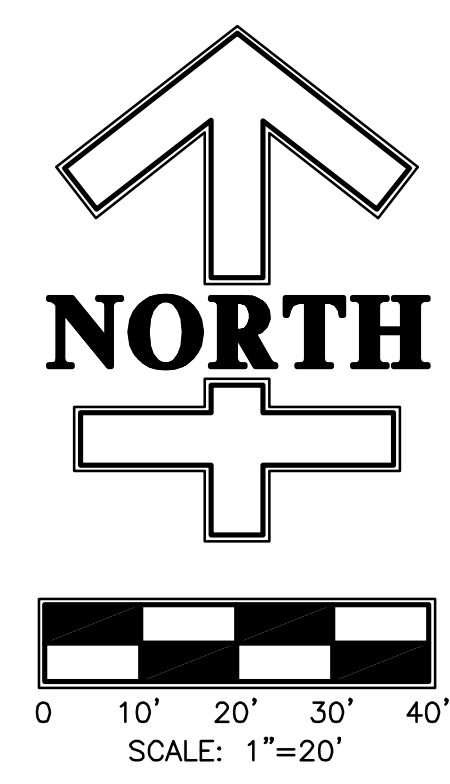


- LEGEND :**
- EX-SAN — EXISTING SANITARY SEWER W/ MANHOLE
 - EX-ST — EXISTING STORM SEWER W/ END SECTION, DITCH INLET AND PAVEMENT INLET
 - EX-G — EXISTING WATER LINE W/ FIRE HYDRANT
 - EX-G — EXISTING GAS LINE
 - EX-T — EXISTING TREE
 - EX-F — EXISTING CHAINLINK FENCE
 - EX-E — EXISTING SPOT ELEVATION
 - EX-C — EXISTING CONTOUR LINE
 - EX-W — EXISTING WATER LINE W/ FIRE HYDRANT
 - D.U.E. — DRAINAGE AND UTILITY EASEMENT
 - B.S.L. — BUILDING SETBACK LINE
 - R/W — RIGHT-OF-WAY



- EXISTING KEYNOTE LEGEND:**
- Y EXISTING UTILITIES TO BE PROTECTED
 - Z EXISTING ASPHALT/CONCRETE PAVEMENT (PROTECT)

- DEMOLITION PLAN NOTES**
- NOTIFY ENGINEER IMMEDIATELY IF THERE ARE QUESTIONS REGARDING THE DRAWINGS AND/OR THE SPECIFICATIONS, OR IF THERE ARE ANY CONFLICTS BETWEEN THE DRAWINGS AND THE EXISTING CONDITIONS.
 - ALL PERIMETER EROSION CONTROL AND/OR CONSTRUCTION FENCING SHALL BE IN PLACE PRIOR TO ANY SOIL DISTURBANCE.
 - THE EXISTING UTILITIES SHOWN HAVE BEEN LOCATED FROM VISIBLE FIELD EVIDENCE AND PROJECTS PLUS MAKES NO GUARANTEES THAT THE UTILITY INFORMATION SHOWN COMPRISES ALL SUCH UTILITIES IN THE AREA IN SERVICE OR ABANDONED. PROJECTS PLUS FURTHER STATES THAT THE UNDERGROUND UTILITY DATA SHOWN DOES NOT INDICATE PRECISE LOCATIONS. ANY CONTRACTOR DOING ANY EXCAVATION WILL CALL IN THEIR OWN UTILITY LOCATES PRIOR TO COMMENCING WORK. ANY DAMAGE SHALL BE REPAIRED TO SATISFACTION OF STORAGE EXPRESS AND OPERATING AUTHORITY AT NO COST TO STORAGE EXPRESS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES TO BE REMOVED, RELOCATED OR ABANDONED PRIOR TO COMMENCING DEMOLITION ACTIVITIES.
 - THE CONTRACTOR SHALL COORDINATE WORK ASSOCIATED WITH THE REMOVAL, RELOCATION OR ABANDONMENT OF UTILITIES WITH THE UTILITY COMPANY OR ENTITY HAVING OWNERSHIP OF EACH RESPECTIVE UTILITY. COSTS FOR DISCONNECTION, REMOVAL, AND/OR RELOCATION OF EXISTING UTILITIES AS SHOWN ON THE DRAWINGS OR AS NECESSARY TO ALLOW FOR EXECUTION OF THE WORK SHALL BE PAID BY THE CONTRACTOR.
 - ALL EXISTING ON-SITE UTILITIES SHALL REMAIN UNLESS DESIGNATED FOR REMOVAL OR SHOULD THEY INTERFERE WITH PROJECT CONSTRUCTION. COSTS FOR DISCONNECTION, REMOVAL, AND/OR RELOCATION OF EXISTING UTILITIES AS SHOWN ON THE DRAWINGS OR AS NECESSARY TO ALLOW FOR EXECUTION OF THE WORK SHALL BE PAID BY THE CONTRACTOR.
 - REMOVE EXISTING UTILITIES ONLY AFTER CRITICAL NEW SYSTEMS ARE IN PLACE AND OPERATIONAL (I.E. STORM DRAINAGE, SERVICES TO EXISTING STRUCTURES). IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE PROPER REMOVAL, INCLUDING SAFE SEQUENCING OF REMOVAL FOR UTILITIES, CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.

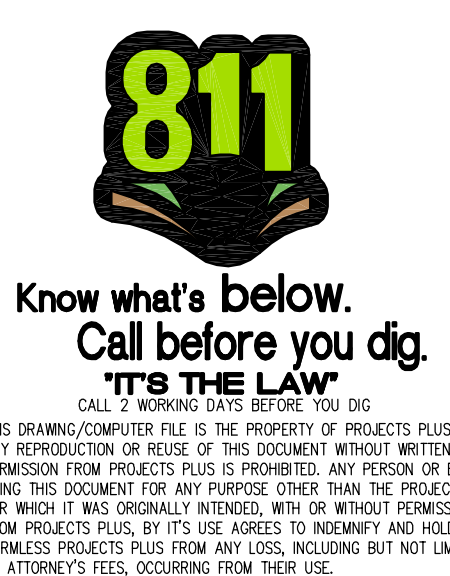
- THE OWNER HAS FIRST SALVAGE RIGHTS ON ALL ITEMS REMOVED. IF OWNER FORFEITS RIGHTS THEN ALL DEMOLISHED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF-SITE UNLESS OTHERWISE SHOWN.
- UNLESS SCHEDULED FOR DEMOLITION ON THE DRAWINGS, ALL TREES AND VEGETATION SHALL BE PROTECTED THROUGHOUT THE DURATION OF THE PROJECT. PROTECTIVE MEASURES SHALL INCLUDE INSTALLATION AND MAINTENANCE OF TREE PROTECTION FENCING TO BE LOCATED WHERE SHOWN AND AT THE DRIPLINE OF ALL TREES LOCATED WITHIN CLOSE PROXIMITY OF AREAS WHERE HEAVY EQUIPMENT WILL OPERATE.
- A CLEAN, STRAIGHT EDGE SHALL BE SAWCUT BETWEEN ALL CONCRETE AND ASPHALT SURFACES SCHEDULED FOR DEMOLITION AND CONCRETE AND ASPHALT SURFACES TO REMAIN IN-PLACE. TERMINAL ENDS OF UNDERGROUND UTILITIES ABANDONED IN-PLACE SHALL BE CUT, CAPPED AND PLUGGED. THE ENDS OF DISCONNECTED UNDERGROUND UTILITIES SHALL BE MARKED FOR FUTURE IDENTIFICATION WITH DETECTABLE LOCATOR TAPE OR A METAL ROD.
- ALL FOUNDATIONS, SLABS, STRUCTURAL STEEL, MASONRY, SIDEWALKS, RETAINING WALLS, CURBS, APPARATUSSES, ETC., WITHIN THE DESIGNATED DEMOLITION LINES SHALL BE DEMOLISHED ACCORDING TO SPECIFICATIONS. ALL DEMOLITION WITHIN PROPOSED FOOTPRINT SHALL BE COORDINATED WITH THE BUILDING DRAWINGS. NO OPEN BURNING SHALL BE PERMITTED ON THE SITE.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE ACCESS FOR PEDESTRIANS AND VEHICLE TRAFFIC. THE CONTRACTOR WILL MAINTAIN ALL UTILITY SERVICES TO ALL BUSINESSES. IF UTILITY SERVICES MUST BE INTERRUPTED, THE CONTRACTOR SHALL COORDINATE THAT SHUTDOWN TO MINIMIZE IMPACT TO THE BUSINESSES AND EXISTING FACILITIES. COORDINATE SHUTDOWN AT LEAST ONE WEEK IN ADVANCE WITH BUSINESS OWNERS REPRESENTATIVE AND FACILITY MANAGER.
- MANHOLES, CATCH BASINS, CLEANOUTS, VALVE BOXES, FRAMES COVERS AND GRATES REMAINING IN USE SHALL BE PROTECTED AND ADJUSTED TO FINAL GRADES.

FLOOD ZONE DESIGNATION
 THIS LOT LIES ENTIRELY IN FLOOD HAZARD SHADED ZONE X (AREA WITHIN 500 YR. FLOODPLAIN) AS SCALE FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR JOHNSON COUNTY, INDIANA, COMMUNITY NUMBER, 18081, PANEL NUMBER, 0231 E, DATED 1/29/21

BENCHMARKS:
 SITE ELEVATIONS ARE BASED ON GPS GEOD "G2012bu7" USING A PROJECTION OF "INDIANA EAST" AND DATUM NAD83 NO TRANS.
 ○ ONSITE BENCHMARK — ELEVATION 737.72 (NAVD 1983)
 TOP OF SANITARY SEWER MANHOLE, 23' EAST OF THE CENTERLINE OF AMY LANE AND 62' NORTH OF HURRICANE ROAD

- NOTICES AND PERMITS**
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DATE	12/2/24
REVISION	REVISED PER CITY OF FRANKLIN TECHNICAL REVIEW COMMENTS
SYMBOL	
SCALE	1"=20'
DRAWN	JPH
CHECKED	JKS
CERTIFIED	JKS
PROJECT	CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6
TITLE	EXISTING SITE PLAN
CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA	
PROJECTS plus	
GREENWOOD SURVEYING COMPANY	
SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT	
1257 Airport Parkway, Suite A - Greenwood, Indiana 46143	
(317) 882-5003	
SEAL	
JEFFERY K. SMITH	
REGISTERED PROFESSIONAL ENGINEER	
No. 19419	
STATE OF INDIANA	
Jeffery K. Smith	
12/2/24	
JOB NUMBER	24015
SHEET	
C201	
DATE	OCTOBER 25, 2024



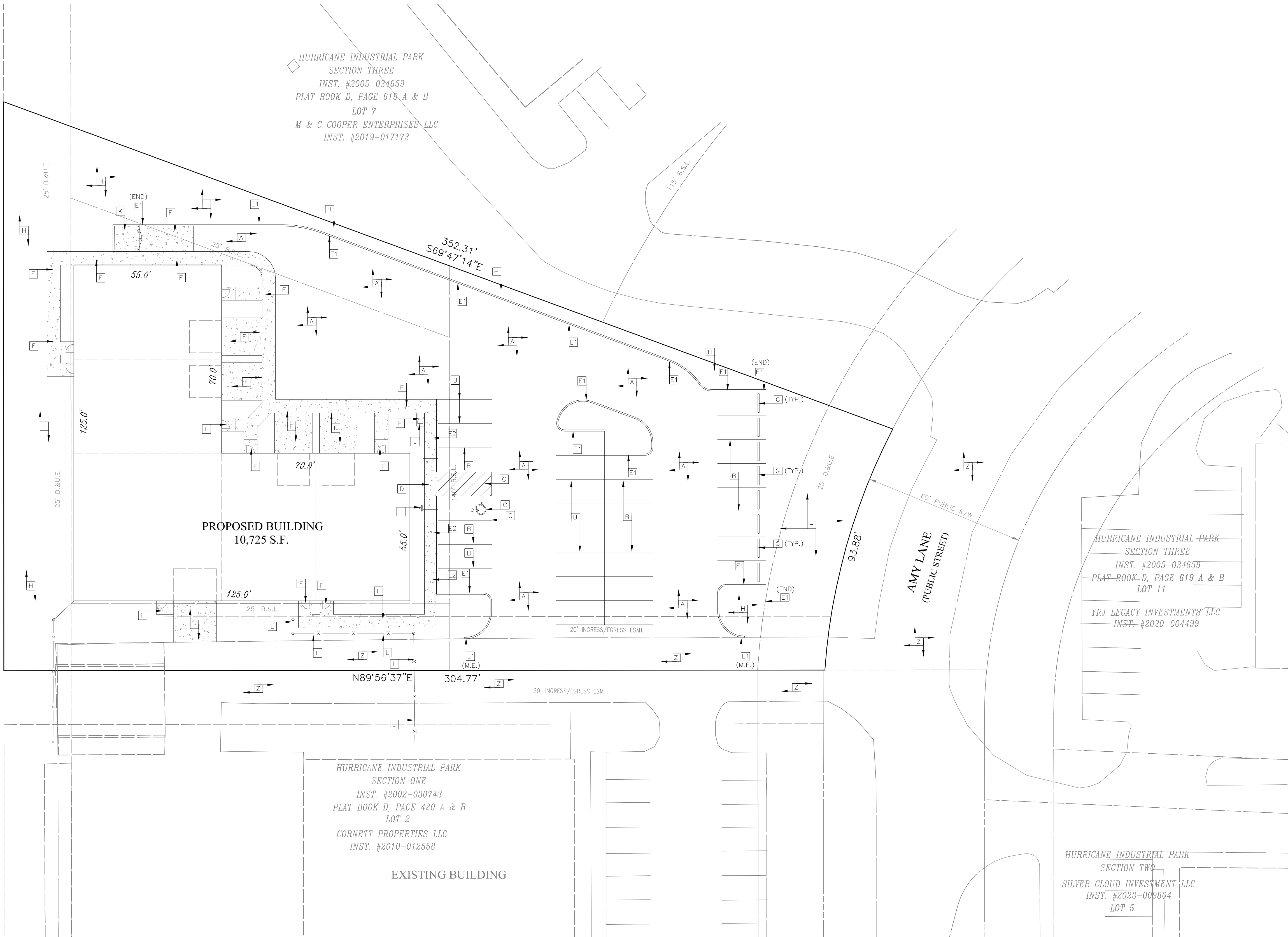
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LIVILLE JASON CLAY & SULLIVAN CHARLOTTE ANN CO-TR
INST. #2022-016291

?HERITAGE HOMEOWNERS ASSOCIATION INC
INST. #2020-000748

211.72'
N00°01'52"W

DUASE.



