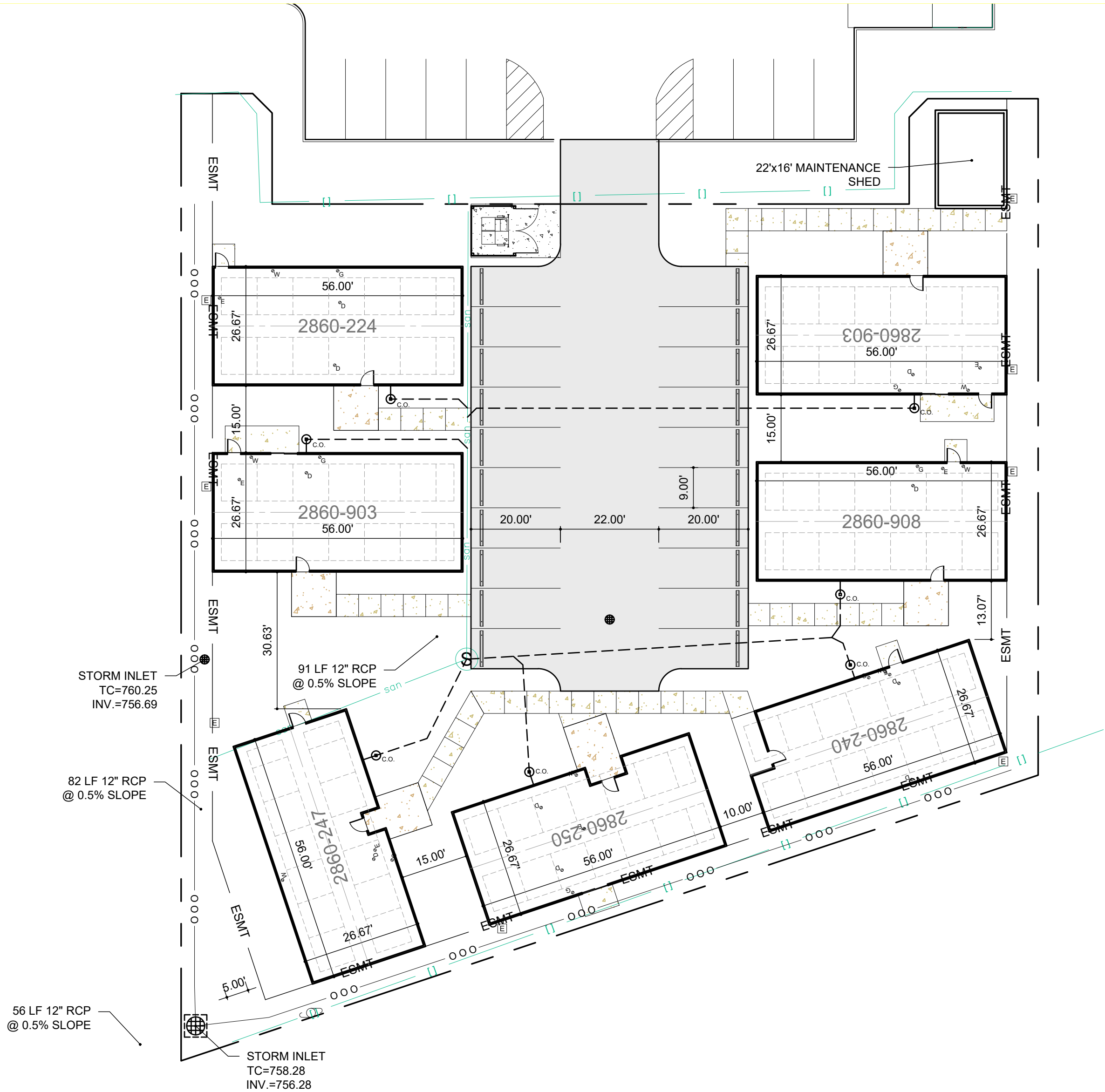
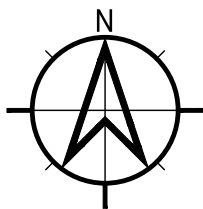




SITE NOTES:

GENERAL NOTES:

1. REFER TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS, LATEST EDITION, FOR BASIC MATERIALS AND CONSTRUCTION METHODS. THE SECTIONS BELOW FOR VARIOUS ITEMS ARE TO CLARIFY THE INTENT OF THE REQUIREMENTS FOR THIS PROJECT. PLEASE NOTE THAT OTHER SECTIONS OF THE INDOT STANDARD SPECIFICATIONS MAY ALSO BE APPLICABLE.
2. ALL RADI SHALL BE 5 FOOT UNLESS NOTED OTHERWISE ON PLANS.
3. CONTRACTOR TO VERIFY EXACT LOCATION AND INVERT OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
4. STORM SEWER PIPE OF OTHER MATERIAL OR MATERIAL NOT MEETING THESE SPECIFICATIONS SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
5. THE CONTRACTOR SHALL SUBMIT INFORMATION TO THE APPROPRIATE JURISDICTIONAL CONTACT SHOWING CONFORMANCE WITH THESE SPECIFICATIONS UPON REQUEST.

