"	-0.30%	5	
5	48" SANITARY MH	SEE DETAIL	719.36	12" PVC SDR 26 700.98 (W) [4]	12" PVC SDR 26 701.08 (E) [6]	400'	12"	-0.30%	6	
6	48" SANITARY MH	SEE DETAIL	719.21	12" PVC SDR 26 702.28 (W) [5]	12" PVC SDR 26 702.38 (E) [7]	408'	12"	-0.30%	7	
7	48" SANITARY MH	SEE DETAIL	719.00	12" PVC SDR 26 703.60 (W) [6]						
EX 1	48" SANITARY MH	SEE DETAIL	714.59		12" PVC SDR 26 696.79 (SE) [2]	108'	12"	-0.30%	2	

EXISTING LEGEND

- Combination Pole
- Gas Marker
- Guy Wire
- Tree
- Overhead Electric Line

BENCHMARK DATA

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OAKLEAF FARMS, LLC



CR600 SANITARY SEWER MAIN EXTENSION

FRANKLIN, IN

XX/XX/20XX

CERTIFIED BY

ISSUANCE INDEX

DATE:
1/26/2022
PROJECT PHASE:

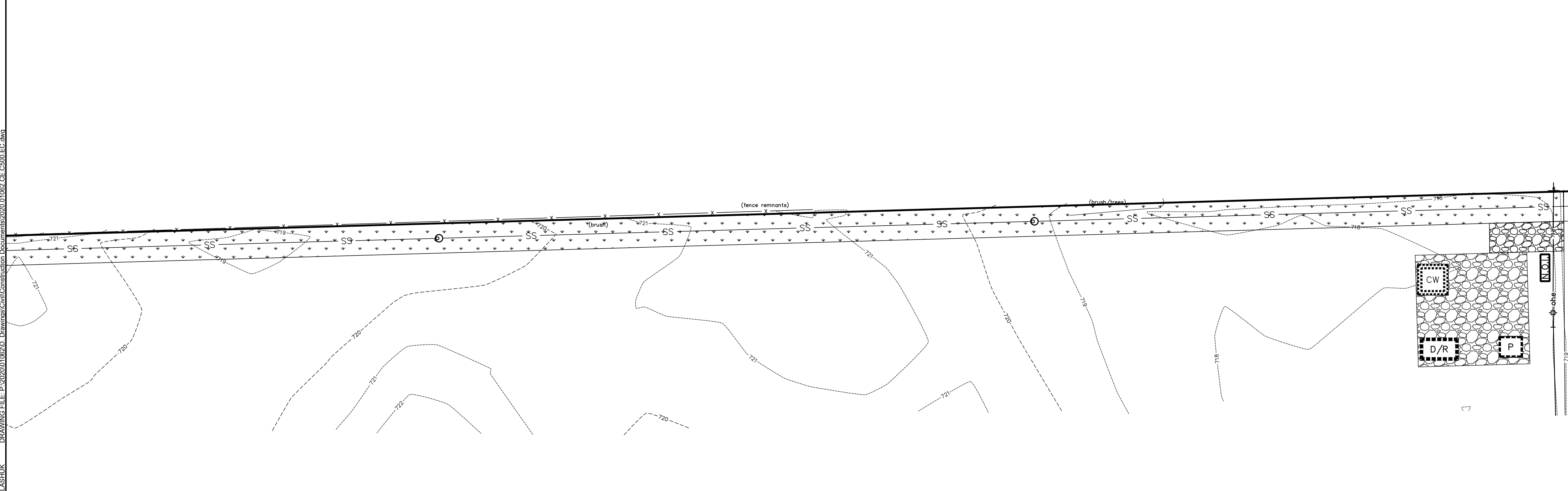
REVISION SCHEDULE

NO.	DESCRIPTION	DATE

Project Number 2020.01062

SANITARY SEWER PLAN & PROFILE

C412



NOTES:

1. CONSTRUCTION ACTIVITIES WITHIN THE WATERWAY FROM APRIL 1 THROUGH JUNE 30 SHALL NOT EXCEED A TOTAL OF TWO WEEKEND DAYS.
2. BEST MANAGEMENT PRACTICES SHALL BE USED DURING AND AFTER CONSTRUCTION TO MINIMIZE EROSION AND SEDIMENTATION.
3. FOLLOWING THE COMPLETION OF CONSTRUCTION, DISTURBED AREAS SHALL BE RECLAIMED AND RESTORED TO ORIGINAL OR BETTER. AREAS SHALL BE MULCHED WITH STRAW, WOOD FIBER, BIODEGRADABLE EROSION BLANKET, OR OTHER SUITABLE MATERIAL TO PREVENT EROSION UNTIL REVEGETATION IS ESTABLISHED. DISHED, LOOSE MUD SHALL BE ANCHORED BY CRIMPING, TACKIFIERS, OR NETTING TO THE EXTENT PRACTICABLE. REVEGETATION MUST RESTORE SPECIES NATIVE TO THE SITE. IF REVEGETATION WITH NATIVE SPECIES IS NOT PRACTICABLE, REVEGETATION SHALL BE PERFORMED BY THE PLANTING OF A MATURE OF RED CLOVER, ORCHARD GRASS, OR WHITE PERNET GRASS. REVEGETATION SHALL BE THAT IS APPROVED BY THE DEPARTMENT AS SUITABLE TO SITE AND CLIMATE CONDITIONS. IN NO CASE SHALL TALL FESCUE BE USED TO REVEGETATE DISTURBED AREAS.

!! CAUTION !!

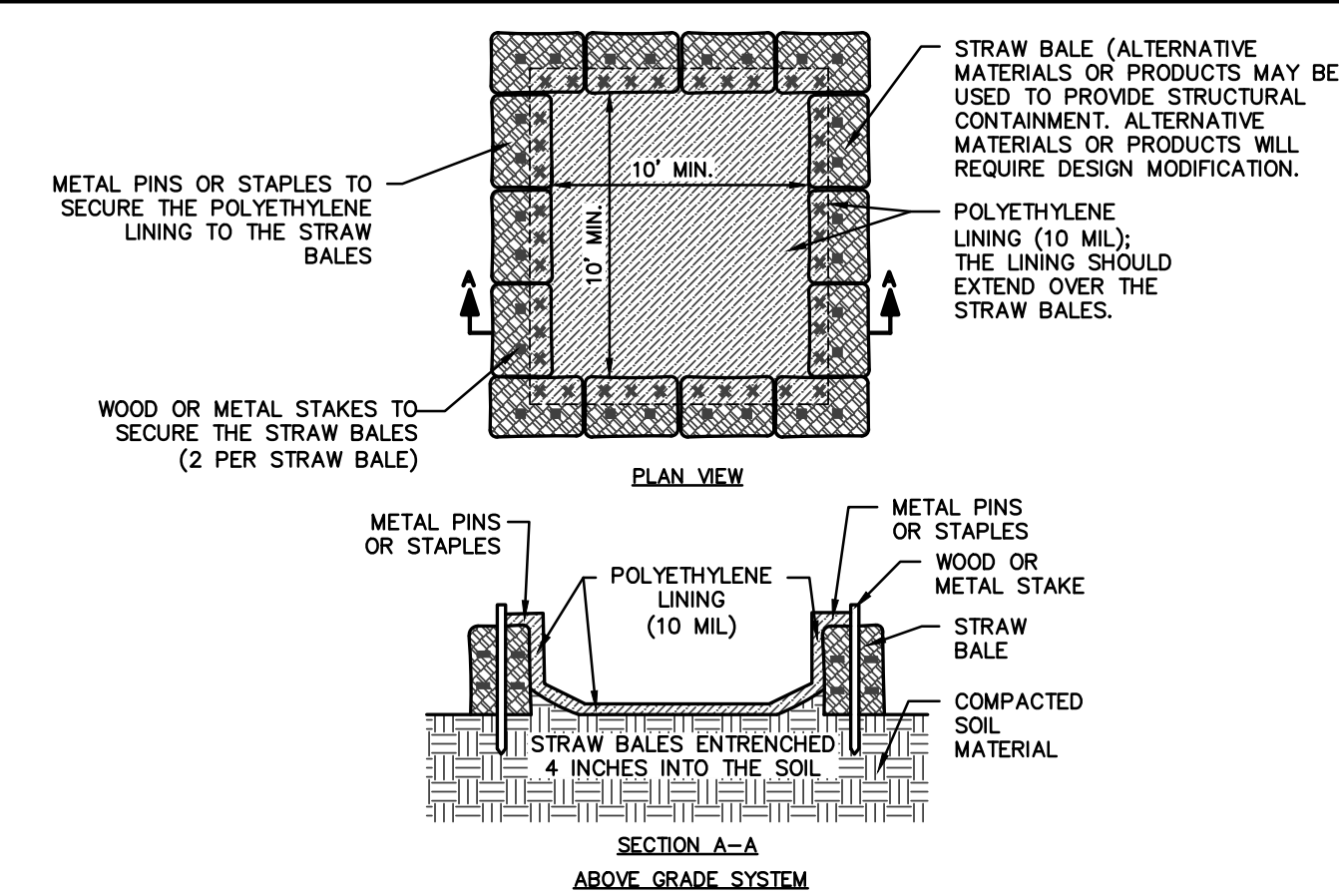
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, vaults, and other marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