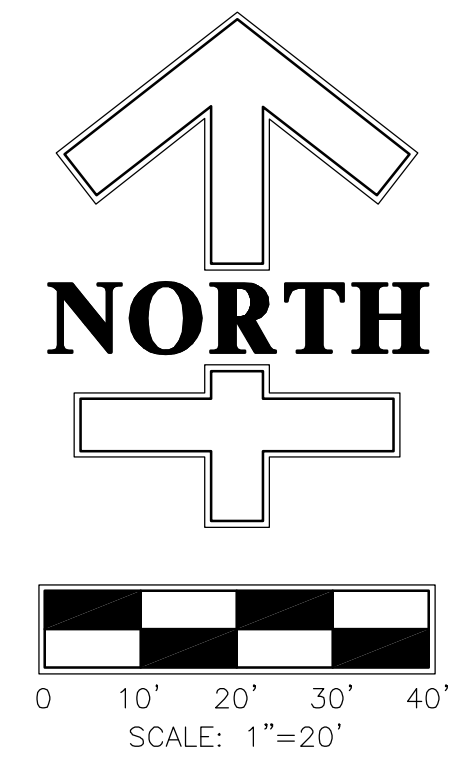
HURRICANE INDUSTRIAL PARK
SECTION THREE
INST. #2005-034659
PLAT BOOK D, PAGE 619 A & B
LOT 7
M & C COOPER ENTERPRISES LLC
INST. #2019-017173

PROPOSED BUILDING
10,725 S.F.

HURRICANE INDUSTRIAL PARK
SECTION ONE
INST. #2002-030743
PLAT BOOK D, PAGE 420 A & B
LOT 2
CORNETT PROPERTIES LLC
INST. #2010-012558

EXISTING BUILDING

HURRICANE INDUSTRIAL PARK
SECTION TWO
SILVER CLOUD INVESTMENT LLC
INST. #2023-008804
LOT 5



PROPOSED KEYNOTES:

- [A] HEAVY DUTY INTERNAL PARKING PAVEMENT SECTION (4" BITUMINOUS OVER 8" STONE BASE)
- [B] 4" WHITE PAVEMENT STRIPING
- [C] ADA BLUE HANDICAP PARKING STRIPING
- [D] ADA HANDICAP ACCESS RAMP
- [E] 6" EXTRUDED CONCRETE CURB
- [E2] 6" MONOLITHIC EXTRUDED CONCRETE CURB W/ 6" CONCRETE OVER COMPACTED STONE SUBBASE
- [F] 6" CONCRETE OVER COMPACTED STONE SUBBASE
- [G] CONCRETE PARKING BUMPER (OR EQUAL)
- [H] LANDSCAPING AND LAWN
- [I] 'HANDICAP PARKING' SIGN ON SQUARE POST
- [J] BICYCLE RACK, FOR A MINIMUM OF TWO BICYCLES
- [K] DUMPSTER ENCLOSURE AND APRON - 7" CLASS 'A' CONCRETE OVER 4" COMPACTED STONE BASE W/ 6" TALL WOOD PRIVACY FENCE AND GATE
- [L] CHAINLINK FENCING

EXISTING KEYNOTES:

- [Z] EXISTING ASPHALT/CONCRETE PAVEMENT (PROTECT)

LEGEND :

- OHP — EXISTING OVERHEAD POWER LINE
- PWP — EXISTING UTILITY POLE W/ GUYWIRE
- REP — EXISTING UTILITY PEDESTAL
- MB — EXISTING MAILBOX
- SIGN — EXISTING TRAFFIC SIGN
- LIGHT — EXISTING AREA LIGHT
- X — X — EXISTING CHAINLINK FENCE
- B.S.L. — BUILDING SETBACK LINE
- R/W — RIGHT-OF-WAY

GENERAL NOTES:

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BUILDING NOTES:

- ALL ROOF-TOP EQUIPMENT, SUCH AS HVAC UNITS, SHALL BE SCREENED FROM THE VIEW OF ALL PUBLIC STREETS BY PARAPETS, DORMERS OR OTHER SCREENS. THE MATERIAL OF ALL SUCH SCREENS SHALL BE CONSISTENT WITH THE EXTERIOR MATERIALS USED ON THE FAÇADE OF THE STRUCTURE.



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DATE	REVISION
12/2/24 <td>REVISED PER CITY OF FRANKLIN TECHNICAL REVIEW COMMENTS</td>	REVISED PER CITY OF FRANKLIN TECHNICAL REVIEW COMMENTS

SCALE	DRAWN	CHECKED	CERTIFIED
1"=20'	JPH	JKS	JKS

PROJECT: CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6
CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
TITLE: GEOMETRIC PLAN

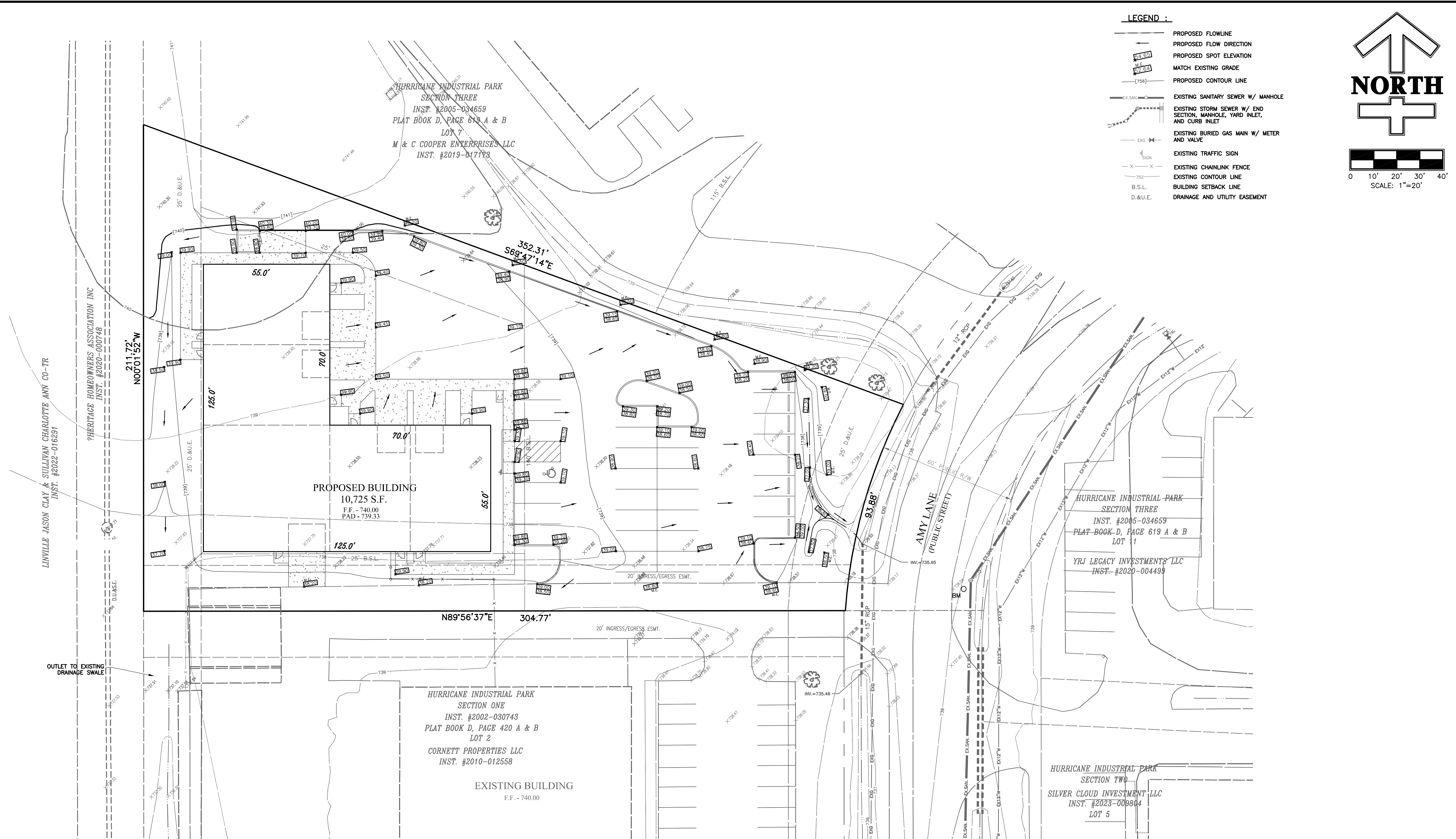
PROJECTS plus
GREENWOOD SURVEYING COMPANY
SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
(317)-882-5003

SEAL
JEFFERY K. SMITH
REGISTERED
No. 19419
STATE OF INDIANA
PROFESSIONAL ENGINEER
Jeffery K. Smith
12/2/24

JOB NUMBER
24015
SHEET

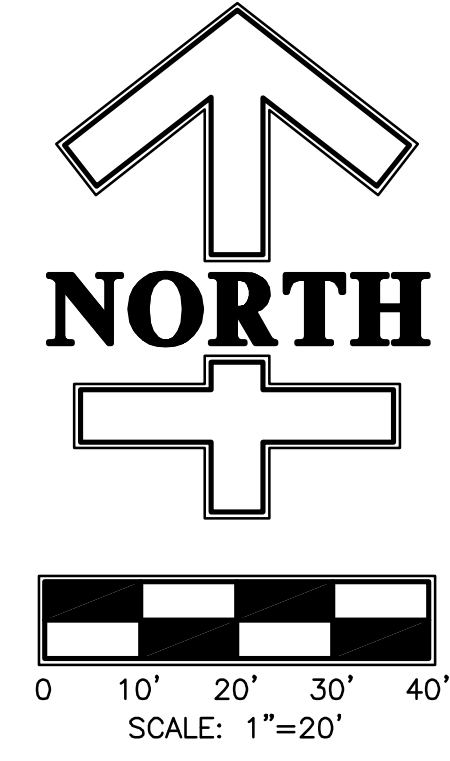
C302

DATE
OCTOBER 25, 2024



LEGEND :

	PROPOSED FLOWLINE
	PROPOSED FLOW DIRECTION
	PROPOSED SPOT ELEVATION
	MATCH EXISTING GRADE
	PROPOSED CONTOUR LINE
	EXISTING SANITARY SEWER W/ MANHOLE
	EXISTING STORM SEWER W/ END SECTION, MANHOLE, YARD INLET, AND CURB INLET
	EXISTING BURIED GAS MAIN W/ METER AND VALVE
	EXISTING TRAFFIC SIGN
	EXISTING CHAINLINK FENCE
	EXISTING CONTOUR LINE
	BUILDING SETBACK LINE
	DRAINAGE AND UTILITY EASEMENT



DATE	12/2/24
REVISION	
SYMBOL	
SCALE	1"=20'
DRAWN	JPH
CHECKED	JKS
CERTIFIED	JKS
PROJECT	CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6
TITLE	GRADING PLAN

PROJECTS plus
GREENWOOD SURVEYING COMPANY
SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
(317)-882-5003