PAVEMENT CONSTRUCTION:

1. THE INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION, SHALL APPLY TO WORKMANSHIP AND MATERIALS IN CONSTRUCTION OF SUBGRADE, PAVEMENT, CURBS AND WALKS.
- A) PREPARE THE SUBGRADE IN ACCORDANCE WITH INDOT SECTION 207. NO TRAFFIC WILL BE PERMITTED ON THE PREPARED SUBGRADE PRIOR TO PAVING.
- B) BITUMINOUS PAVEMENT IN ACCORDANCE WITH INDOT SECTION 403.
- C) FINISHING EARTH GRADED SHOULDERS, DITCHES AND SLOPES IN ACCORDANCE WITH INDOT SECTION 208.

CONCRETE PAVEMENT AND WALKS:

1. SEE DETAIL FOR TYPE AND DETAILS.
2. CONCRETE SHALL BE READY MIXED PORTLAND CEMENT AND WATER CONFORMING TO ASTM C-150. AGGREGATES SHALL CONFORM TO ASTM C-33. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE 4000 P.S.I. WHERE REQUIRED, REINFORCEMENT SHALL BE WELDED STEEL WIRE FABRIC CONFORMING TO ASTM A-185.
3. ALL EXTERIOR CONCRETE SHALL CONTAIN 6% ± 1% AIR ENTRAINMENT.

APPLICATION:

- A) PLACE CONCRETE ONLY ON A MOIST, COMPACT SUBGRADE OR BASE FREE FROM LOOSE MATERIAL. PLACE NO CONCRETE ON MUDDY OR FROZEN SUBGRADE IN ACCORDANCE WITH INDOT SECTION 604 AND 605.

- B) CONCRETE SHALL BE DEPOSITED SO AS TO REQUIRE AS LITTLE REHANDLING AS PRACTICAL. WHEN CONCRETE IS TO BE PLACED AT AN ATMOSPHERIC TEMPERATURE OF 35 DEGREES OR LESS, PARAGRAPH 702.10 OF THE INDOT SPECIFICATIONS SHALL APPLY.

- C) EXCEPT AS OTHERWISE SPECIFIED, CURE ALL CONCRETE BY ONE OF THE METHODS DESCRIBED IN INDOT SECTION 501.17.

PARKING LOT STRIPING:

1. PAINT MATERIAL SHALL COMPLY WITH FEDERAL SPECIFICATION TT-P-115A FOR TRAFFIC PAINT WITHOUT GLASS SPHERES. (COLOR BY OWNER SELECTION).
2. SUBCONTRACTOR TO PERFORM ALL FIELD LAYOUT WORK NECESSARY TO ACHIEVE STRAIGHT AND TRUE LINES. ASPHALT MUST BE CLEANED WITH POWER BROOM AND HAND BROOM TO REMOVE LOOSE MATERIAL BEFORE STRIPING. THE SUBCONTRACTOR IS TO PROVIDE BARRIERS TO PREVENT MARKING OF LINES BY VEHICLES UNTIL PAINT HAS DRIED. STRIPING PAINT SHALL BE APPLIED AT THE MINIMUM RATE OF ONE GALLON PER 100 SQUARE FEET OF PAINT (BASED ON 39% SOLIDS) AT A WIDTH OF FOUR INCHES.

STREET PAVEMENT NOTES:

1. MATERIALS AND CONSTRUCTION FOR STREETS, WALKS, CURBS AND STORM WATER SEWERS SHALL CONFORM TO THE REQUIREMENTS OF THE INDIANA DEPARTMENT OF TRANSPORTATION 'STANDARD SPECIFICATIONS' LATEST PRINTED EDITION UNLESS SHOWN OR NOTED OTHERWISE.
2. PAVEMENT COMPOSITION NOTED ON DETAIL IS THE MINIMUM REQUIREMENT FOR STREET CLASSES 1, 2, 3, 4 AND 5, WITH A GOOD SUB-GRADE SOIL CLASSIFICATION. PAVEMENT COMPOSITION FOR OTHER CLASSES OF STREET SHALL BE DESIGNED WITH CONSIDERATION GIVEN TO THE TRAFFIC VOLUME, SUB-GRADE SOIL EVALUATION AND TYPE OF PAVEMENT MATERIAL TO BE USED.
3. THE SUB-GRADE MUST BE PROOF ROLLED BY THE CONTRACTOR USING A FULLY LOADED TANDEM TRUCK.
4. ASPHALT BASE SHALL BE LAID IN NO MORE THAN 3" LIFTS. SURFACE ASPHALT SHALL BE LAID IN NO MORE THAN 1 1/2" LIFTS. ASPHALT SHALL BE ROLLER COMPACTED AS PER INDOT SPECIFICATIONS SEC. 402.15.
5. TEMPERATURE SHALL BE 32°F AND RISING FOR BASE MATERIAL AND 45°F AND RISING FOR TOP COAT MATERIAL.
6. NO ASPHALT SHALL BE INSTALLED ON FROZEN OR WET SUBSURFACE
7. STREET CUT REPAIRS SHALL USE 100 PSI QUICK SET FLOWABLE FILL TO WITHIN 8" OF PAVEMENT SURFACE. INSTALL 5' OF 4000 PSI READY MIX CONCRETE WITHIN 1" OF PAVEMENT WITHIN 2-24 HOURS AFTER FLOWABLE FILL HAS BEEN INSTALLED. INSTALL 1" OF #11 SURFACE ASPHALT LEVEL WITH EXISTING PAVEMENT WITHIN 24 HOURS OF CONCRETE BEING INSTALLED. CONDITIONS WHICH MAY WARRANT #8 STONE SUBSTITUTE INCLUDE: TIME OF DAY, COLD MIX, MUST BE MAINTAINED AS A SMOOTH SURFACE UNTIL PERMANENT PATCH IS COMPLETE. NO STONE SUBSTITUTE WILL BE ALLOWED FOR COLLECTOR STREETS.
8. FLOWABLE FILL SHALL BE USED FOR BACKFILLING ALL EXCAVATIONS THAT REQUIRE CUT THROUGH EXISTING PAVEMENT. FLOWABLE FILL SHALL BE A MIXTURE OF SAND, PORTLAND CEMENT AND WATER, THOROUGHLY MIXED; AND SHALL HAVE A 100 PSI COMPRESSIVE STRENGTH WITHIN 3 HOURS OF PLACEMENT. FLOWABLE FILL SHALL BE PLACED FROM TOP OF #8 STONE COVER FOR PIPE TO BOTTOM OF NEW PAVEMENT.