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-- INDIANA UNDERGROUND --

Project Number	2020.01062
EROSION CONTROL PLAN	
C500	

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- MATERIALS**
- MINIMUM OF TEN MIL POLYETHYLENE SHEETING THAT IS FREE OF HOLES, TEARS, AND OTHER DEFECTS. THE SHEETING SELECTED SHOULD BE OF AN APPROPRIATE SIZE TO FIT THE WASHOUT SYSTEM WITHOUT SEAMS OR OVERLAP OF THE LINING (DESIGNED AND INSTALLED SYSTEMS).
 - SIGNAGE.
 - ORANGE SAFETY FENCING OR EQUIVALENT.
 - STRAW BALES, SANDBAGS (BAGS SHOULD BE ULTRAVIOLET--STABILIZED GEOTEXTILE FABRIC), SOIL MATERIAL, OR OTHER APPROPRIATE MATERIALS THAT CAN BE USED TO CONSTRUCT A CONTAINMENT SYSTEM (ABOVE GRADE SYSTEMS).
 - METAL PINS OR STAPLES AT A MINIMUM OF SIX INCHES IN LENGTH, SANDBAGS, OR ALTERNATIVE FASTENER TO SECURE POLYETHYLENE LINING TO THE CONTAINMENT SYSTEM.
 - NON--COLLAPSING AND NON--WATER HOLDING COVER FOR USE DURING RAIN EVENTS (OPTIONAL).

INSTALLATION

PREFABRICATED WASHOUT SYSTEMS/CONTAINERS

- INSTALL AND LOCATE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- DESIGNED AND INSTALLED SYSTEMS
 - UTILIZE AND FOLLOW THE DESIGN IN THE STORM WATER POLLUTION PREVENTION PLAN TO INSTALL THE SYSTEM.
 - DEPENDENT UPON THE TYPE OF SYSTEM, EITHER EXCAVATE THE PIT OR INSTALL THE CONTAINMENT SYSTEM.
 - A BASE SHALL BE CONSTRUCTED AND PREPARED THAT IS FREE OF ROCKS AND OTHER DEBRIS THAT MAY CAUSE TEARS OR PUNCTURES IN THE POLYETHYLENE LINING.
 - INSTALL THE POLYETHYLENE LINING. FOR EXCAVATED SYSTEMS, THE LINING SHOULD EXTEND OVER THE ENTIRE EXCAVATION. THE LINING FOR BERMED SYSTEMS SHOULD BE INSTALLED OVER THE POOLING AREA WITH ENOUGH MATERIAL TO EXTEND THE LINING OVER THE BERM OR CONTAINMENT SYSTEM. THE LINING SHOULD BE SECURED WITH PINS, STAPLES, OR OTHER FASTENERS.
 - PLACE FLAGS, SAFETY FENCING, OR EQUIVALENT TO PROVIDE A BARRIER TO CONSTRUCTION EQUIPMENT AND OTHER TRAFFIC.
 - PLACE A NON--COLLAPSING, NON--WATER HOLDING COVER OVER THE WASHOUT FACILITY PRIOR TO A PREDICTED RAINFALL EVENT TO PREVENT ACCUMULATION OF WATER AND POSSIBLE OVERFLOW OF THE SYSTEM (OPTIONAL).
- INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS.
- POST SIGNS DIRECTING CONTRACTORS AND SUPPLIERS TO DESIGNATED LOCATIONS.
- WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD FOR CONCRETE WASHOUT SYSTEMS.

MAINTENANCE

- INSPECT DAILY AND AFTER EACH STORM EVENT.
- INSPECT THE INTEGRITY OF THE OVERALL STRUCTURE INCLUDING, WHERE APPLICABLE, THE CONTAINMENT SYSTEM.
- INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT.
- INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES.
- ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL.
- EXCESS CONCRETE SHOULD BE REMOVED WHEN THE WASHOUT SYSTEM REACHES 90 PERCENT OF THE DESIGN CAPACITY. USE OF THE SYSTEM SHOULD BE DISCONTINUED UNTIL APPROPRIATE MEASURES CAN BE INITIATED TO CLEAN THE STRUCTURE. PREFABRICATED SYSTEMS SHOULD ALSO UTILIZE THIS CRITERION, UNLESS THE MANUFACTURER HAS ALTERNATE SPECIFICATIONS.
- UPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE. REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM.
- DISPOSE OF ALL CONCRETE IN A LEGAL MANNER. REUSE THE MATERIAL ON SITE, RECYCLE OR HAUL THE MATERIAL TO AN APPROVED CONSTRUCTION/DEMOLITION LANDFILL SITE. RECYCLING OF MATERIAL IS ENCOURAGED. THE WASTE MATERIAL CAN BE USED FOR MULTIPLE APPLICATIONS INCLUDING BUT NOT LIMITED TO ROADBEDS AND BUILDING. THE AVAILABILITY FOR RECYCLING SHOULD BE CHECKED LOCALLY.
- THE PLASTIC LINER SHOULD BE REPLACED AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING.
- THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE.
- CONCRETE WASHOUT SYSTEMS ARE DESIGNED TO PROMOTE EVAPORATION. HOWEVER, IF THE LIQUIDS DO NO EVAPORATE AND THE SYSTEM IS NEAR CAPACITY IT MAY BE NECESSARY TO VACUUM OR REMOVE THE LIQUIDS AND DISPOSE OF THEM IN AN ACCEPTABLE METHOD. DISPOSAL MAY BE ALLOWED AT THE LOCAL SANITARY SEWER AUTHORITY PROVIDED THEIR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMITS ALLOW FOR ACCEPTANCE OF THIS MATERIAL. ANOTHER OPTION WOULD BE TO UTILIZE A SECONDARY CONTAINMENT SYSTEM OR BASIN FOR FUTURE DEWATERING.
- PREFABRICATED UNITS ARE OFTEN PUMPED AND THE COMPANY SUPPLYING THE UNIT PROVIDES THIS SERVICE.
- INSPECT CONSTRUCTION ACTIVITIES ON A REGULAR BASIS TO ENSURE SUPPLIERS, CONTRACTORS, AND OTHERS ARE UTILIZING DESIGNATED WASHOUT AREAS. IF CONCRETE WASTE IS BEING DISPOSED OF IMPROPERLY, IDENTIFY THE VIOLATORS AND TAKE APPROPRIATE ACTION.
- WHEN CONCRETE WASHOUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASHOUT SYSTEMS SHALL BE CLOSED. DISPOSE OF ALL HARDENED CONCRETE AND OTHER MATERIALS USED TO CONSTRUCT THE SYSTEM.
- HOLES, DEPRESSIONS AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND STABILIZED.