SEAL
JEFFERY K. SMITH
REGISTERED PROFESSIONAL ENGINEER
No. 19419
STATE OF INDIANA
12/2/24

JOB NUMBER
24015
SHEET
C401
DATE
OCTOBER 25, 2024

FLOOD ZONE DESIGNATION
THIS LOT LIES ENTIRELY IN FLOOD HAZARD SHADED ZONE X (AREA WITHIN 500 YR. FLOODPLAIN) AS SCALE FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR JOHNSON COUNTY, INDIANA, COMMUNITY NUMBER, 18081, PANEL NUMBER, 0231 E, DATED 1/28/21

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○ ONSITE BENCHMARK - ELEVATION 737.72 (NAVD 1983)
TOP OF SANITARY SEWER MANHOLE, 23' EAST OF THE CENTERLINE OF AMY LANE AND 627' NORTH OF HURRICANE ROAD

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 - CONTRACTORS SHALL CONSULT ARCHITECTURAL, PLUMBING AND ELECTRICAL PLANS FOR INVERT ELEVATIONS AND EXACT LOCATION OF DOWNSPOUTS, WATER LINES GAS LINES, TRANSFORMER'S PAD OR POLE, AND BUILDING DIMENSIONS.
 - ALL PAVEMENT PATCHING DUE TO UTILITIES INSTALLATION; CONSTRUCTION OF CURBS, ETC., OR DAMAGE TO EXISTING PAVEMENT DURING CONSTRUCTION SHALL BE PATCHED WITH A PAVEMENT SECTION WHICH MEETS OR EXCEEDS JOHNSON COUNTY STANDARDS AS APPROVED BY THE ENGINEERING DEPARTMENT.
 - ALL GRASS AND/OR SHRUBBERY DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
 - ALL EXISTING MANHOLE AND CATCH BASIN GRATES, WATER OR GAS VALVES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION

- ALL PIPE LENGTHS SHOWN ON DRAWINGS ARE FOR HYDRAULIC CALCULATION PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE EXACT LENGTHS REQUIRED FOR ACTUAL INSTALLATION.
- CONSTRUCTION OF ALL SEWER LINES AND STRUCTURES SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODE, RULES AND REGULATIONS
- WHERE WATER LINES AND SEWERS CROSS AND THE WATER LINE CANNOT BE PLACED ABOVE OR BELOW THE SEWER WITH A MINIMUM OF 18" VERTICAL CLEARANCE. THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC (SDR 26) SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS WITHIN 10' OF THE WATER LINE.
- WHERE WATER LINES AND SEWERS RUN PARALLEL AND A MINIMUM SEPARATION DISTANCE OF 10' CANNOT BE MAINTAINED, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC (SDR 26) SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS.
- ANY FIELD TILES ENCOUNTERED DURING THE COURSE OF CONSTRUCTION SHALL BE PERPETUATED IN COMPLIANCE WITH STATE AND LOCAL LAWS AND REGULATIONS.

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INDEX OF REQUIRED INFORMATION FOR CONSTRUCTION STORM WATER POLLUTION PREVENTION FOR WARWEG BUILDING AT HURRICANE INDUSTRIAL PARK - LOTS 15 & 16

EROSION CONTROL PLAN INDEX

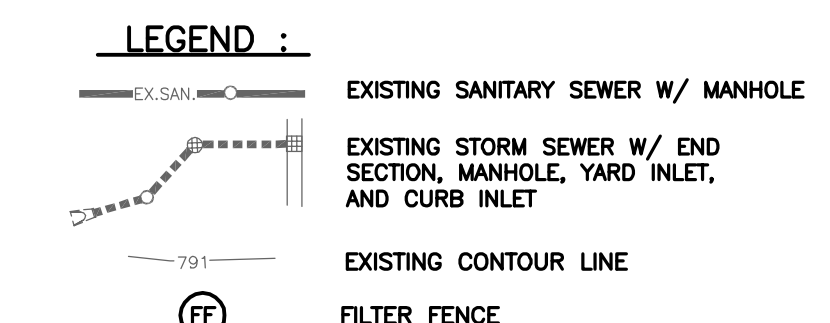
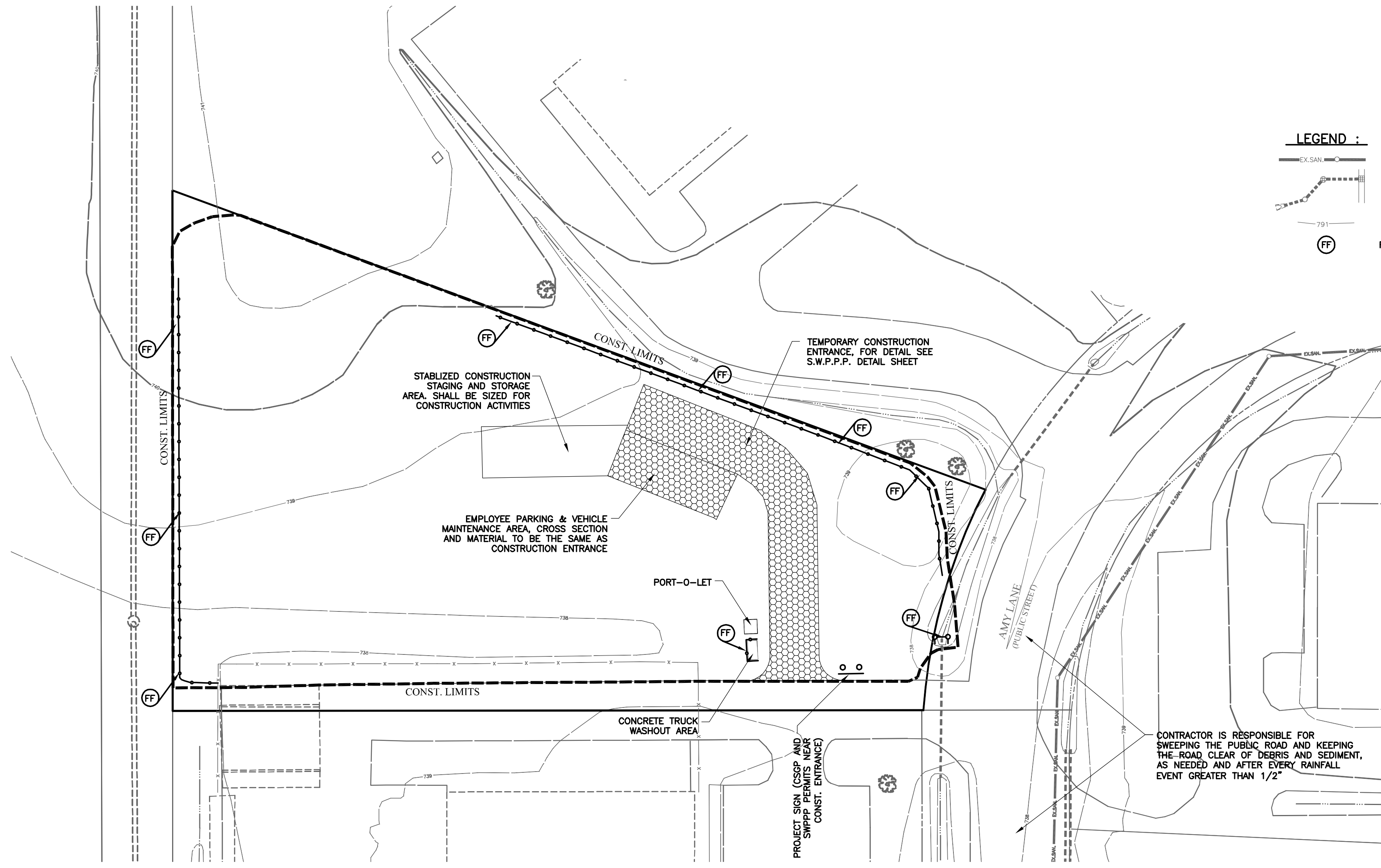
ELEMENT SHEET	ELEMENT SHEET	ELEMENT SHEET	ELEMENT SHEET	ELEMENT SHEET	ELEMENT SHEET
A1 C501	A12 C801	A23 C501	B1 C501-C503,C801	B12 C501-C503,C801	
A2 C101	A13 N/A	A24 C501	B2 C501-C503,C801	B13 C501	
A3 C501	A14 N/A	A25 C501	B3 C501-C503,C801	B14 C501	
A4 C501	A15 C201	A26 C801	B4 C501-C503,C801	B15 C501-C503,C801	
A5 C101	A16 C201	A27 C401	B5 C501-C503,C801		
A6 ATTACHED	A17 N/A	A28 C401	B6 C501-C503,C801	C1 C501-C503	
A7 C201	A18 C501	A29 C502	B7 C501-C503,C801	C2 C801	
A8 C501	A19 C201	A30 N/A	B8 C501-C503,C801	C3 C502-C503, C801	
A9 C501	A20 N/A	A31 N/A	B9 N/A	C4 C801	
A10 C501	A21 C501		B10 C501-C503,C801	C5 C502-C503	
A11 C501	A22 C501		B11 C501-C503,C801	C6 C501	

- A2. VICINITY MAP ON TITLE SHEET - SEE SHEET C101
 A3. CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - LOTS 6 IS LOCATED AT 1442 AMY LANE, FRANKLIN, IN 46131. THE SITE IS A PROPOSED INDUSTRIAL DEVELOPMENT ON 1.11 ACRES. IMPROVEMENTS SHALL CONSIST OF CONSTRUCTION OF AN INDUSTRIAL BUILDING, STORM SEWER, SWALES, ASPHALT PAVEMENT, CONCRETE CURBS, CONCRETE WALKS, AND EARTH WORK.
 A4. LATITUDE: N39°29'44" LONGITUDE: W86°02'42"
 A5. LEGAL DESCRIPTION ON TITLE SHEET - SEE SHEET C101
 LEGAL DESCRIPTION - SOUTHWEST QUARTER OF SECTION 12, TOWNSHIP 12 NORTH, RANGE 4 EAST, SEE FULL LEGAL DESCRIPTION ON SHEET C101
 A6. ATTACHED
 A7. ANY 100 YEAR FLOODPLANS, FLOODWAYS OF FLOODWAY FRINGES ARE PER FEMA FLOOD INSURANCE RATE MAP OF JOHNSON COUNTY, INDIANA, MAP #180810221E, DATED JANUARY 29, 2021, AND ARE SHOWN ON PLANS - SEE SHEET(S) C201.
 A8. LAND USE OF ADJACENT PROPERTIES:
 NORTH: INDUSTRIAL, SOUTH: INDUSTRIAL
 WEST: AGRICULTURAL, EAST: INDUSTRIAL
 A9. TOTAL MAXIMUM DAILY LOAD POLLUTANT AREA: YOUNG'S CREEK, NO TMDL LISTED
 A10. RECEIVING WATERS: YOUNG'S CREEK
 A11. IDENTIFICATION OF DISCHARGE TO A WATER ON CURRENT LIST OF IMPAIRED WATER AND POLLUTANTS: YOUNG'S CREEK, ASSESSMENT UNIT ID: INW0463_T1008, WATERBODY CONDITION: IMPAIRED CONDITION, 303(D) LISTED: YES, ESCHERICHIA COLI (E. COLI) HUC14: 05120204090040
 A12. SOIL MAP LOCATED ON STORM SEWER POLLUTION PREVENTION PLAN - SEE SHEET C801
 A13. NO WETLANDS EXIST ON SITE
 A14. CSQP STATE PERMIT IS REQUIRED, NO FEDERAL WATER QUALITY PERMIT IS REQUIRED FOR THIS PROJECT.
 A15. EXISTING SITE IS AN OPEN FIELD - SEE SHEET(S) C201
 A16. EXISTING SITE TOPOGRAPHY SHOWN ON EXISTING SITE CONDITION PLAN(S) - SEE SHEET(S) C201
 A17. NO EXISTING RUN-OFF FROM OFFSITE IS RECEIVED.
 A18. STORM WATER WILL DISCHARGE FROM WEST TO EAST TO AN OFFSITE DETENTION POND, RELEASING NORTH TO YOUNG'S CREEK- SEE SHEET(S) C501
 A19. EXISTING SITE IMPROVEMENTS, INCLUDING ANY BUILDING(S), POND(S) AND OTHER EXISTING INFRASTRUCTURE IS SHOWN ON EXISTING SITE CONDITION PLAN(S) - SEE SHEET(S) C201
 A20. NO EXISTING PERMANENT DETENTION IS ONSITE.
 A21. THE OFFSITE DETENTION POND IS THE ONLY POTENTIAL AREA WERE DISCHARGE WILL ENTER GROUNDWATER.
 A22. TOTAL AVERAGE: 1.11 AC
 A23. PROPOSED LAND DISTURBANCE: 1.05 AC
 A24. PROPOSED FINAL SITE TOPOGRAPHY SHOWN ON PROPOSED SITE CONDITION PLAN(S) - SEE SHEET(S) C401
 A25. BOUNDARY OF DISTURBED AREA SHOWN ON PLANS - SEE SHEET(S) C501
 A26. THE STORM WATER SYSTEMS ARE SHOWN ON PLANS - SEE SHEET(S) C801
 A27. STORM WATER WILL DISCHARGE FROM THE DETENTION FACILITY, RELEASING TO THE SOUTH - SEE SHEET(S) C401
 A28. IMPROVEMENTS SHOWN ON PROPOSED SITE CONDITION(S) - SEE SHEET(S) C401
 A29. ALL NECESSARY SOIL STOCKPILE, BORROW AND DISPOSAL AREAS (IF SHOWN) ARE SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN - SEE SHEET(S) C502.
 A30. NOT REQUIRED.
 A31. NOT REQUIRED.