HANDICAP RAMP CONSTRUCTION NOTES:

1. ALL HANDICAP RAMPS SHALL MEET THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT, THE MOST RECENT INDOT STANDARD SPECIFICATIONS AND THE GOVERNING JURISDICTIONS MOST RECENT STANDARDS. CURB SWIPES REQUIRED FOR HANDICAP RAMPS SHALL BE PROVIDED AT TIME OF INITIAL CONSTRUCTION.
2. MINIMUM WIDTH OF CURB RAMP SHALL BE 4 FEET NOT INCLUDING FLARES. MAXIMUM SLOPE OF RAMPS SHALL BE 12:1
3. HANDICAP RAMPS ARE TO BE LOCATED AS SHOWN ON PLANS.
4. TYPE 'E' RAMPS SHALL BE PROVIDED AT THE CENTERLINE OF RADIUS AT ALL CORNERS OF EVERY STREET INTERSECTION WHERE THERE IS AN EXISTING OR PROPOSED SIDEWALK AND CURB. IN CASE OF 'T'-INTERSECTION, A TYPE 'C' RAMP SHALL BE PROVIDED ADJACENT TO EACH CORNER RAMP. TYPE 'C' RAMPS ALSO SHALL BE PROVIDED AT WALK LOCATIONS AT MID-BLOCK IN VICINITY OF HOSPITALS, MEDICAL CENTERS OR ATHLETIC STADIUMS. THE USE OF DETAILS CONTRARY TO THOSE SHOWN HEREIN SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF THE GOVERNING JURISDICTION.
5. SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.
6. RAMPS SHALL BE PROVIDED WHERE THE DRIVEWAY CURB EXTENDS ACROSS THE SIDEWALK.
7. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON ALL RAMPS WITH NO BREAKS IN GRADE.
8. DRAINAGE STRUCTURES SHALL NOT BE PLACED IN LINE WITH THE RAMPS EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION. LOCATION OF THE RAMPS SHALL TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURES.
9. THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
10. EXPANSION JOINTS FOR THE RAMP SHALL BE A MAXIMUM 12" WIDE. THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.
11. CROSSWALK AND STOP LINE MARKING, IF USED, SHALL BE LOCATED TO STOP TRAFFIC SHORT OF ALL RAMP CROSSINGS.
12. SLOPE OF RAMP MAY BE WARPED WHEN FILED CONDITIONS WARRANT AND WHEN APPROVED BY THE GOVERNING JURISDICTION.

LINETV LEGEND:

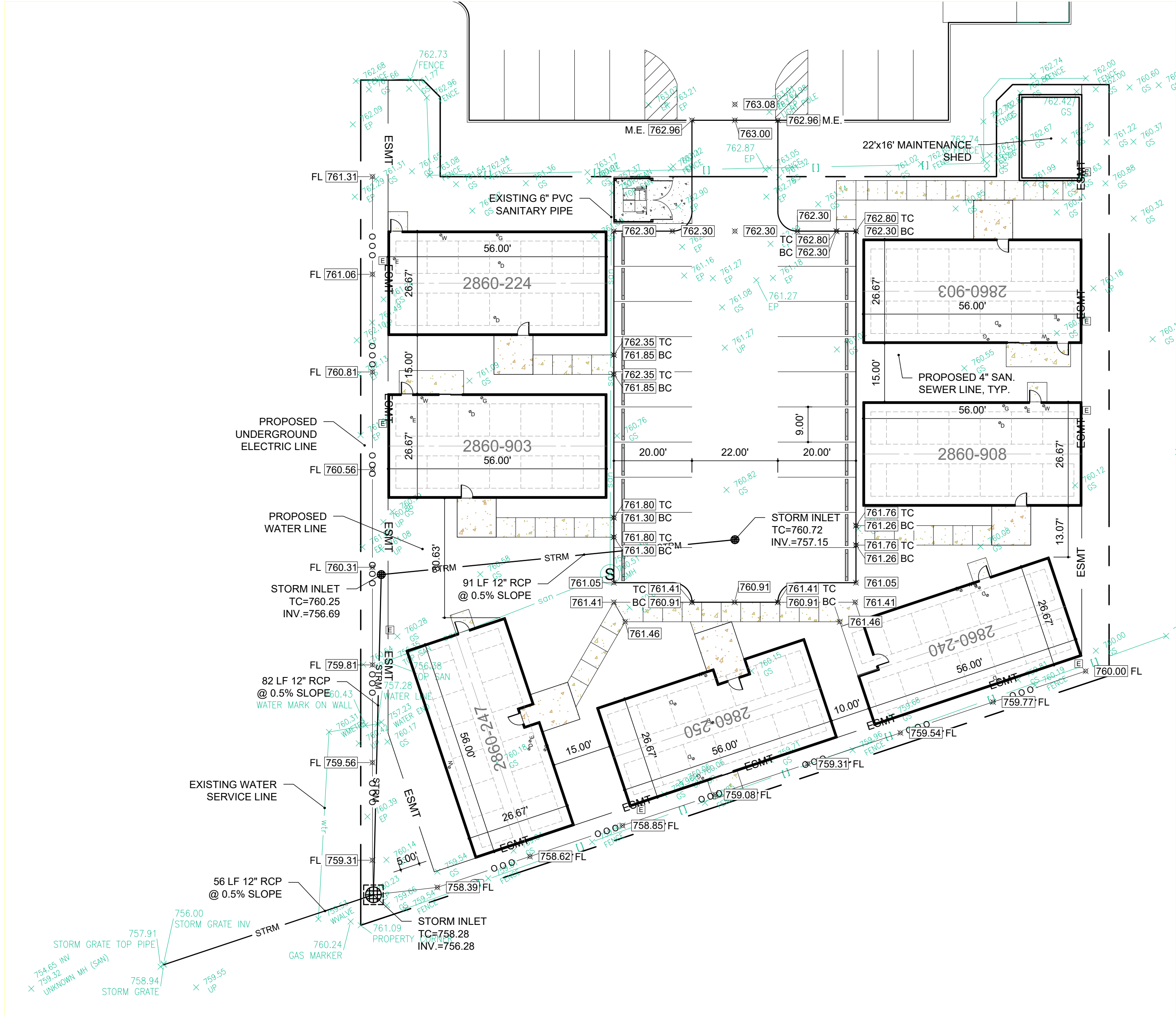
(SF)	= SILT FENCE
X	= BARB WIRE FENCE
o	= CHAINLINK FENCE
H	= WOOD FENCE
W	= WATER LINE
STRM	= STORM SEWER LINE
SAN	= SANITARY SEWER LINE
GAS	= GAS LINE
UGE	= UNDERGROUND ELECTRIC LINE
OHE	= OVERHEAD ELECTRIC LINE
COMM	= COMMUNICATION LINE
T	= TELEPHONE LINE
UTELE	= UNDERGROUND TELEPHONE LINE
FO	= FIBER OPTIC LINE
W	= FIRE DEPARTMENT WATER SUPPLY
35' ESMT	= 35' EASEMENT LINE
30' ESMT	= 30' EASEMENT LINE
25' ESMT	= 25' EASEMENT LINE
20' ESMT	= 20' EASEMENT LINE
15' ESMT	= 15' EASEMENT LINE
10' ESMT	= 10' EASEMENT LINE
5' ESMT	= 5' EASEMENT LINE
ESMT	= EASEMENT LINE
0000	= SWALE LINE
000	= EDGE OF WATER
35' SETBK	= 35' SETBACK LINE
30' SETBK	= 30' SETBACK LINE
25' SETBK	= 25' SETBACK LINE
20' SETBK	= 20' SETBACK LINE
15' SETBK	= 15' SETBACK LINE
10' SETBK	= 10' SETBACK LINE
5' SETBK	= 5' SETBACK LINE
SETBACK	= SETBACK LINE
ROW	= RIGHT-OF-WAY LINE
	= PROPERTY BOUNDARY
UD	= SWALE UNDERDRAIN
CABLE	= CABLE TV LINE
FL>	= FLOW LINE

SYMBOL LEGEND:

◄ = STORM SEWER END SECTION	+741.25 = NEW GRADE ELEVATION
↗ = SANITARY SEWER CLEANOUT	+741.25 = EXISTING GRADE ELEVATION
⊙ = CLEANOUT	STRAW BALE DAM
⊙ = MANHOLE	ROCK DAM
⊕ = CATCH BASIN	⊖ = SIGN
⊕ = CATCH BASIN	⊖ = STOP SIGN
⊕ = CURB INLET	⊖ = HANDICAP SIGN
⊕ = FIRE HYDRANT	ENTER ONLY
⊕ = PRESSURE RELIEF VALVE	EXIT ONLY
⊕ = WATER VALVE	DO NOT ENTER SIGN
⊕ = WATER WELL	EVERGREEN TREE
⊕ = GAS VALVE	DECIDUOUS TREE
⊕ = LIGHT POLE	BUSH
⊕ = UTILITY POLE	TEMPORARY CONSTRUCTION ENTRNACE
⊕ = PROPERTY CORNER	GRASS PERMANENT SEEDING
IRF = IRON ROD FOUND	EROSION CONTROL BLANKET ON ALL SLOPES 3:1 OR GREATER
RBF = REBAR FOUND	
⊕ = SURVEY POINT (SECTION CORNER)	
⊕ = BENCHMARK	
⊕ = SOIL BORING	