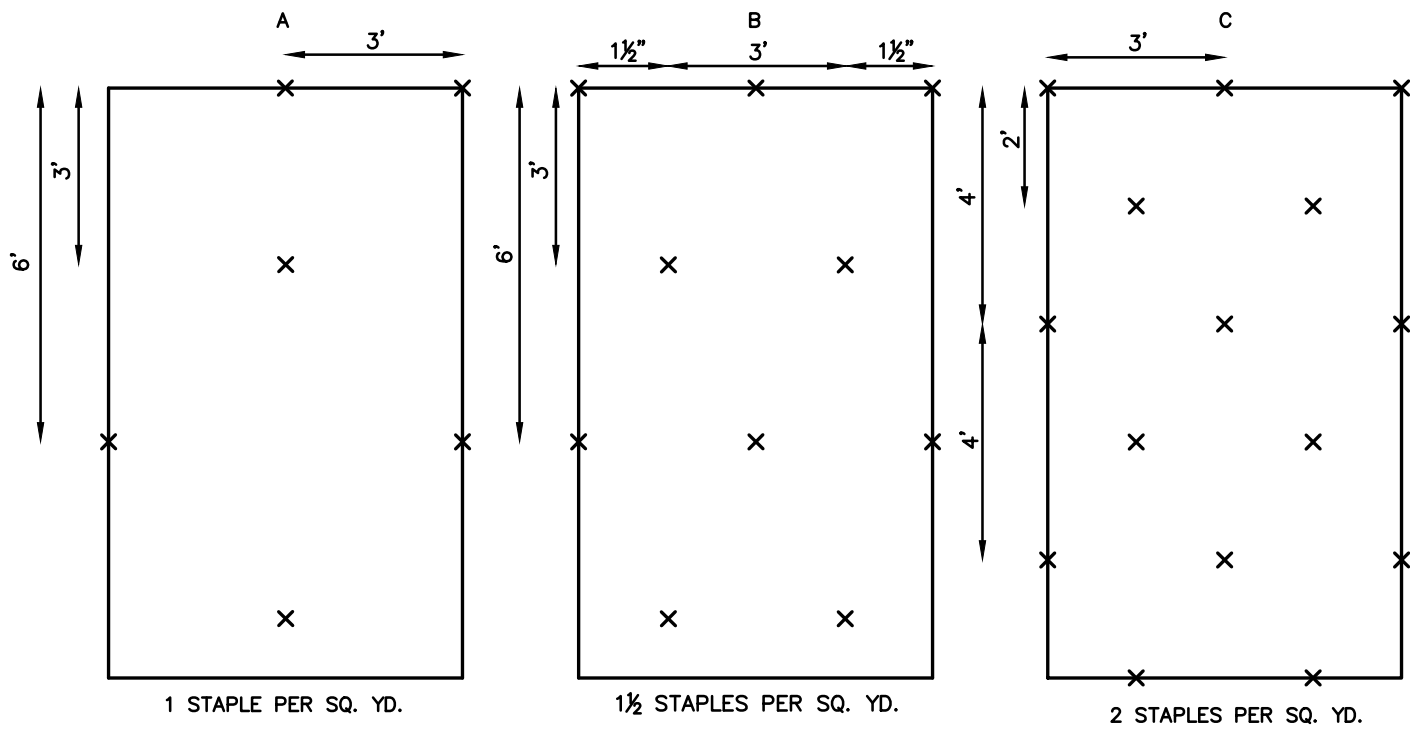
SPECIFICATIONS

SITE MANAGEMENT

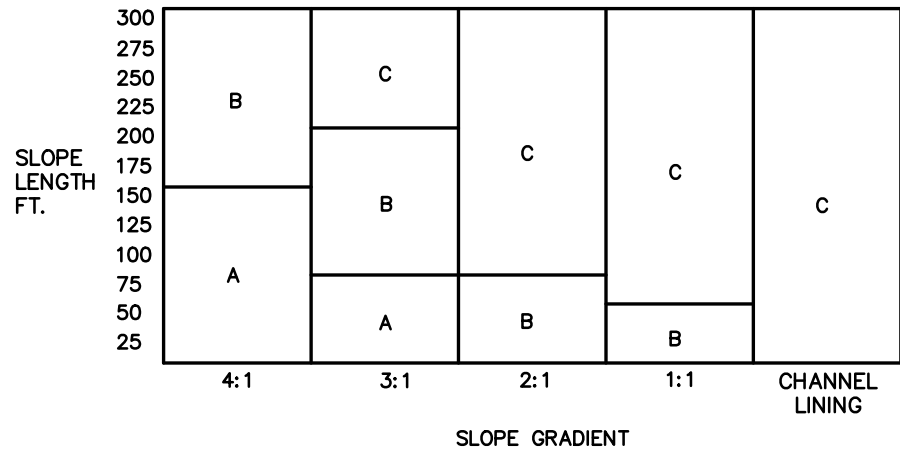
- COMPLETE CONSTRUCTION/INSTALLATION OF THE SYSTEM AND HAVE WASHOUT LOCATIONS OPERATIONAL PRIOR TO CONCRETE DELIVERY.
- DO NOT WASH OUT CONCRETE TRUCKS OR EQUIPMENT INTO STORM DRAINS, WETLANDS, STREAMS, RIVERS, CREEKS, DITCHES, OR STREETS.
- NEVER WASH OUT INTO A STORM SEWER DRAINAGE SYSTEM. THESE SYSTEMS ARE TYPICALLY CONNECTED TO A NATURAL CONVEYANCE SYSTEM.
- WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS.
- IT IS RECOMMENDED THAT WASHOUT SYSTEMS BE RESTRICTED TO WASHING CONCRETE FROM MIXER AND PUMP TRUCKS AND NOT USED TO DISPOSE OF EXCESS CONCRETE OR RESIDUAL LIQUIDS DUE TO THE POTENTIAL TO EXCEED THE DESIGN CAPACITY OF THE WASHOUT SYSTEM. SMALL AMOUNTS OF EXCESS OR RESIDUAL

CONCRETE WASH OUT

NOT TO SCALE (REV. 01/17)



GENERAL STAPLE RECOMMENDATIONS



SLOPE GRADIENT

EROSION CONTROL BLANKET

NOT TO SCALE (REV. 01/17)

SPECIFICATIONS

EFFECTIVE LIFE

- THE FUNCTIONAL LIFE OF AN EROSION CONTROL BLANKET IS DEPENDENT ON THE MATERIALS USED.

ANCHORING

- STAPLES, PINS OR STAKES USED TO PREVENT MOVEMENT OR DISPLACEMENT OF BLANKET. (FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC APPLICATIONS.)