- B1. POTENTIAL STORM WATER POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITY INCLUDE GASOLINE, OIL AND OTHER FLUIDS FROM CONSTRUCTION EQUIPMENT, CONCRETE, ASPHALT AND SEDIMENT. CONTRACTOR SHALL ESTABLISH AN EMPLOYEE PARKING AREA AND VEHICLE MAINTENANCE AREA AS SHOWN ON THE PLAN(S). A PROPER CONCRETE WASHOUT AREA SHALL ALSO BE ESTABLISHED AS SHOWN ON THE PLAN(S). THIS WASHOUT PIT SHALL MEET REQUIREMENTS SET FORTH IN THE CURRENT I.S.W.Q.M. FOR DETAIL OF WASHOUT PIT SEE SHEET C801
 B2. A CONSTRUCTION ENTRANCE LOCATION IS SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S) - SEE SHEET(S) C501-C503, FOR SPECIFICATIONS AND DETAILS REGARDING THE ENTRANCE IS SHOWN STORM WATER POLLUTION PREVENTION DETAIL SHEET, SEE SHEET C801
 B3. SURFACE STABILIZATION METHODS SHOWN ON STORM WATER POLLUTION PREVENTION SHEET(S), CONTRACTOR SHALL INSTALL THE REQUIRED SEEDING, MULCH BLANKETS OR OTHER SURFACE STABILIZATION MEASURES SHOWN ON THE PLAN(S).
 B4. SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S) - SEE SHEET(S) C501-C503, DETAIL ON SHEET C801. CONTRACTOR TO GRADE OVERSICUTORY DITCHES TO CHANNEL WATER AS CONSTRUCTION PROCEEDS SO THAT SEDIMENT IS NOT ALLOWED TO FLOW UNFILTERED. NORTH AMERICAN GREEN SC-150 SHALL BE UTILIZED.
 B5. SEDIMENT CONTROL MEASURES FOR SHEET FLOW SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S) - SEE SHEET(S) C501-C503, DETAIL ON SHEET C801. CONTRACTOR TO ENSURE ALL REQUIRED MEASURES OF FILTER FENCE ARE INSTALLED AND REQUIRED VEGETATIVE FILTER STRIPS ARE MAINTAINED.
 B6. RUNOFF CONTROL MEASURES ARE SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S), SEE SHEET(S) C501-C503, FOR DETAILS SHEET C801. CONTRACTOR SHALL INSTALL ALL DIVERSIONS, TEMPORARY SLOPE DRAIN OR OTHER REQUIRED RUNOFF CONTROL MEASURES SHOWN ON THE PLAN(S).
 B7. STORM WATER OUTLET PROTECTION MEASURES ARE SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S), SEE SHEET(S) C501-C503, FOR DETAILS SHEET C801. CONTRACTOR SHALL INSTALL ALL RIPRAP SLOPE PROTECTION OR OTHER REQUIRED RUNOFF CONTROL MEASURES SHOWN ON THE PLAN(S).
 B8. NO GRADE STABILIZATION MEASURES IS NECESSARY.
 B9. NO DEMATERING MEASURES IS NECESSARY.
 B10. NO IN-STREAM ACTIVITIES IS NECESSARY.
 B11. PERMANENT TEMPORARY STORM WATER QUALITY MEASURES INCLUDING FILTER FENCING, CONSTRUCTION ENTRANCE, SEEDING AND BLANKETS ARE SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S), SEE SHEET(S) C501-C503, FOR DETAILS, SEE SHEET C801. PERMANENT VEGETATIVE COVER WITH A UNIFORM DENSITY OF 70% IS REQUIRED BEFORE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES. TEMPORARY STORM SEWER INLET PROTECTION MEASURES INCLUDING TEMPORARY BASKET INSERTS, FILTER INSERTS, FILTER SLEEVES/TUBES, WIRE BASKETS OR OTHER REQUIRED INLET PROTECTION MEASURES ARE SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S), SEE SHEET(S) C501-C503, FOR DETAILS, SEE SHEET C801.
 B12. PERMANENT SURFACE STABILIZATION METHODS INCLUDING THE REQUIRED SEEDING, MULCH BLANKETS OR OTHER SURFACE STABILIZATION MEASURES ARE SHOWN ON THE STORM WATER POLLUTION PREVENTION SHEET(S), SEE SHEET(S) C501-C503, FOR DETAIL SEE GENERAL NOTE ON THE STORM WATER POLLUTION PREVENTION SHEET(S).
 B13. AN EROSION CONTROL CONSTRUCTION SEQUENCE SCHEDULE, SHOWING THE IMPLEMENTATION RELATIVE TO LAND DISTURBING
 B14. A 3 PHASE STORM SEWER POLLUTION PREVENTION PLAN IS PROVIDED AND SHALL BE UTILIZED FOR INITIAL PRE-CONSTRUCTION, CONSTRUCTION PHASE AND PROJECT COMPLETION PHASES OF EROSION CONTROL PROTECTION. AN EROSION CONTROL CONSTRUCTION SEQUENCE SCHEDULE IS SHOWN ON SHEET C801.
 B15. NO EROSION CONTROL FOR INDIVIDUAL BUILDING LOTS CONSTRUCTION REQUIRED
 B16. MATERIAL HANDLING AND SPILL PREVENTION ASSOCIATED WITH CONSTRUCTION ACTIVITY SHALL MEET THE SPILL PREVENTION AND SPILL RESPONSE REQUIREMENTS IN 327 IAC 2-6.1. FULL EMERGENCY PLAN IS SHOWN ON STORM WATER POLLUTION PREVENTION DETAIL SHEET, SEE SHEET C801. ALL MATERIALS SHALL BE HANDLED IN ACCORDANCE WITH GUIDELINES SET FORTH IN MATERIAL SAFETY DATA SHEET(S) PROVIDED BY MANUFACTURER.
 B17. MATERIAL HANDLING AND STORAGE PROCEDURES ASSOCIATED WITH WATER MATERIAL FROM CONSTRUCTION ACTIVITY, INCLUDING CONCRETE WASHOUT, DUMPSTER AND ANY OTHER REQUIRED ITEMS ARE SHOWN ON THE STORM WATER POLLUTION PREVENTION SHEET(S), SEE SHEET(S) C501-C503, FOR DETAILS, SEE SHEET C801.

- C1. EXPECTED POLLUTANTS ASSOCIATED WITH THE PROPOSED LAND USE INCLUDE FLUIDS FROM VEHICULAR TRAFFIC (I.E. OIL, GREASE, ANTIFREEZE, GASOLINE, ETC.), SAND AND GRIT FROM ROADWAY SURFACES AND SUBSTANCES ASSOCIATED WITH THE MAINTENANCE OF LAWNS AND GARDENS. THE ONLY OTHER REASONABLY FORESEEN POLLUTION FROM THIS SITE WILL BE MINIMAL AMOUNT OF LITTER AND TRASH FROM IMPROPER DISPOSAL.
 C2. POST-CONSTRUCTION STORM WATER QUALITY WILL BE ACCOMPLISHED BY ROUTING THE SITE RUNOFF THROUGH A DRY DETENTION POND DESIGNED TO DETAIN FOR AT LEAST 24 HOURS AFTER PEAK RUNOFF. 20% OF THE RUNOFF GENERATED FROM EITHER A 1"-1/4" STORM EVENT OR 1/2" OF DIRECT RUNOFF, WHICHEVER IS GREATER. THE DETENTION FACILITY ACTS AS A PERMANENT STORMWATER CONTROL STRUCTURE PROVIDING BOTH DETENTION AND TREATMENT OF CONTAMINATED STORMWATER RUNOFF. THE POND'S NATURAL PHYSICAL, BIOLOGICAL, AND CHEMICAL PROCESSES THEN WORK TO REMOVE POLLUTANTS. SEDIMENTATION PROCESSES REMOVE PARTICULATES, ORGANIC MATTER, AND METALS WHILE DISSOLVED METALS AND NUTRIENTS ARE REMOVED THROUGH BIOLOGICAL UPTAKE. FURTHER MAINTENANCE INCLUDES SWEEPING OF ALL PAVED SURFACES AS WELL AS COLLECTION OF ANY LITTER. ALL DRAINAGE SWALES AND GREEN SPACES WILL BE MAINTAINED WITH REGULAR MOWING DURING GROWING SEASONS.
 C3. ALL WATER QUALITY BMP MEASURES (I.E. STORM WATER QUALITY STRUCTURES, SEDIMENT FOREBAYS, OUTLET STRUCTURES AND DETENTION POND BASINS) ARE SHOWN ON STORM WATER POLLUTION PREVENTION PLAN(S)
 C4. WATER QUALITY MEASURES (I.E. STRUCTURES AND NON-STRUCTURAL) ARE IDENTIFIED ON THE STORM SEWER POLLUTION PREVENTION PLAN(S), SEE SHEET(S) C502-C503
 C5. MAINTENANCE OF ALL STORM WATER POLLUTION PREVENTION MEASURES WILL BE THE RESPONSIBILITY OF THE PROJECT OWNER UTILIZING PROCEDURES OUTLINED ON THESE PLAN(S). ANY GRASSED OR VEGETATED AREAS THAT EXPERIENCE EROSION FROM RAINFALL EVENTS SHOULD BE REPAIRED AND REVEGETATED AS SOON AS POSSIBLE.

- A. DETENTION PONDS BANK EROSION SHOULD BE ADDRESSED AS SOON AS IT BECOMES VISIBLE BY FILLING THE ERODED AREA WITH SUITABLE SOIL AND ESTABLISHING VEGETATION IMMEDIATELY. PREFERABLY BY SODDING. THE SAME MEASURE SHOULD BE USED FOR STEEP BANKS OR ANY BERMS OR SWALES. THE PONDS SHOULD ALSO BE MONITORED FOR SEDIMENT. IF THE BOTTOM OF THE POND RECEIVED SIGNIFICANT SEDIMENT (LESS THAN 2 FEET DEEP), THE SEDIMENT SHOULD BE REMOVED AND REPLACED ONSITE. AN ENGINEER SHOULD BE CONTACTED TO IDENTIFY THE SOURCE AND RECOMMEND REPAIRS.
 B. POND OUTLET CONTROL STRUCTURE(S) AND OUTLET PIPES SHALL BE INSPECTED FREQUENTLY AND AFTER HEAVY RAIN EVENTS FOR ANY FAILURES. THE DOWNSTREAM OUTLET CONDITION INCLUDING EROSION SHALL ALSO BE INSPECTED. ANY AREAS OF EXCESS EROSION OR DEBRIS SHALL BE CORRECTED TO ORIGINAL DESIGN. INSPECTION SHALL INCLUDE INSPECTION OF ANY END SECTIONS, DRIFTS, CASTINGS AND STRUCTURES. THE INTEGRITY OF THE CONTROL STRUCTURE SHALL BE CHECKED TO ENSURE PROPER FUNCTIONALITY TO PREVENT ANY POTENTIAL DOWNSTREAM ISSUES. IF ANY ISSUES OCCUR AN ENGINEER SHOULD BE CONTACTED TO IDENTIFY THE SOURCE AND RECOMMEND REPAIRS.
 C. STORM SEWERS WATER QUALITY STRUCTURES SHALL BE INSPECTED ANNUALLY FOR ANY FAILURES. GROUND SEDIMENT THAT COLLECTS IN ANY STORM SEWER SHALL BE REMOVED. INSPECTIONS SHOULD BE PERFORMED MONTHLY AND MORE OFTEN IN AREAS WHERE THERE IS A HIGHER POTENTIAL FOR SEDIMENT TO ACCUMULATE. THIS EXCESS DEBRIS SHALL BE REMOVED. INLET CATCH BASINS (IE CURB AND YARD INLETS) SHOULD BE INSPECTED FOR SEDIMENT DEPTH. THE MAXIMUM DEPTH SHALL BE 1/4 OF THE PIPE DIAMETER, WITH A MAXIMUM OF 6". ANY DAMAGED, FAILING OR MISSING STORM SEWER CASTINGS OR STRUCTURES SHALL BE REPLACED.
 D. RESPONSIBLE FOR OPERATIONS AND MAINTENANCE:
 CORNETT METAL FABRICATION LLC
 1518 AMY LANE
 FRANKLIN, IN, 46131
 PHONE: 317-738-0008
 CHAN CORNETT
 CHANCORNETT@CORNETTROOFING.COM



GENERAL NOTES:

- FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE SEED. THEY SHALL BE MIXED INTO THE TOP 2" OF SOIL WITH A DISK, HARROW, ROTARY TILLER, OR OTHER APPROVED EQUIPMENT. FERTILIZER SHALL BE SPREAD AT THE RATE OF 400 POUNDS PER ACRE. SEED MATURE SHALL BE 60 POUNDS PER ACRE OF PERENNIAL RYE GRASS AND 60 POUNDS PER ACRE OF KENTUCKY 31 FESCUE OR ALTA FESCUE.
 - A. EARLY SPRING MIX: 100% OATS SEEDING RATE: 50 LBS./ACRE
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 - C. FALL MIX: 100% PERENNIAL RYE SEEDING RATE: 50 LBS./ACRE
 STRAW OR MULCH AS APPROVED BY THE ENGINEER SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE.
- MULCH-SEEDING: MULCH-SEEDING SHALL BE AS PER I.S.W.Q.M. SPECIFICATIONS, DATED OCTOBER 2007. FERTILIZER SHALL BE 12-12-12 APPLIED AT THE RATE OF 400 POUNDS PER ACRE. SEED MATURE SHALL BE 60 POUNDS PER ACRE OF PERENNIAL RYE GRASS AND 60 POUNDS PER ACRE OF KENTUCKY 31 FESCUE OR ALTA FESCUE.
- PROJECT SITE OWNER OR THEIR REPRESENTATIVE, KNOWLEDGEABLE IN EROSION AND SEDIMENT CONTROL, SHALL INSPECT THE SITE FOR STORM WATER POLLUTION PREVENTION DEFICIENCIES AT LEAST WEEKLY AND AGAIN WITHIN 24 HOURS OF EVERY 1/2 INCH RAIN EVENT.
- ALL HAZARDOUS MATERIALS USED DURING THE CONSTRUCTION OF THIS SITE SHALL BE HANDLED AT ALL TIMES ACCORDING TO RECOMMENDATIONS IN THE MATERIAL SAFETY DATA SHEETS PROVIDED BY THE MANUFACTURER. SITE CONTRACTOR TO IMPLEMENT A SPILL PREVENTION PLAN PRIOR TO START OF CONSTRUCTION.
- ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE "INDIANA STORM WATER QUALITY MANUAL" AND THE SCS "FIELD OFFICE TECHNICAL GUIDE".

NOTICES AND PERMITS

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT PERMITS ARE OBTAINED FROM ALL UTILITIES IN THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ALL UTILITIES IN THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
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NOTES:

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- THE CITY OF FRANKLIN RESERVES THE RIGHT TO REQUIRE ADDITIONAL ONSITE CONTROLS AS DEEMED NECESSARY TO MAINTAIN COMPLIANCE WITH 327 IAC 15-5 (RULE 5) AND THE CITY'S STORMWATER MANAGEMENT ORDINANCE. ALL EROSION AND SEDIMENT CONTROL, BEST MANAGEMENT PRACTICES AND POLLUTION PREVENTION MEASURES MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE INDIANA STORMWATER QUALITY MANUAL.
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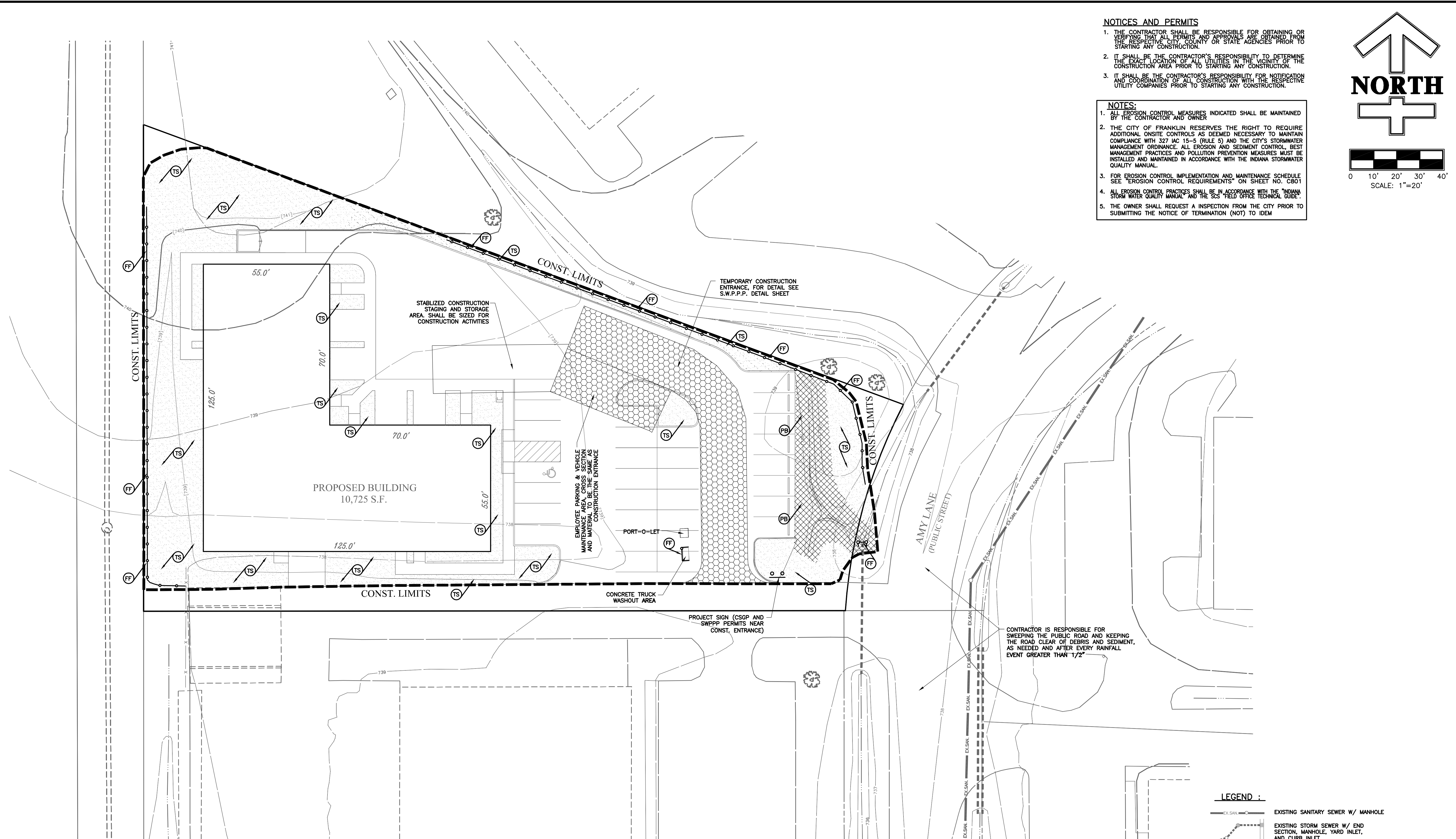
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DATE	REVISION	SYMBOL	SCALE	PROJECT
12/2/24			1"=30'	CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6
	REVISED PER CITY OF FRANKLIN TECHNICAL REVIEW COMMENTS		DRAWN	CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
			CHECKED	TITLE
			JPH	STORM WATER POLLUTION PREVENTION PLAN (INITIAL PRE CONST.)
			JKS	
			CERTIFIED	
			JKS	

PROJECTS plus
 GREENWOOD SURVEYING COMPANY
 SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
 (317)-882-5003

SEAL
 JEFFERY K. SMITH
 REGISTERED PROFESSIONAL ENGINEER
 No. 19419
 STATE OF INDIANA
 Jeffery K. Smith
 12/2/24

JOB NUMBER
24015
 SHEET
C501
 DATE
OCTOBER 25, 2024

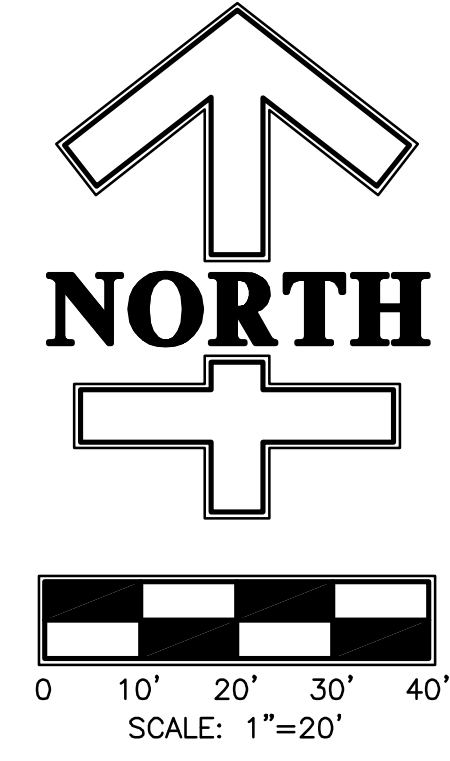


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CONTRACTOR IS RESPONSIBLE FOR SWEEPING THE PUBLIC ROAD AND KEEPING THE ROAD CLEAR OF DEBRIS AND SEDIMENT, AS NEEDED AND AFTER EVERY RAINFALL EVENT GREATER THAN 1/2"

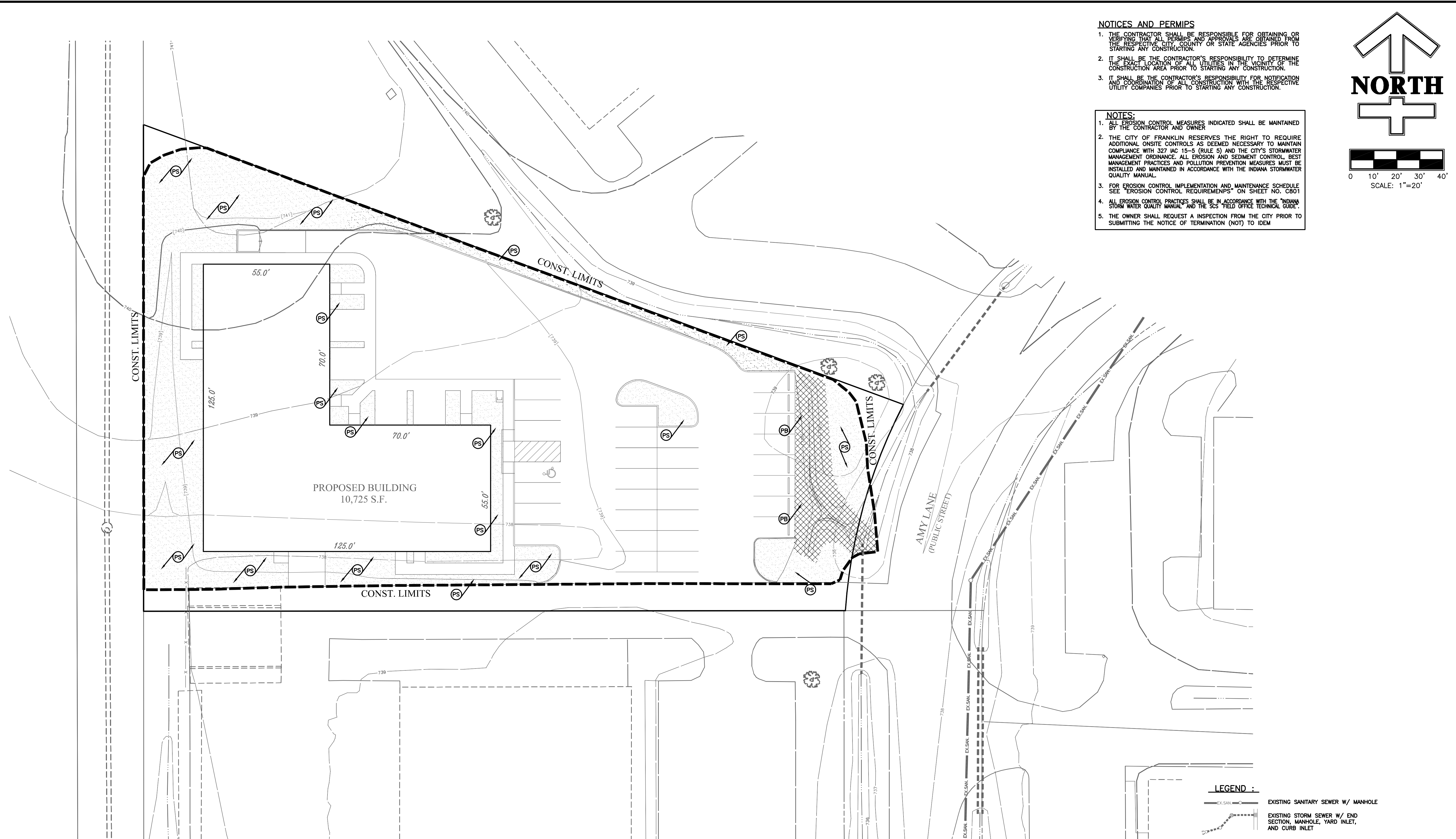
LEGEND :