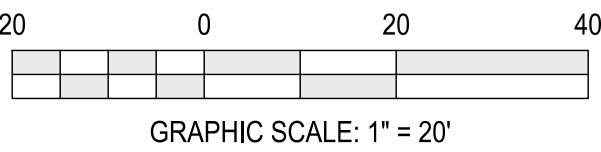
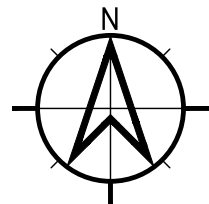
REVISIONS:

NO.	DESCRIPTION	DATE



GRADING PLAN

SCALE: 1" = 20'



GRAPHIC SCALE: 1" = 20'

GRADING NOTES:

GENERAL GRADE NOTES:

1. REFER TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS, LATEST EDITION, FOR BASIC MATERIALS AND CONSTRUCTION METHODS. THE SECTION BELOW FOR VARIOUS ITEMS ARE TO CLARIFY THE INTENT OF THE REQUIREMENTS FOR THIS PROJECT. PLEASE NOTE THAT OTHER SECTIONS OF THE INDOT STANDARD SPECIFICATIONS MAY ALSO BE APPLICABLE.
2. FILL MATERIAL SHALL CONSIST OF EARTH OBTAINED FROM CUT AREAS, BORROW PITS OR OTHER APPROVED SOURCES. EARTH SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES AND LARGE ROCKS. THE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED SIX INCHES FOLLOWING COMPACTION. PROPER MOISTURE CONTENT OF FILL MATERIAL WILL BE SUCH TO ACHIEVE SPECIFIED COMPACTION DENSITY. ALL FILL BENEATH PAVED AREAS, FLOOR SLABS AND FUTURE BUILDINGS SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D-1557. FIELD COMPACTING TEST SHALL BE RUN ON EACH LIFT, IN FILL SECTIONS, AND THE REQUIRED COMPACTION ON EACH LIFT SHALL BE IN ACCORDANCE WITH INDOT SECTION 211.
3. MAXIMUM LAWN SLOPE IS 3:1.
4. THE CONTRATOR SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE MAINS, CONDUITS, SERVICE LINES, ETC. IN THE AFFECTED CONSTRUCTION AREA EXISTING UTILITY STRUCTURES ARE SHOWN HERE IN ACCORDANCE WITH AVAILABLE INFORMATION. THE LOCATION AND PROTECTION OF UTILITY STRUCTURES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION (IN COOPERATION WITH APPLICABLE UTILITY COMPANY) IS THE EXPRESSED RESPONSIBILITY OF THE CONTRACTOR.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE.
6. ALL EXISTING MANHOLE CASTINGS TO BE ADJUSTED TO FINISH GRADE.
7. COMPACT "B" BORROW BACK FILL REQ'D. OVER ALL UTILITIES IN PAVED AREAS.

REINFORCED CONCRETE PIPE:

1. REINFORCED CONCRETE PIPE SHALL BE CLASS III, IV OR V AS SPECIFIED IN ASTM C-76.
2. REINFORCED ELLIPTICAL CONCRETE PIPE SHALL BE CLASS HE-II OR HE-IV AS SPECIFIED IN ASTM C-507.
3. LIFT HOLES ARE NOT ALLOWED FOR PIPE LESS THAN 24 INCHES IN DIAMETER. A MAXIMUM OF TWO LIFT HOLES ARE ALLOWED FOR PIPE 24 INCHES IN DIAMETER OR LARGER. LIFT HOLES SHALL BE REPAIRED ACCORDING TO MOST RECENT INDOT STANDARD SPECIFICATIONS.
4. FITTINGS AND SPECIALTIES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE TYPE OF PIPE BEING USED.
5. EACH PIPE SECTION SHALL BE MARKED WITH DATE OF MANUFACTURE, SIZE AND CLASS OF PIPE, SPECIFICATION DESIGNATION, MANUFACTURER AND PLANT IDENTIFICATION.
6. PIPE SHALL BE FURNISHED WITH A BELL OR GROOVE ON ONE END OF A UNIT OF PIPE AND A SPIGOT OR TONGUE ON THE ADJACENT END OF THE ADJOINING PIPE. ALL JOINTS SHALL HAVE A GROOVE ON THE SPIGOT FOR PLACEMENT OF A RUBBER "O-RING" OR PROFILE GASKET IN ACCORDANCE WITH ASTM C-443. THE GASKET SHALL BE A CONTINUOUS RING WHICH FITS SNUGLY INTO THE ANNULAR SPACE BETWEEN THE OVERLAPPING SURFACES OF THE ASSEMBLED PIPE JOINT.