MATERIALS

- ORGANIC (STRAW, EXCELSIOR, WOVEN PAPER, COCONUT FIBER, ETC.) OR SYNTHETIC MULCH INCORPORATED WITH A POLYPROPYLENE, NATURAL FIBER OR SIMILAR NETTING MATERIAL. (THE NETTING MAY BE BIODEGRADABLE, PHOTODEGRADABLE OR PERMANENT.)

NOTE: SOME EROSION CONTROL BLANKET NETTINGS MAY POSE A THREAT TO CERTAIN SPECIES OF WILDLIFE IF THEY BECOME ENTANGLED IN THE NETTING MATRIX.

- SIX TO 12--INCH STAPLES, PINS, OR STAKES.

INSTALLATION

- SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (E.G., SLOPE, CHANNEL, FLOW VELOCITY) PER THE MANUFACTURER'S RECOMMENDATIONS.
- PREPARE THE SEEDBED, ADD SOIL AMENDMENTS, AND PERMANENTLY SEED THE AREA IMMEDIATELY FOLLOWING SEEDBED PREPARATION.
- LAY EROSION CONTROL BLANKETS ON THE SEEDBED AREA SO THAT THEY ARE IN CONTINUOUS CONTACT WITH THE SOIL WITH EACH UP--SLOPE OR UP--STREAM BLANKET OVERLAPPING THE DOWN--SLOPE OR DOWN--STREAM BLANKET BY AT LEAST EIGHT INCHES, OR FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL AND TAMP DOWN. IN CERTAIN APPLICATIONS, THE MANUFACTURER MAY REQUIRE ADDITIONAL CHECK SLOTS AT SPECIFIC LOCATIONS DOWN SLOPE FROM THE UPPERMOST EDGE OF THE UPPER BLANKETS.
- ANCHOR THE BLANKETS IN PLACE BY DRIVING STAPLES, PINS, OR STAKES THROUGH THE BLANKET AND INTO THE UNDERLYING SOIL. FOLLOW AN ANCHORING PATTERN APPROPRIATE FOR THE SITE CONDITIONS AND AS RECOMMENDED BY THE MANUFACTURER.

MAINTENANCE

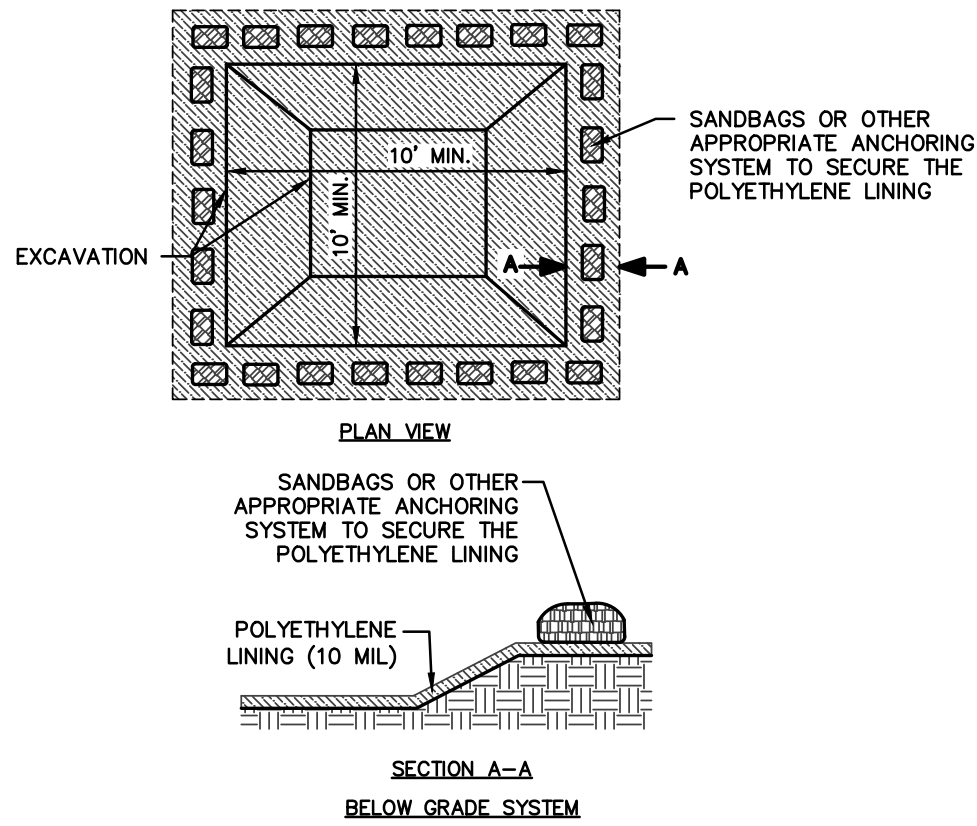
- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET.
- IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE ERODED AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET.

NOTES

CHANNEL LININGS UTILIZE STAPLE PATTERN "C" WITH ADDITIONAL STAPLES ON SIDE SLOPES AT PROJECTED WATER LINE.

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE RAINFALL.

AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.



- CONCRETE (NOT WASHOUT WATER) MAY BE DISPOSED OF IN AREAS THAT WILL NOT RESULT IN FLOW TO AN AREA THAT IS TO BE PROTECTED.
- INSTALL SYSTEMS AT STRATEGIC LOCATIONS THAT ARE CONVENIENT AND IN CLOSE PROXIMITY TO WORK AREAS AND IN SUFFICIENT NUMBER TO ACCOMMODATE THE DEMAND FOR DISPOSAL.
- INSTALL SIGNAGE IDENTIFYING THE LOCATION OF CONCRETE WASHOUT SYSTEMS.

LOCATION

- LOCATE CONCRETE WASHOUT SYSTEMS AT LEAST 50 FEET FROM ANY CREEKS, WETLANDS, DITCHES, KARST FEATURES, OR STORM DRAIN/MANAGE CONVEYANCE SYSTEMS.
- TO THE EXTENT PRACTICAL, LOCATE CONCRETE WASHOUT SYSTEMS IN RELATIVELY FLAT AREAS THAT HAVE ESTABLISHED VEGETATIVE COVER AND DO NOT RECEIVE RUNOFF FROM ADJACENT LAND AREAS.
- LOCATE IN AREAS THAT PROVIDE EASY ACCESS FOR CONCRETE TRUCKS AND OTHER CONSTRUCTION EQUIPMENT.
- LOCATE AWAY FROM OTHER CONSTRUCTION TRAFFIC TO REDUCE THE POTENTIAL FOR DAMAGE TO THE SYSTEM.

GENERAL DESIGN CONSIDERATIONS

- THE STRUCTURE OR SYSTEM SHALL BE DESIGNED TO CONTAIN THE ANTICIPATED WASHOUT WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- THE SYSTEM SHALL BE DESIGNED, TO THE EXTENT PRACTICAL, TO ELIMINATE RUNOFF FROM ENTERING THE WASHOUT SYSTEM.
- WASHOUT FROM A RAINSTORM OR SNOWMELT SHOULD NOT CARRY WASTES AWAY FROM THE WASHOUT LOCATION.
- WASHOUT WILL NOT IMPACT FUTURE LAND USES (I.E., OPEN SPACES, LANDSCAPED AREAS, HOME SITES, PARKS).
- WASHOUT SYSTEMS/CONTAINMENTS MEASURES MAY ALSO BE UTILIZED ON SMALLER INDIVIDUAL BUILDING SITES. THE DESIGN AND SIZE OF THE SYSTEM CAN BE ADJUSTED TO ACCOMMODATE THE EXPECTED CAPACITY.