- EXISTING SANITARY SEWER W/ MANHOLE
- EXISTING STORM SEWER W/ END SECTION, MANHOLE, YARD INLET, AND CURB INLET
- EXISTING CONTOUR LINE
- FILTER FENCE
- TEMPORARY/PERMANENT SEEDING WITH NORTH AMERICAN GREEN SC-150 BLANKET OR EQUIVALENT
- TEMPORARY SEEDING

- GENERAL NOTES:**
1. FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE SEED. THEY SHALL BE MIXED INTO THE TOP 2" OF SOIL WITH A 100K HOLLOW ROTARY TILLER, OR OTHER APPROVED EQUIPMENT. FERTILIZER SHALL BE SPREAD AT THE RATE OF 400 POUNDS PER ACRE AND AGRICULTURAL LIMESTONE AT THE RATE OF 1/2 TON PER ACRE UNLESS OTHERWISE SPECIFIED.
 2. TEMPORARY SEEDING: THE AREAS WHERE STRIPPING, CUTS OR FILLS HAVE BEEN GRADED SHALL BE SEED FOR SILT AND EROSION PROTECTION WITH ONE OF THE FOLLOWING METHODS:
 - A. EARLY SPRING MIX: 100% OATS SEEDING RATE: 50 LBS./ACRE
 - B. SPRING OR LATE FALL MIX: 100% ANNUAL RYE SEEDING RATE: 50 LBS./ACRE
 - C. FALL MIX: 100% PERENNIAL RYE SEEDING RATE: 50 LBS./ACRE
 STRAW OR MULCH AS APPROVED BY THE ENGINEER SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE.
 3. WILCH-SEEDING: MULCH-SEEDING SHALL BE AS PER I.S.W.Q.M. SPECIFICATIONS, DATED OCTOBER 2007. FERTILIZER SHALL BE 12-12-12 APPLIED AT THE RATE OF 400 POUNDS PER ACRE. SEED MIXTURE SHALL BE 60 POUNDS PER ACRE OF PERENNIAL RYE GRASS AND 60 POUNDS PER ACRE OF KENTUCKY 31 FESCUE OR ALTA FESCUE.
 4. WATER QUALITY MAINTENANCE- AT THE COMPLETION OF CONSTRUCTION ALL EXCESS SOIL AND OTHER MATERIAL SHALL BE REMOVED FROM THE SITE. TO ENSURE PROPER WATER QUALITY THE SITE AND ITS STORM WATER CONVEYANCE FACILITIES SHALL BE INSPECTED AT REGULAR INTERVALS AND AFTER ALL MAJOR RAIN EVENTS; THE STORM WATER CONVEYANCE SYSTEMS SHALL BE KEPT FREE OF DEBRIS AND FLUIDS THAT COULD POTENTIALLY POLLUTE STORM WATER RUNOFF.
 5. PROJECT SITE OWNER OR THEIR REPRESENTATIVE, KNOWLEDGEABLE IN EROSION AND SEDIMENT CONTROL SHALL INSPECT THE SITE FOR STORM WATER POLLUTION PREVENTION DEFICIENCIES AT LEAST WEEKLY AND AGAIN WITHIN 24 HOURS OF EVERY 1/2 INCH RAIN EVENT.
 6. ALL HAZARDOUS MATERIALS USED DURING THE CONSTRUCTION OF THIS SITE SHALL BE HANDLED AT ALL TIMES ACCORDING TO RECOMMENDATIONS IN THE MATERIAL SAFETY DATA SHEETS PROVIDED BY THE MANUFACTURER. SITE CONTRACTOR TO IMPLEMENT A SPILL PREVENTION PLAN PRIOR TO START OF CONSTRUCTION.
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DATE	12/2/24
REVISION	
SYMBOL	
SCALE	1"=20'
DRAWN	JPH
CHECKED	JKS
CERTIFIED	JKS
PROJECT	CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6
TITLE	CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
PROJECT	STORM WATER POLLUTION PREVENTION PLAN (CONSTRUCTION/GRADING PHASE)
<p>PROJECTS plus GREENWOOD SURVEYING COMPANY SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143 (317)-882-5003</p>	
<p>SEAL JEFFERY K. SMITH REGISTERED PROFESSIONAL ENGINEER No. 19419 STATE OF INDIANA Jeffery K. Smith 12/2/24</p>	
JOB NUMBER	24015
SHEET	C502
DATE	OCTOBER 25, 2024

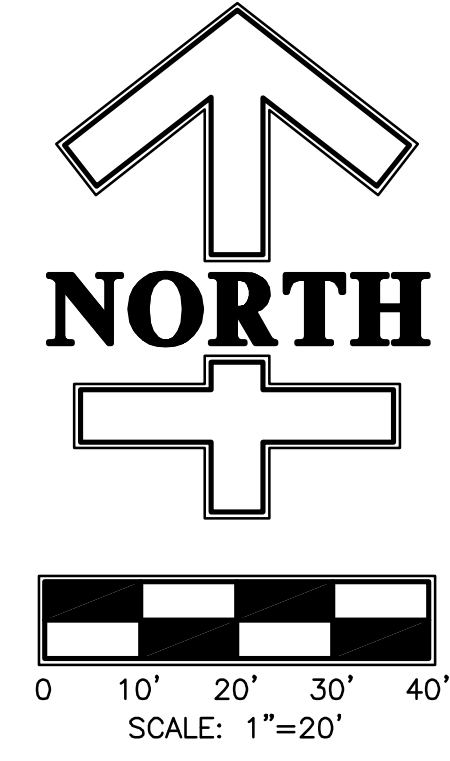


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5. THE OWNER SHALL REQUEST AN INSPECTION FROM THE CITY PRIOR TO SUBMITTING THE NOTICE OF TERMINATION (NOT) TO IDEM.



GENERAL NOTES:

1. FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE SEEDDED. THEY SHALL BE MIXED INTO THE TOP 2" OF SOIL WITH A DISK HARROW, ROTARY TILLER, OR OTHER APPROVED EQUIPMENT. FERTILIZER SHALL BE SPREAD AT THE RATE OF 400 POUNDS PER ACRE AND AGRICULTURAL LIMESTONE AT THE RATE OF 1/2 TON PER ACRE UNLESS OTHERWISE SPECIFIED.
2. TEMPORARY SEEDING: THE AREAS WHERE STOPPING, CUTS OR FILLS HAVE BEEN GRADDED SHALL BE SEEDDED FOR SEED AND EROSION PROTECTION WITH ONE OF THE FOLLOWING METHODS:
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LEGEND :

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- - - - - EXISTING STORM SEWER W/ END SECTION, MANHOLE, YARD INLET, AND CURB INLET
- --- --- EXISTING CONTOUR LINE
- [Cross-hatched] (PB) PERMANENT SEEDING WITH NORTH AMERICAN GREEN SC-150 BLANKET OR EQUIVALENT
- (PS) PERMANENT SEEDING

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SYMBOL	
SCALE	1"=20'
DRAWN	JPH
CHECKED	JKS
CERTIFIED	JKS
PROJECT	CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
TITLE	STORM WATER POLLUTION PREVENTION PLAN (POST CONSTR.)

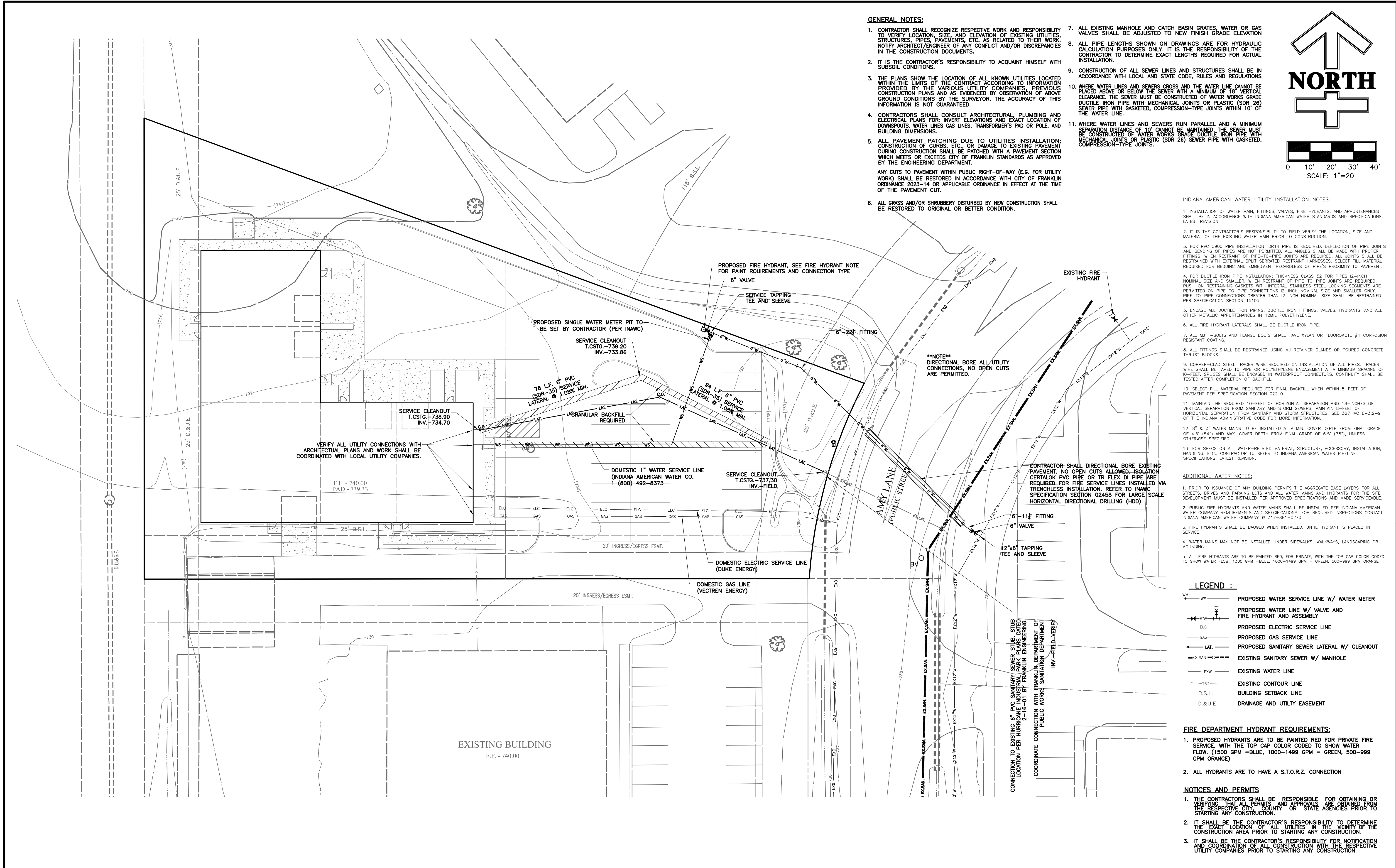
PROJECTS plus
GREENWOOD SURVEYING COMPANY
 SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
 (317)-882-5003

SEAL

 Jeffrey K. Smith
 12/2/24

JOB NUMBER
24015
 SHEET
C503
 DATE
OCTOBER 25, 2024

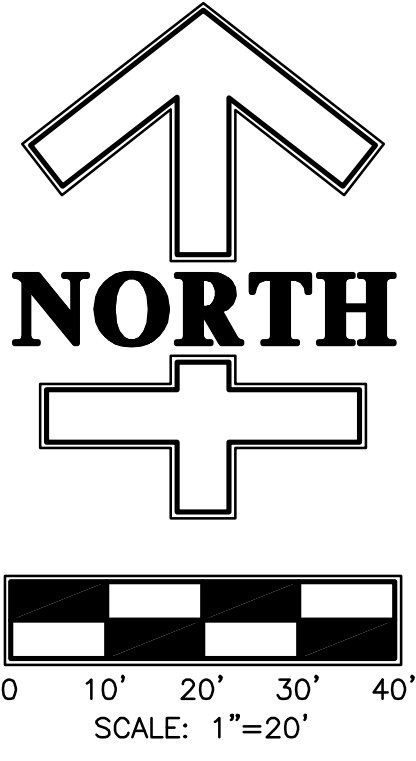
811
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GENERAL NOTES:

- CONTRACTOR SHALL RECOGNIZE RESPECTIVE WORK AND RESPONSIBILITY TO VERIFY LOCATION, SIZE AND ELEVATION OF EXISTING UTILITIES, STRUCTURES, PIPES, PAVEMENTS, ETC. AS RELATED TO THEIR WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH SUBSOIL CONDITIONS.
- THE PLANS SHOW THE LOCATION OF ALL KNOWN UTILITIES LOCATED WITHIN THE LIMITS OF THE CONTRACT ACCORDING TO INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES. PREVIOUS CONSTRUCTION PLANS AND AS EVIDENCED BY OBSERVATION OF ABOVE GROUND CONDITIONS BY THE SURVEYOR. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED.
- CONTRACTORS SHALL CONSULT ARCHITECTURAL PLUMBING AND ELECTRICAL PLANS FOR: INVERT ELEVATIONS AND EXACT LOCATION OF DOWNSPOUTS, WATER LINES GAS LINES, TRANSFORMER'S PAD OR POLE, AND BUILDING DIMENSIONS.
- ALL PAVEMENT PATCHING DUE TO UTILITIES INSTALLATION; CONSTRUCTION OF CURBS, ETC., OR DAMAGE TO EXISTING PAVEMENT DURING CONSTRUCTION SHALL BE PATCHED WITH A PAVEMENT SECTION WHICH MEETS OR EXCEEDS CITY OF FRANKLIN STANDARDS AS APPROVED BY THE ENGINEERING DEPARTMENT.
- ANY CUTS TO PAVEMENT WITHIN PUBLIC RIGHT-OF-WAY (E.G. FOR UTILITY WORK) SHALL BE RESTORED IN ACCORDANCE WITH CITY OF FRANKLIN ORDINANCE 2023-14 OR APPLICABLE ORDINANCE IN EFFECT AT THE TIME OF THE PAVEMENT CUT.
- ALL GRASS AND/OR SHRUBBERY DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.