FLOOD ZONE DESIGNATION:

THIS LOT LIES ENTIRELY IN FLOOD HAZARD ZONE "X" AS SCALES FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR:

COMMUNITY NAME: CITY OF BLOOMFIELD
COMMUNITY NUMBER: 180436
PANEL NUMBER: C0310C
DATED: JANUARY 7, 2015



Moench Engineering
4000 Clarks Creek Road
Plainfield, Indiana 46168
(317) 837-2767
(317) 837-7266 (Fax)

THESE DRAWINGS ARE GIVEN IN CONFIDENCE AND SHALL BE USED ONLY IN PURSUANT TO THE AGREEMENT WITH:
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1645 E. Main St. Site Design

1645 E. Main St
Plainfield, IN 46168

GRADING PLAN

PRELIMINARY

REVISIONS:

NO.	DESCRIPTION	DATE

DRAWN BY: JBF
CHECKED BY: BEM
PROJECT NUMBER: 21509
DATE: 3/11/21

SHEET NUMBER:

C301



Moench Engineering
4000 Clarks Creek Road
Plainfield, Indiana 46168
(317) 837-2767
(317) 837-7266 (Fax)

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1645 E. Main St. Site Design

1645 E. Main St
Plainfield, IN 46168

UTILITY PLAN

PRELIMINARY

REVISIONS:

DRAWN BY: JBF
CHECKED BY: BEM
PROJECT NUMBER: 21509
DATE: 3/11/21

SHEET NUMBER:

C401

UTILITY NOTES:

SANITARY GENERAL SPECIFICATIONS:

1. (A) 100 PSI FLOWABLE FILL SHALL BE REQUIRED FOR ROAD CROSSINGS UNDER EXISTING PAVEMENT AND WITHIN FIVE (5) FEET OF THE PAVEMENT EDGE. STREET CUT REPAIRS SHALL USE 100 PSI FLOWABLE FILL TO WITHIN 6" OF PAVEMENT SURFACE. INSTALL 5" OF 4000 PSI READY MIX CONCRETE WITHIN 1" OF PAVEMENT 2-24 HOURS AFTER FLOWABLE FILL HAS BEEN INSTALLED. INSTALL 1" OF #11 SURFACE ASPHALT LEVEL WITH EXISTING PAVEMENT WITHIN 24 HOURS ON CONCRETE INSTALLATION.

(B) FLOWABLE FILL SHALL BE A MIXTURE OF SAND, PORTLAND CEMENT AND WATER, THOROUGHLY MIXED, AND SHALL HAVE 100 PSI COMPRESSIVE STRENGTH WITHIN 3 HOURS OF PLACEMENT. FLOWABLE FILL SHALL BE PLACED FROM TOP OF #8 STONE PIPE COVER TO BOTTOM OF NEW PAVEMENT.

(C) IN LOCATIONS OF NEW DEVELOPMENT, WHERE UTILITIES ARE INSTALLED PRIOR TO ROAD CONSTRUCTION, TRENCH BACKFILL UNDER FUTURE ROAD SHALL BE ENTIRELY #8 CRUSHED STONE FROM MANHOLES.

2. ALL OSHA SAFETY STANDARDS SHALL BE STRICTLY ENFORCED FOR PROTECTION OF WORKERS.

3. NO SEWER SYSTEM CONSTRUCTION MAY BEGIN UNTIL APPROVAL FROM I.D.E.M.

4. ONE SET OF I.D.E.M. APPROVED PLANS SHALL BE ON THE JOB SITE AT ALL TIMES

POLYVINYL CHLORIDE (P.V.C.) PIPE:

1. PIPE DIAMETERS OF 10 INCHES THROUGH 15 INCHES SHALL MEET OR EXCEED ALL THE REQUIREMENTS OF ASTM D-3034, AND SHALL HAVE A MINIMUM CELL CLASSIFICATION OF 12454-C. REFERENCE SHOULD BE MADE TO ASTM D-1784 FOR A SUMMARIZATION OF CELL CLASS PROPERTIES. PIPE DIAMETERS GREATER THAN 15 INCHES SHALL MEET OR EXCEED ALL REQUIREMENTS OF ASTM F-679, AND SHALL HAVE A MINIMUM CELL CLASSIFICATION OF 12454-C. P.V.C. RIBBED SEWER PIPE SHALL MEET OR EXCEED ALL REQUIREMENTS OF ASTM F-794 AND SHALL HAVE A MINIMUM CELL CLASSIFICATION OF 12454.

2. THE MINIMUM WALL THICKNESS FOR PIPES OF 10 INCHES THROUGH 15 INCHES IN DIAMETER SHALL CONFORM TO SDR-35, TYPE PSM, AS SPECIFIED IN ASTM D-3034. THE MINIMUM WALL THICKNESS FOR PIPE DIAMETERS GREATER THAN 15 INCHES SHALL CONFORM TO T-1 AS SPECIFIED IN ASTM F-679. P.V.C. PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 46 POUNDS PER SQUARE INCH FOR EACH DIAMETER WHEN MEASURED AT FIVE PERCENT DEFLECTION AND TESTED IN ACCORDANCE WITH ASTM D-2412.

3. PIPE JOINTS SHALL HAVE A BELL WALL, GASKET GROOVE AND SPIGOT WHICH IS INTEGRAL WITH THE PIPE. THE ASSEMBLY OF JOINTS SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS' RECOMMENDATIONS AND ASTM D-3212. NO SOLVENT CEMENT JOINTS SHALL BE ALLOWED. GASKET MATERIAL SHALL BE CONSTRUCTED OF STYRENE BUTADIENE OR BUTYL RUBBER AND MEET THE REQUIREMENTS OF ASTM F-477.

4. EACH PIPE SECTION SHALL BE MARKED WITH THE NAME OF THE MANUFACTURER, TRADEMARK OR TRADENAME, NOMINAL PIPE SIZE, PRODUCTION / EXTRUSION CODE, MATERIAL AND CELL CLASS DESIGNATION AND ASTM NUMBER.

5. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM RECOMMENDED PRACTICE D-2321.

SANITARY SEWER NOTES:

1. 10 STATES STANDARDS AND INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT REQUIREMENTS SHALL BE MET OR EXCEEDED FOR ALL DESIGN, MATERIALS AND CONSTRUCTION METHODS.

2. SANITARY SEWER MANHOLES SHALL BE NONLITHIC PRECAST SECTIONS, INCLUDING THE BOTTOM SECTION. ALL SECTIONS SHALL BE PRECAST CONCRETE IN ACCORDANCE WITH ASTM C-478. ALL MANHOLE INLET CONNECTIONS SHALL BE LOCK JOINT FLEXIBLE SLEEVES CONFORMING TO ASTM C-923. ONLY PRECAST CONCRETE RINGS SHALL BE ALLOWED FOR CASTING RISERS. ALL MANHOLES, GRADE RINGS AND CASTING SHALL BE SEALED TO PREVENT INFILTRATION.

3. MANHOLE INVERTS SHALL BE SHAPED FOR FLOW CHANNELS WITH CONCRETE AND SMOOTHLY FINISHED BY A SEMI CIRCULAR SECTION CONFORMING TO THE INSIDE DIAMETER OF THE CONNECTING SEWERS. NO BRICK, ROCK OR SAND FILLERS WILL BE ALLOWED.

4. ALL MANHOLE COVERS SHALL BE TRAFFIC BEARING, NON-ROCKING DESIGN WITH NON-PENETRATING PICK HOLES.

5. SANITARY SEWERS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 MEETING ASTM D3034 SPECIFICATIONS. ALL SEWER MAINS SHALL HAVE A MINIMUM DIAMETER OF 8". ALL PIPE SPECIFIED SHALL SUPPORT ANTICIPATED LOADS.

6. ALL JOINTS SHALL BE PUSH-ON TYPE (SLIP SEAL) OR SOLVENT WELD.

7. BEDDING FOR PVC PIPE SHALL CONFORM TO BEDDING CLASSES I, II OF III, AS DESCRIBED IN ASTM D2321, FLEXIBLE SEWER PIPE INSTALLATION REQUIREMENTS.

8. ALL SEWER PIPE SHALL BE LAID USING PIPE LASER EQUIPMENT FOR BOTH VERTICAL AND HORIZONTAL ALIGNMENT.

9. MINIMUM ALLOWABLE COVER SHALL BE 5'-0" OVER TOP OF PIPE.

10. ALL SEWER MAINS SHALL BE DEFLECTION TESTED WITH AN 11 POINT, 5% MANDREL AFTER COMPACTED AGGREGATE IS IN PLACE FOR ALL STREETS. FLEXIBLE PIPE WILL BE TESTED AFTER BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. ALL PVC PIPE FAILING THE MANDREL TEST SHALL BE REROUTED IN PLACE OR AN ALTERNATE METHOD APPROVED BY THE GOVERNING JURISDICTION IF REPAIR REQUIRED. SEWER SHALL BE RETESTED 30 DAYS AFTER REPAIR IS COMPLETE.

11. ALL SEWER MAINS SHALL BE LAMPED AT THE TIME THE MANDREL TEST IS CONDUCTED. ALL MAINS SHALL BE TRUE TO ALIGNMENT AND GRADE.

12. ALL SEWER MAINS AND LATERAL CONNECTIONS SHALL BE AIR TESTED IN ACCORDANCE WITH UNI-BELL UNI-B-4-85. MINIMUM TIME FOR THE AIR TEST SHALL BE FOR A 1.0 PSIG PRESSURE DROP. ALL SECTIONS FAILING AIR TEST SHALL BE REPAIRED AND RETESTED.

13. ALL SERVICE WYE BRANCHES SHALL BE INSTALLED AT THE TIME OF THE SEWER MAIN INSTALLATION. NO DIRECT TAPS WILL BE ALLOWED ON NEW MAIN CONSTRUCTION. NO VERTICAL CONNECTIONS WILL BE ALLOWED.

14. A SEPARATE (8" MINIMUM) SERVICE SHALL BE PROVIDED FOR EACH UNIT SERVED APPROXIMATELY SIX (6) FEET TO THE RIGHT OF THE LOT CENTERLINE. NO WYES SHALL BE ALLOWED, INCLUDING CONDOMINIUMS.

15. THE MAXIMUM ALLOWABLE VERTICAL DISTANCE BETWEEN ANY INFLUENT LINE AND THE EFFLUENT MAIN SHALL BE 6" FOR TYPE 'A' AND 'C' MANHOLES. ANY DISTANCE GREATER THAN 6" SHALL REQUIRE A TYPE 'B' MANHOLE.

16. WHERE A SEWER EXTENSION OR IMPROVEMENT CONNECTS TO A EXISTING SEWER OR MANHOLE, IT MUST BE LOCATED IN A STREET, ROAD OR HIGHWAY R/W AND NOT LOCATED IN SUCH A MANNER WHERE IT WILL CUT THROUGH LOTS OR DEVELOPMENTS.