PREFABRICATED WASHOUT SYSTEMS/CONTAINERS

- SELF--CONTAINED STURDY CONTAINMENT SYSTEMS THAT ARE DELIVERED TO A SITE AND LOCATED AT STRATEGIC LOCATIONS FOR CONCRETE DISPOSAL.
- THESE SYSTEMS ARE MANUFACTURED TO RESIST DAMAGE FROM CONSTRUCTION EQUIPMENT AND PROTECT AGAINST LEAKS OR SPILLS.
- MANUFACTURER OR SUPPLIER PROVIDES THE CONTAINERS. THE PROJECT SITE MANAGER MAINTAINS THE SYSTEM OR THE SUPPLIER PROVIDES COMPLETE SERVICE THAT INCLUDES MAINTENANCE AND DISPOSAL.
- UNITS ARE OFTEN AVAILABLE WITH OR WITHOUT RAMPS. UNITS WITH RAMPS LEND THEMSELVES TO ACCOMMODATE PUMP TRUCKS.
- MAINTAIN ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

DESIGNED AND INSTALLED UNITS

THESE UNITS ARE DESIGNED AND INSTALLED ON SITE. THEY TEND TO BE LESS RELIABLE THAN PREFABRICATED SYSTEMS. SYSTEMS ARE OFTEN PRONE TO FAILURE. CONCRETE WASHOUT SYSTEMS CAN BE CONSTRUCTED ABOVE OR BELOW GRADE. IT IS NOT UNCOMMON TO HAVE A SYSTEM THAT IS PARTLY BELOW GRADE WITH AN ADDITIONAL CONTAINMENT STRUCTURE ABOVE GRADE.

- WASHOUT SYSTEMS SHALL UTILIZE A PIT OR BERMED AREA DESIGNED AND MAINTAINED AT A CAPACITY TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
- THE VOLUME OF THE SYSTEM MUST ALSO BE DESIGNED TO CONTAIN RUNOFF THAT DRAINS TO THE SYSTEM AND RAINFALL THAT ENTERS THE SYSTEM FOR A TWO--YEAR FREQUENCY, 24--HOUR STORM EVENT.

BELOW GRADE SYSTEM

- WASHOUT SYSTEM INSTALLED BELOW GRADE SHOULD BE A MINIMUM OF TEN FEET WIDE BY TEN FEET LONG, BUT SIZED TO CONTAIN ALL LIQUID AND WASTE THAT IS EXPECTED TO BE GENERATED BETWEEN SCHEDULED CLEANOUT PERIODS. THE SIZE OF THE PIT MAY BE LIMITED BY THE SIZE OF THE POLYETHYLENE AVAILABLE. THE POLYETHYLENE LINING SHOULD BE ADEQUATE SIZE TO EXTEND OVER THE ENTIRE EXCAVATION.
- INCLUDE A MINIMUM 12--INCH FREEBOARD TO REASONABLY ENSURE THAT THE STRUCTURE WILL NOT OVERTOP DURING A RAIN EVENT.
- LINE THE PIT WITH TEN MIL POLYETHYLENE LINING TO CONTROL SEEPAGE.
- THE BOTTOM OF EXCAVATED PIT SHOULD BE ABOVE THE SEASONAL HIGH WATER TABLE.

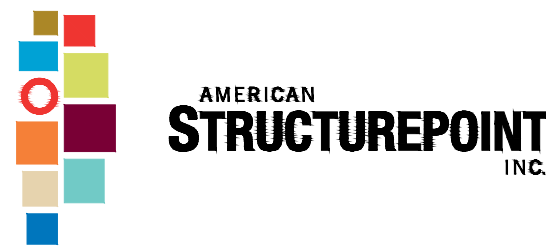
ABOVE GRADE SYSTEM

- A SYSTEM DESIGNED AND BUILT ABOVE GRADE SHOULD BE A MINIMUM OF TEN FEET WIDE BY TEN FEET LONG, BUT SIZED TO CONTAIN ALL LIQUID AND WASTE THAT IS EXPECTED TO BE GENERATED BETWEEN SCHEDULED CLEANOUT PERIODS. THE SIZE OF THE CONTAINMENT SYSTEM MAY BE LIMITED BY THE SIZE OF POLYETHYLENE AVAILABLE. THE POLYETHYLENE LINING SHOULD BE OF ADEQUATE SIZE TO EXTEND OVER THE BERM OR CONTAINMENT SYSTEM.
- THE SYSTEM DESIGN MAY UTILIZE AN EARTHEN BERM, STRAW BALES, SANDBAGS, OR OTHER ACCEPTABLE BARRIERS THAT WILL MAINTAIN ITS SHAPE AND INTEGRITY AND SUPPORT THE POLYETHYLENE LINING.
- INCLUDE A MINIMUM FOUR--INCH FREEBOARD AS PART OF THE DESIGN.

WASHOUT PROCEDURES

- DO NOT LEAVE EXCESS MUD IN THE CHUTES OR HOPPER AFTER THE POUR. EVERY EFFORT SHOULD BE MADE TO EMPTY THE CHUTES AND HOPPER AT THE POUR. THE LESS MATERIAL LEFT IN THE CHUTES AND HOPPER, THE QUICKER AND EASIER THE CLEANOUT. SMALL AMOUNTS OF EXCESS CONCRETE (NOT WASHOUT WATER) MAY BE DISPOSED OF IN AREAS THAT WILL NOT RESULT IN FLOW TO AN AREA THAT IS TO BE PROTECTED.
- AT THE WASHOUT LOCATION, MATERIALS FROM THE CHUTES AS MUCH AS POSSIBLE BEFORE WASHING THEM. USE NON--WATER CLEANING METHODS TO MINIMIZE THE CHANCE FOR WASTE TO FLOW OFF SITE.
- REMOVE AS MUCH MUD AS POSSIBLE WHEN WASHING OUT.
- STOP WASHING OUT IN AN AREA IF YOU OBSERVE WATER RUNNING OFF THE DESIGNATED AREA OR IF THE CONTAINMENT SYSTEM IS LEAKING OR OVERFLOWING AND INEFFECTIVE.
- DO NOT BACK FLUSH EQUIPMENT AT THE PROJECT SITE. BACK FLUSHING SHOULD BE RESTRICTED TO THE PLANT AS IT GENERATES LARGE VOLUMES OF WASTE THAT MORE THAN LIKELY EXCEEDS THE CAPACITY OF MOST WASHOUT SYSTEMS. IF AN EMERGENCY ARISES, BACK FLUSH SHOULD ONLY BY PERFORMED WITH THE PERMISSION OF AN ON--SITE MANAGER FOR THE PROJECT.
- DO NOT USE ADDITIVES WITH WASH WATER. DO NOT USE SOLVENTS OR ACIDS THAT MAY BE USED AT THE TARGET PLANT.