- ALL EXISTING MANHOLE AND CATCH BASIN GRATES, WATER OR GAS VALVES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION
- ALL PIPE LENGTHS SHOWN ON DRAWINGS ARE FOR HYDRAULIC CALCULATION PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE EXACT LENGTHS REQUIRED FOR ACTUAL INSTALLATION.
- CONSTRUCTION OF ALL SEWER LINES AND STRUCTURES SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODE, RULES AND REGULATIONS
- WHERE WATER LINES AND SEWERS CROSS AND THE WATER LINE CANNOT BE PLACED ABOVE OR BELOW THE SEWER WITH A MINIMUM OF 10' VERTICAL CLEARANCE, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC (SDR 26) SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS WITHIN 10' OF THE WATER LINE.
- WHERE WATER LINES AND SEWERS RUN PARALLEL, A MINIMUM SEPARATION DISTANCE OF 10' CANNOT BE MAINTAINED, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC (SDR 26) SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS.



INDIANA AMERICAN WATER UTILITY INSTALLATION NOTES:

- INSTALLATION OF WATER MAIN, FITTINGS, VALVES, FIRE HYDRANTS, AND APPURTENANCES SHALL BE IN ACCORDANCE WITH INDIANA AMERICAN WATER STANDARDS AND SPECIFICATIONS, LATEST REVISION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION, SIZE AND MATERIAL OF THE EXISTING WATER MAIN PRIOR TO CONSTRUCTION.
- FOR PVC C900 PIPE INSTALLATION: DR14 PIPE IS REQUIRED. DEFLECTION OF PIPE JOINTS AND BENDING OF PIPES ARE NOT PERMITTED. ALL ANGLES SHALL BE MADE WITH PROPER FITTINGS. WHEN RESTRAINT OF PIPE-TO-PIPE JOINTS ARE REQUIRED, ALL JOINTS SHALL BE RESTRAINED WITH EXTERNAL SPLIT SERRATED RESTRAINT HARNESSSES. SELECT FILL MATERIAL REQUIRED FOR BEDDING AND EMBEDMENT REGARDLESS OF PIPE'S PROXIMITY TO PAVEMENT.
- FOR DUCTILE IRON PIPE INSTALLATION: THICKNESS CLASS 52 FOR PIPES 12-INCH NOMINAL SIZE AND SMALLER. WHEN RESTRAINT OF PIPE-TO-PIPE JOINTS ARE REQUIRED, PUSH-ON RESTRAINING GASKETS WITH INTEGRAL STAINLESS STEEL LOCKING SEGMENTS ARE PERMITTED. ON PIPE-TO-PIPE CONNECTIONS 12-INCH NOMINAL SIZE AND SMALLER ONLY, PIPE-TO-PIPE CONNECTIONS GREATER THAN 12-INCH NOMINAL SIZE SHALL BE RESTRAINED PER SPECIFICATION SECTION 15105.
- ENCASE ALL DUCTILE IRON PIPING, DUCTILE IRON FITTINGS, VALVES, HYDRANTS, AND ALL OTHER METALLIC APPURTENANCES IN 12MIL POLYETHYLENE.
- ALL FIRE HYDRANT LATERALS SHALL BE DUCTILE IRON PIPE.
- ALL MJ T-BOLTS AND FLANGE BOLTS SHALL HAVE XYLAN OR FLUOROKROR #1 CORROSION RESISTANT COATING.
- ALL FITTINGS SHALL BE RESTRAINED USING MJ RETAINER GLANDS OR POURED CONCRETE THRUST BLOCKS.
- COPPER-CLAD STEEL TRACER WIRE REQUIRED ON INSTALLATION OF ALL PIPES. TRACER WIRE SHALL BE TAPED TO PIPE OR POLYETHYLENE ENCASEMENT AT A MINIMUM SPACING OF 10-FEET. SPLICES SHALL BE ENCASED IN WATERPROOF CONNECTORS. CONTINUITY SHALL BE TESTED AFTER COMPLETION OF BACKFILL.
- SELECT FILL MATERIAL REQUIRED FOR FINAL BACKFILL WHEN WITHIN 5-FEET OF PAVEMENT PER SPECIFICATION SECTION G2210.
- MAINTAIN THE REQUIRED 10-FEET OF HORIZONTAL SEPARATION AND 18-INCHES OF VERTICAL SEPARATION FROM SANITARY AND STORM SEWERS. MAINTAIN 8-FEET OF HORIZONTAL SEPARATION FROM SANITARY AND STORM STRUCTURES. SEE 327 IAC 8-3.2-9 OF THE INDIANA ADMINISTRATIVE CODE FOR MORE INFORMATION.
- 8" & 3" WATER MAINS TO BE INSTALLED AT A MIN. COVER DEPTH FROM FINAL GRADE OF 4.5' (54") AND MAX. COVER DEPTH FROM FINAL GRADE OF 6.5' (78"), UNLESS OTHERWISE SPECIFIED.
- FOR SPECS ON ALL WATER-RELATED MATERIAL, STRUCTURE, ACCESSORY, INSTALLATION, HANDLING, ETC., CONTRACTOR TO REFER TO INDIANA AMERICAN WATER PIPELINE SPECIFICATIONS, LATEST REVISION.

ADDITIONAL WATER NOTES:

- PRIOR TO ISSUANCE OF ANY BUILDING PERMITS THE AGGREGATE BASE LAYERS FOR ALL STREETS, DRIVES AND PARKING LOTS AND ALL WATER MAINS AND HYDRANTS FOR THE SITE DEVELOPMENT MUST BE INSTALLED PER APPROVED SPECIFICATIONS AND MADE SERVICEABLE.
- PUBLIC FIRE HYDRANTS AND WATER MAINS SHALL BE INSTALLED PER INDIANA AMERICAN WATER COMPANY REQUIREMENTS AND SPECIFICATIONS. FOR REQUIRED INSPECTIONS CONTACT INDIANA AMERICAN WATER COMPANY @ 317-951-0229
- FIRE HYDRANTS SHALL BE BAGGED WHEN INSTALLED, UNTIL HYDRANT IS PLACED IN SERVICE.
- WATER MAINS MAY NOT BE INSTALLED UNDER SIDEWALKS, WALKWAYS, LANDSCAPING OR MOUNDING.
- ALL FIRE HYDRANTS ARE TO BE PAINTED RED, FOR PRIVATE, WITH THE TOP CAP COLOR CODED TO SHOW WATER FLOW. 1300 GPM =BLUE, 1000-1499 GPM = GREEN, 500-999 GPM ORANGE

LEGEND :

- W/W - PROPOSED WATER SERVICE LINE W/ WATER METER
- W/W - PROPOSED WATER LINE W/ VALVE AND FIRE HYDRANT AND ASSEMBLY
- ELC - PROPOSED ELECTRIC SERVICE LINE
- GAS - PROPOSED GAS SERVICE LINE
- SS - PROPOSED SANITARY SEWER LATERAL W/ CLEANOUT
- EX SAN - EXISTING SANITARY SEWER W/ MANHOLE
- EX W - EXISTING WATER LINE
- 752 - EXISTING CONTOUR LINE
- B.S.L. - BUILDING SETBACK LINE
- D.&U.E. - DRAINAGE AND UTILITY EASEMENT

FIRE DEPARTMENT HYDRANT REQUIREMENTS:

- PROPOSED HYDRANTS ARE TO BE PAINTED RED FOR PRIVATE FIRE SERVICE, WITH THE TOP CAP COLOR CODED TO SHOW WATER FLOW. (1500 GPM =BLUE, 1000-1499 GPM = GREEN, 500-999 GPM ORANGE)
- ALL HYDRANTS ARE TO HAVE A S.T.O.R.Z. CONNECTION

NOTICES AND PERMITS

- THE CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES IN THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.

FLOOD ZONE DESIGNATION
 THIS LOT LIES ENTIRELY IN FLOOD HAZARD SHADED ZONE X (AREA WITHIN 500 YR. FLOODPLAIN) AS SCALE FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR JOHNSON COUNTY, INDIANA, COMMUNITY NUMBER, 18081, PANEL NUMBER, 0231 E, DATED 1/28/21

BENCHMARKS:
 SITE ELEVATIONS ARE BASED ON GPS GEOD "G2012bu7" USING A PROJECTION OF "INDIANA EAST" AND DATUM NAD83 NO TRANS.
 ○ ONSITE BENCHMARK - ELEVATION 737.72 (NAVD 1983)
 TOP OF SANITARY SEWER MANHOLE, 23' EAST OF THE CENTERLINE OF AMY LANE AND 627' NORTH OF HURRICANE ROAD