17. ALL EXTENSIONS SHALL BE INSTALLED AT MINIMUM GRADES.

CONCRETE MANHOLE NOTES:

1. ALL MANHOLES SHALL BE NEGATIVE AIR PRESSURE (VACUUM) TESTED AS PER ASTM C1244-93 STANDARD METHOD.

2. NO MANHOLES SHALL BE MORE THAN 14' FROM BACK OF CURB.

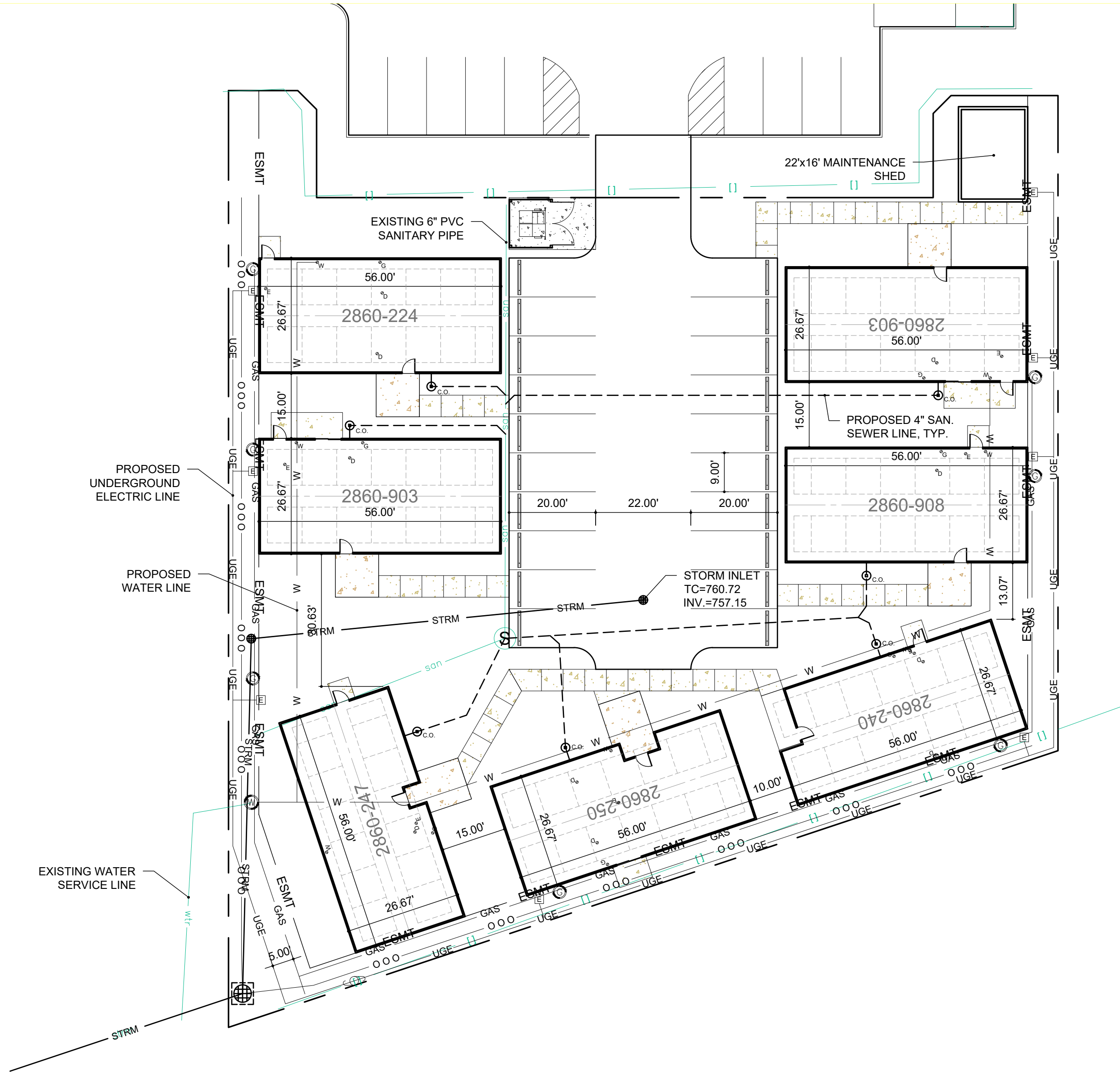
3. NO MANHOLE SHALL BE LOCATED IN ANY BACKYARD OR SIDE YARD. THEY MUST BE LOCATED IN THE FRONT YARD OR FRONT LOT THAT IS FRONTING A STREET.

4. ALL JOINTS IN MANHOLES SHALL BE SEALED TO PREVENT INFILTRATION BY USING A RUBBER O-RING GASKET AND A 1/2" EXTRUDABLE PERFORMED GASKET BETWEEN ALL PRECAST SECTIONS.

5. ANNULAR SPACE AROUND SANITARY SEWER AT POINT OF ENTRANCE INTO THE MANHOLE SHALL BE GROUTED COMPLETELY AROUND SANITARY SEWER, INSIDE AND OUTSIDE TO INSURE SMOOTH TRANSITION.

6. WHEN CONNECTING A NEW SEWER INTO AN EXISTING MANHOLE, THE EXISTING MANHOLE SHALL BE BROUGHT UP TO MEET PRESENT STANDARDS.

7. SECTION JOINTS ON PRECAST CONCRETE MANHOLES SHALL BE SEALED WITH BLACK TAR MASTIC 6" ABOVE AND 6" BELOW JOINT, ON MANHOLE EXTERIOR.



UTILITY PLAN

SCALE: 1" = 20'