OAKLEAF FARMS, LLC



9025 River Road, Suite 200 | Indianapolis, Indiana 46240
TEL 317.547.5580 | FAX 317.543.0270
www.structurepoint.com

CR600 SANITARY SEWER MAIN EXTENSION

FRANKLIN, IN

XX/XX/20XX

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ISSUANCE INDEX

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REVISION SCHEDULE

NO.	DESCRIPTION	DATE

Project Number 2020.01062

EROSION CONTROL DETAILS

C521

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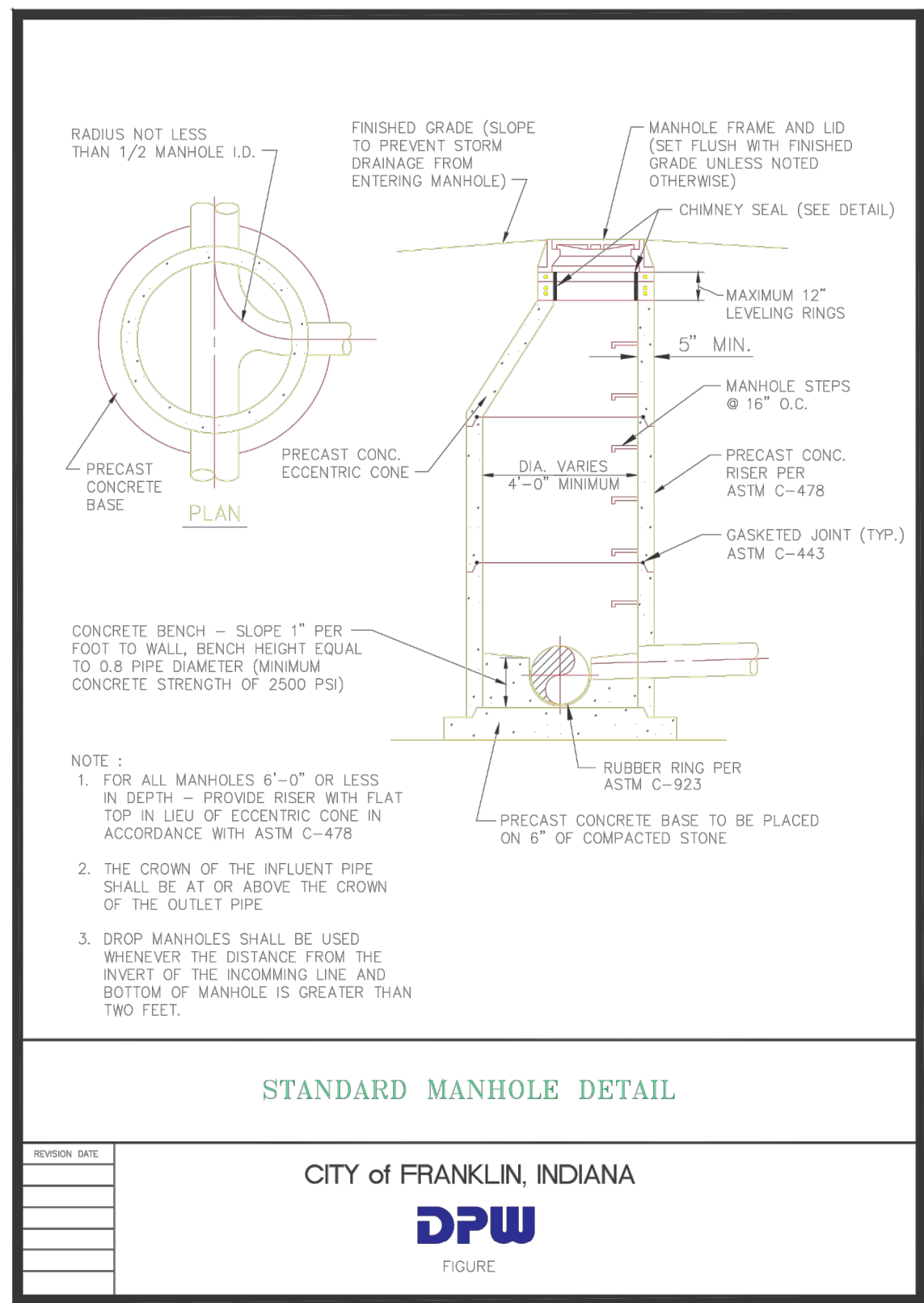


Illustration 5-1

CITY OF FRANKLIN - STANDARD SPECIFICATIONS

1-33

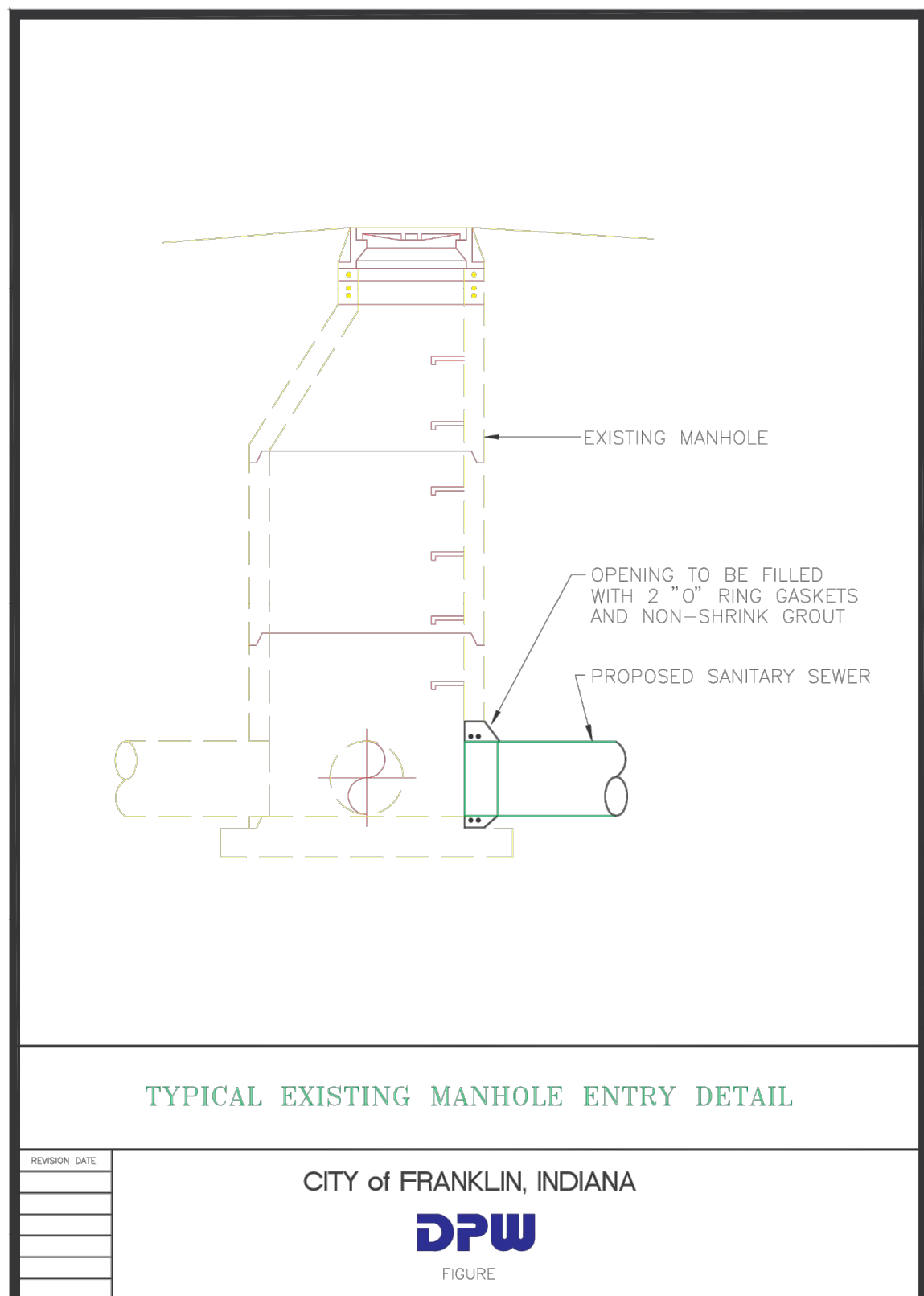


Illustration 5-5

CITY OF FRANKLIN - STANDARD SPECIFICATIONS

1-37

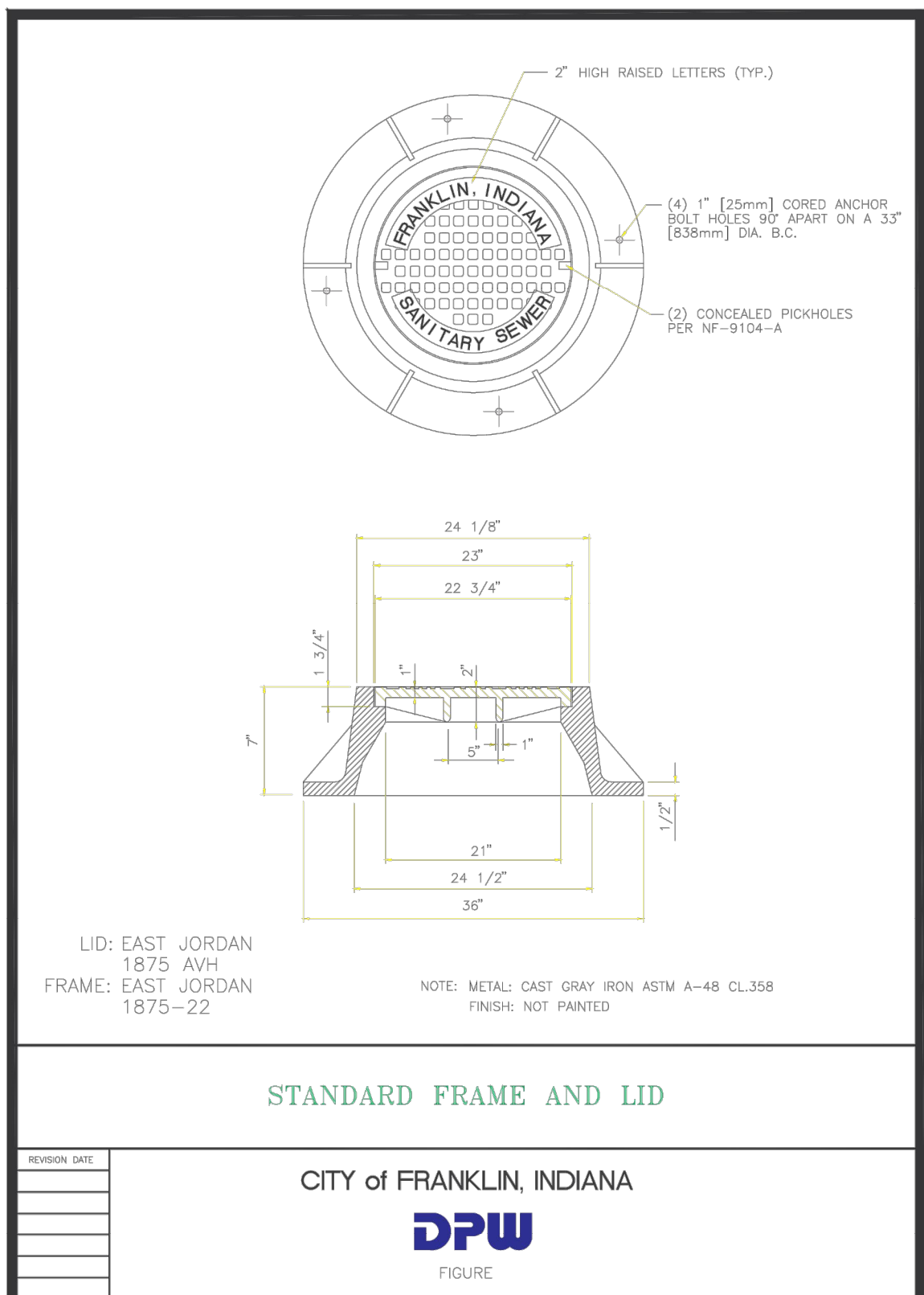


Illustration 5-8

CITY OF FRANKLIN - STANDARD SPECIFICATIONS

1-40

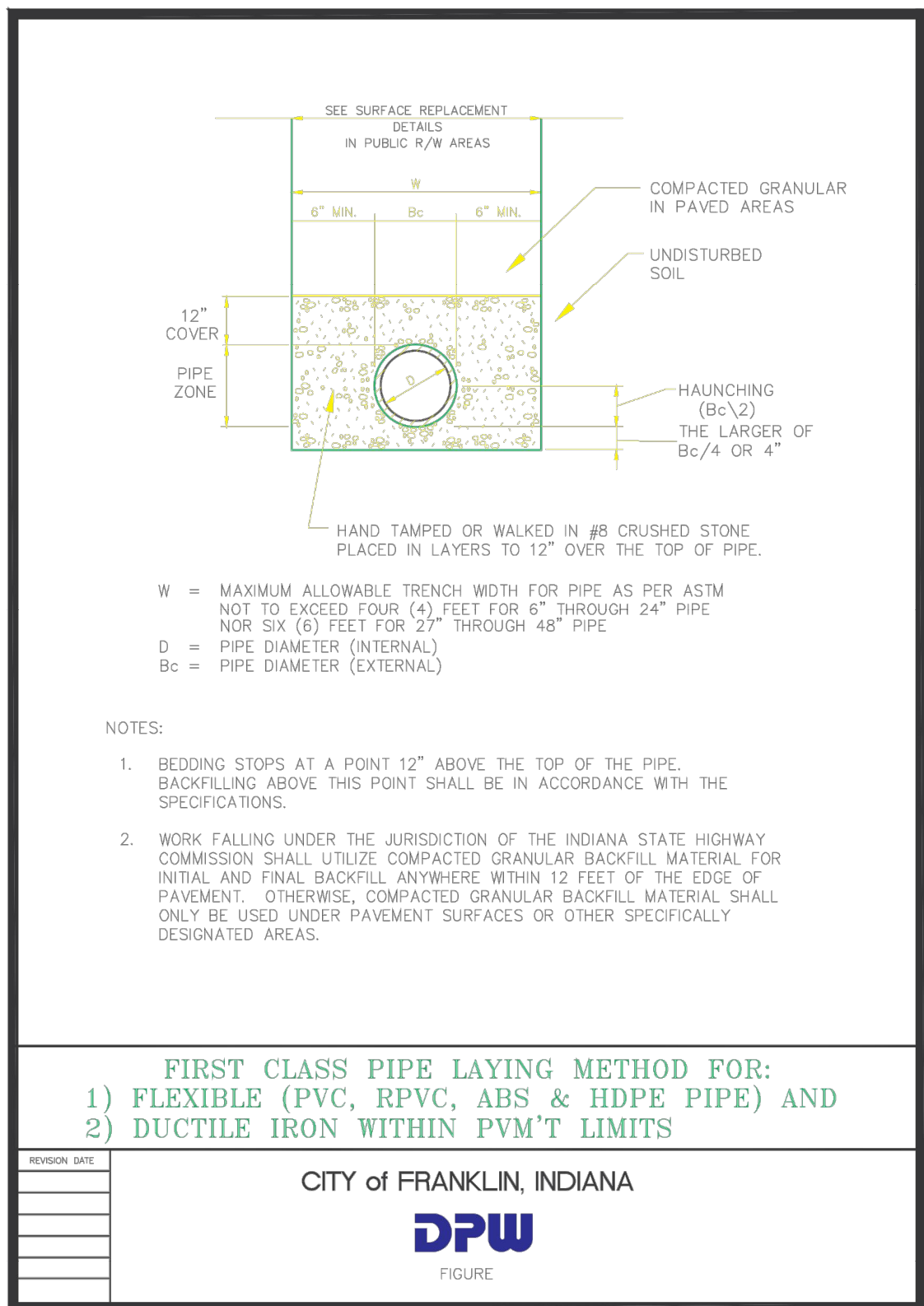


Illustration 7-1

CITY OF FRANKLIN - STANDARD SPECIFICATIONS

1-70

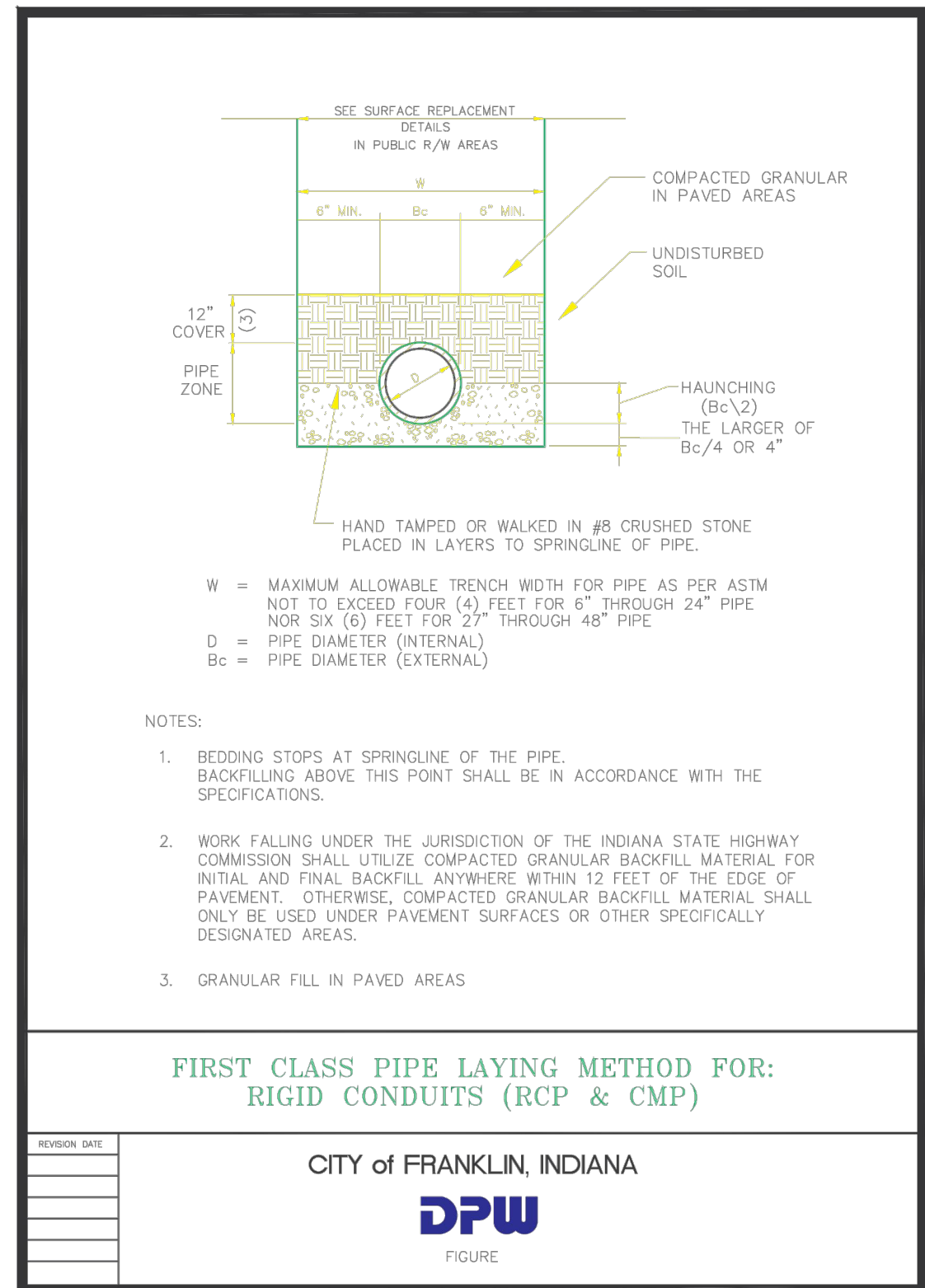
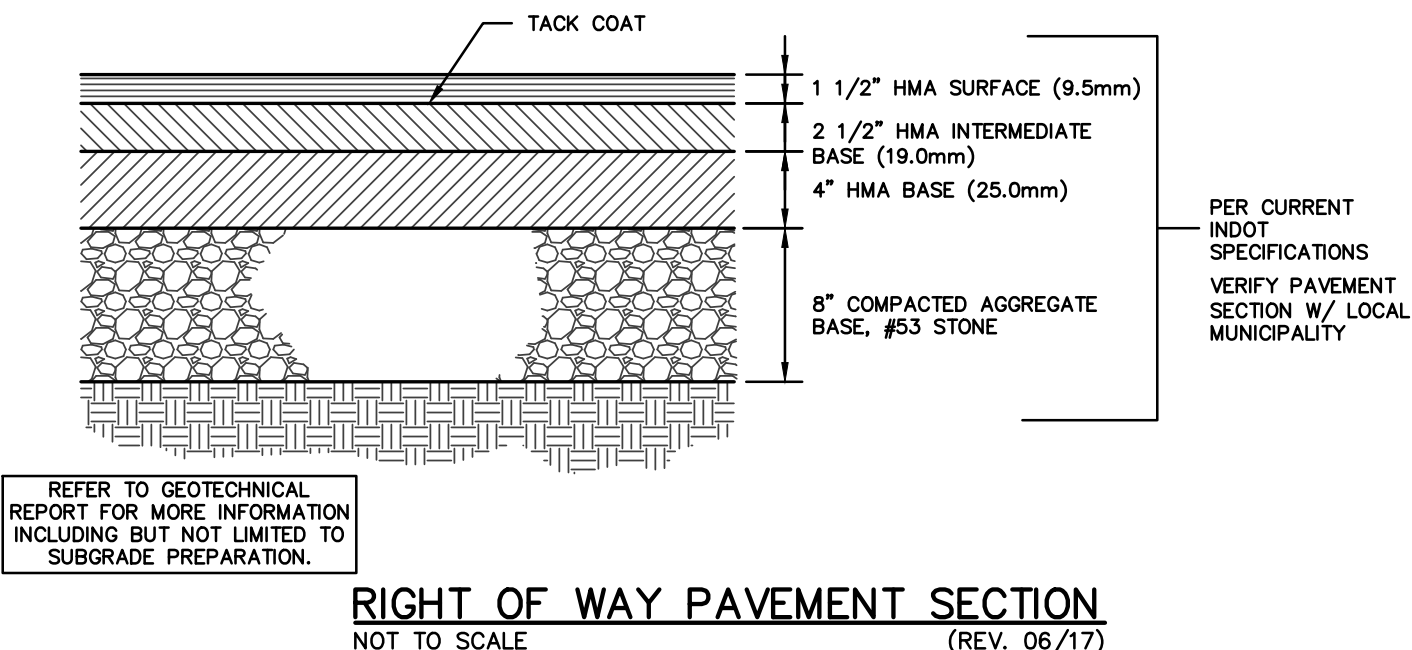


Illustration 7-2

CITY OF FRANKLIN - STANDARD SPECIFICATIONS

1-71



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NO.	DESCRIPTION	DATE

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SITE DETAILS

C600