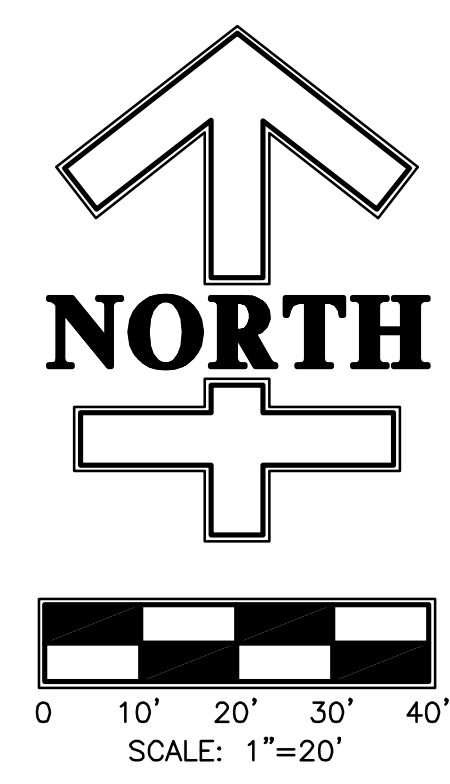
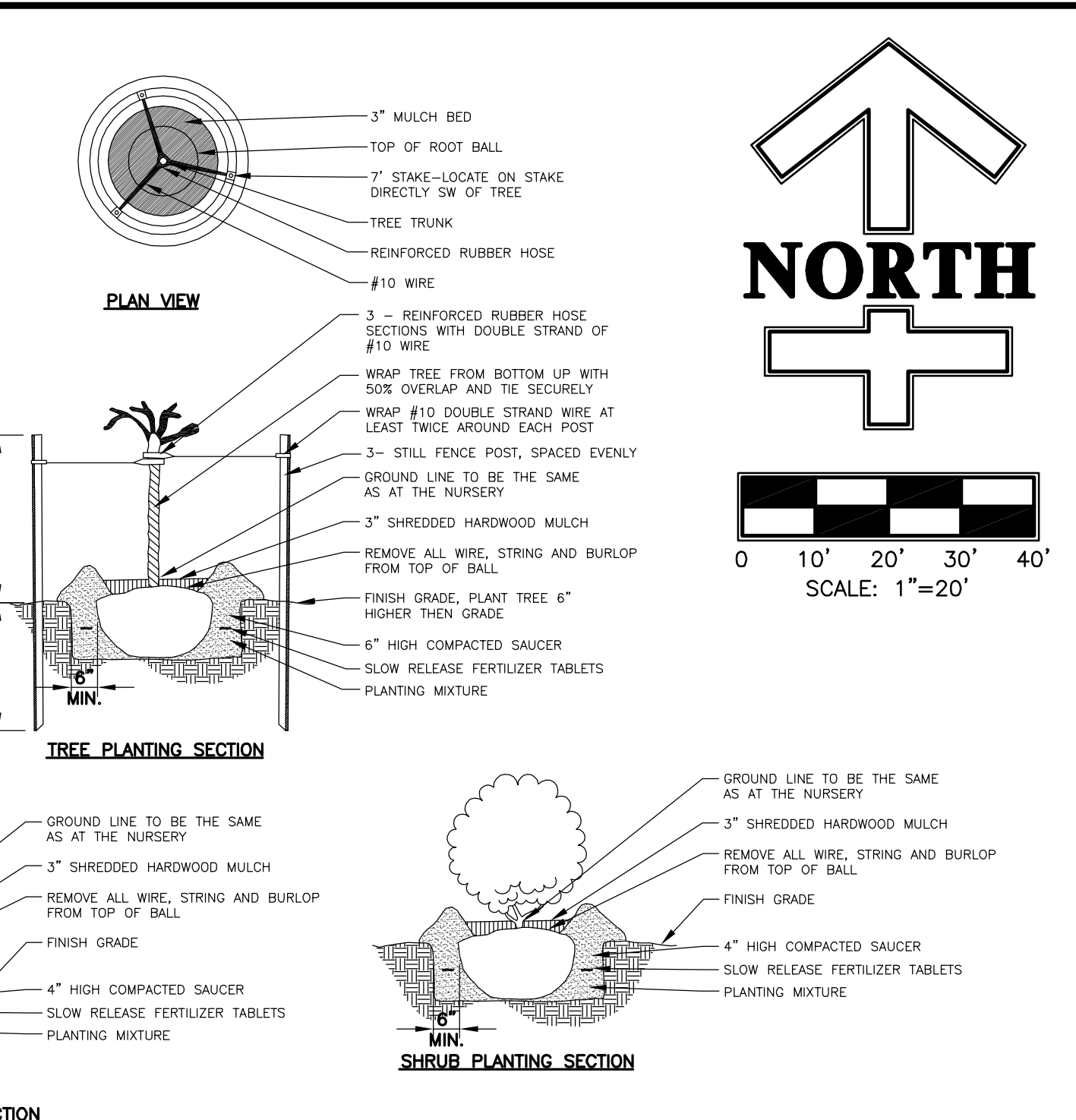
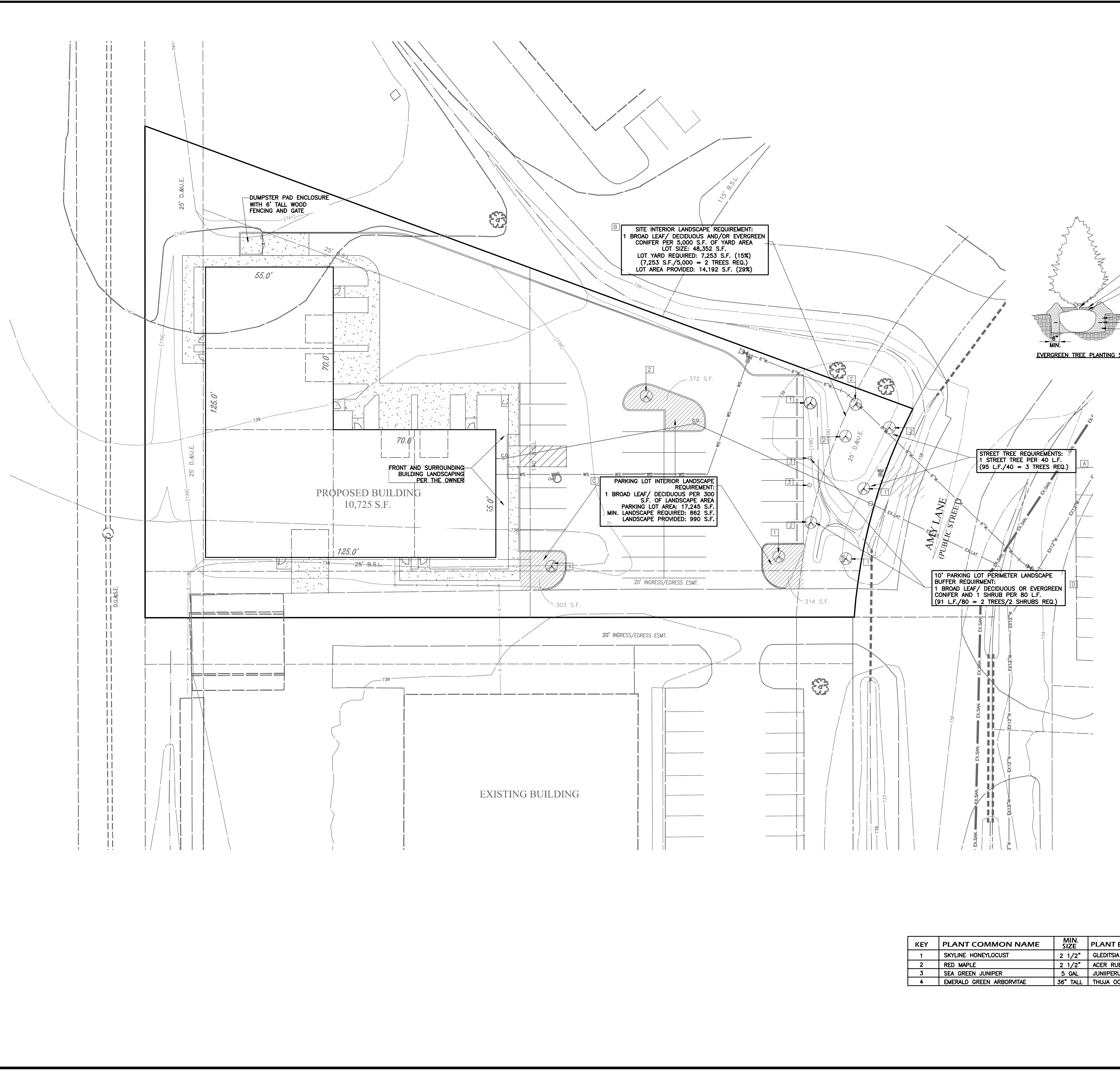
DATE	12/2/24
REVISION	
SYMBOL	
SCALE	1"=20'
DRAWN	JPH
CHECKED	JKS
CERTIFIED	JKS
PROJECT	CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
TITLE	UTILITY PLAN

PROJECTS plus
 GREENWOOD SURVEYING COMPANY
 SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
 (317)-882-5003

SEAL
 JEFFERY K. SMITH
 REGISTERED PROFESSIONAL ENGINEER
 No. 19419
 STATE OF INDIANA
 Jeffery K. Smith
 12/2/24

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JOB NUMBER
24015
 SHEET
C601
 DATE
OCTOBER 25, 2024



LANDSCAPE LEGEND		
SYMBOL	REQUIREMENT	QUANTITY
	1. PARKING LANDSCAPE PLANTING SHALL BE MODIFIED ONLY UNDER THE PLANNING DIRECTORS WRITTEN APPROVAL. 2. LANDSCAPING NOT TO OBSTRUCT LINE OF SIGHT FOR MOTOR VEHICLES.	
A	STREET TREE - TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN SUBDIVISION CONTROL ORDINANCE 6.15. a. MIN. OF 2" CALIBER AT 6" FROM TOP OF ROOT BALL. b. NOT WITHIN 25' OF AN INTERSECTION. c. NOT WITHIN 10' OF HYDRANT OR LATERAL. d. WITHIN 10' OF THE RIGHT OF WAY. d. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE PERMITTED STREET TREE TABLE.	3 TREES
B	SITE INTERIOR LANDSCAPE REQUIREMENTS - TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN ZONING ORDINANCE 7.16. a. 1 BROAD LEAF/ DECIDUOUS AND/OR EVERGREEN CONIFER PER THE FOLLOWING LAND TYPE: 1. 1 FOR EVERY 1,000 S.F. OF YARD AREA MULTI FAMILY RESIDENTIAL 2. 1 FOR EVERY 1,500 S.F. OF YARD AREA COMMERCIAL USE 3. 1 FOR EVERY 2,500 S.F. OF YARD AREA INSTITUTIONAL USE 4. 1 FOR EVERY 5,000 S.F. OF YARD AREA INDUSTRIAL USE b. ALL BROAD LEAF/ DECIDUOUS TREE MIN. OF 2 1/2" CALIBER AT 6" FROM TOP OF ROOT BALL. TREES MAY BE LOCATED IN CLUSTERS OR DISPERSED THROUGHOUT THE SITE. c. ALL EVERGREEN TREE MIN. OF 5' IN HEIGHT. d. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE LANDSCAPE STANDARDS.	2 TREES
C	PARKING LOT INTERIOR TREE - TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN ZONING ORDINANCE 7.16. a. 1 BROAD LEAF/ DECIDUOUS PER 300 S.F. OF LANDSCAPE AREA. b. ALL BROAD LEAF/ DECIDUOUS TREE MIN. OF 2 1/2" CALIBER AT 6" FROM TOP OF ROOT BALL. c. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE LANDSCAPE STANDARDS.	3 TREES
D	PARKING LOT PERIMETER TREE/SHRUB - TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN ZONING ORDINANCE 7.16. a. 1 BROAD LEAF/ DECIDUOUS OR EVERGREEN TREE AND 1 SHRUB PER 80 L.F. OF LANDSCAPE AREA. b. ALL BROAD LEAF/ DECIDUOUS TREE MIN. OF 2 1/2" CALIBER AT 6" FROM TOP OF ROOT BALL. c. ALL EVERGREEN TREE MIN. OF 5' IN HEIGHT. d. ALL SHRUBS MIN. OF 18" IN HEIGHT. e. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE LANDSCAPE STANDARDS.	2 TREES 2 SHRUBS

KEY	PLANT COMMON NAME	MIN. SIZE	PLANT BOTANIC NAME	QUANTITY	CATEGORY
1	SKYLINE HONEYLOCUST	2 1/2"	GLEDTISIA TRIACANTHOS	5	SHADE TREE
2	RED MAPLE	2 1/2"	ACER RUBRUM	5	SHADE TREE
3	SEA GREEN JUNIPER	5 GAL	JUNIPERUS CHINENSIS 'SEA GREEN'	2	EVERGREEN SHRUB
4	EMERALD GREEN ARBORVITAE	36" TALL	THUJA OCCIDENTALIS 'EMERALD GREEN'	0	EVERGREEN SHRUB



DATE	8/28/23
REVISION	REVISED PER CITY OF FRANKLIN TECHNICAL REVIEW COMMENTS
SYMBOL	
SCALE	1"=20'
DRAWN	JPH
CHECKED	JKS
CERTIFIED	JKS
PROJECT	CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
TITLE	LANDSCAPE PLAN
<p>PROJECTS plus GREENWOOD SURVEYING COMPANY SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143 (317)-882-5003</p>	
<p>SEAL JEFFERY K. SMITH REGISTERED PROFESSIONAL ENGINEER No. 19419 STATE OF INDIANA <i>Jeffery K. Smith</i> 12/2/24</p>	
JOB NUMBER	24015
SHEET	C701
DATE	OCTOBER 25, 2024



Specifications Luminaire

Height: 9-3/8" (237 mm)
 Width: 18" (457 mm)
 Depth: 6" (152 mm)
 Weight: 17 lbs (7.7 kg)

Optional Back Box (BBW)

Height: 4" (102 mm)
 Width: 6-1/2" (165 mm)
 Depth: 1-1/2" (38 mm)

Ordering Information EXAMPLE: WSQ LED P2 40K SR3 MVOU2 DDBTxD

Series	Part Number	Color Temperature	Installation	Mounting	Options	Notes
WSQ LED	P1	30K	342 (10' H)	SR3	MVOU2	Shipped installed
	P2	40K	342 (10' H)	SR3	MVOU2	Shipped separately
	P3	50K	342 (10' H)	SR3	MVOU2	Shipped separately
	P4	60K	342 (10' H)	SR3	MVOU2	Shipped separately

Emergency Battery Operation

The emergency battery backup (EBC) is a 12VDC battery pack that is integrated into the luminaire. It provides emergency lighting in the event of a power outage. The battery is fully charged and ready to use at all times. The battery is designed to provide up to 90 minutes of emergency lighting. The battery is sealed and maintenance-free. The battery is protected from overcharging and over-discharging. The battery is designed to be replaced in the field. The battery is designed to be replaced in the field. The battery is designed to be replaced in the field.

LITHONIA LIGHTING One Lithonia Way • Conley, Georgia 30021 • Phone 800.279.8041 • www.lithonia.com WSQ LED Rev. 05/2017

Performance Data

Lumen Output

Part Number	Wattage	Beam Angle	Beam Diameter @ 100'	Beam Diameter @ 200'	Beam Diameter @ 300'	Beam Diameter @ 400'	Beam Diameter @ 500'	Beam Diameter @ 600'	Beam Diameter @ 700'	Beam Diameter @ 800'	Beam Diameter @ 900'	Beam Diameter @ 1000'
P1	20W	50°	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
P2	20W	50°	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
P3	40W	50°	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
P4	40W	50°	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0

Lumen Ambient Temperature (LAT) Multipliers

Temperature (°C)	Multiplier
0°C	1.00
10°C	0.98
20°C	0.95
30°C	0.90
40°C	0.85
50°C	0.80
60°C	0.75
70°C	0.70
80°C	0.65
90°C	0.60
100°C	0.55

Photometric Diagrams

FEATURES & SPECIFICATIONS

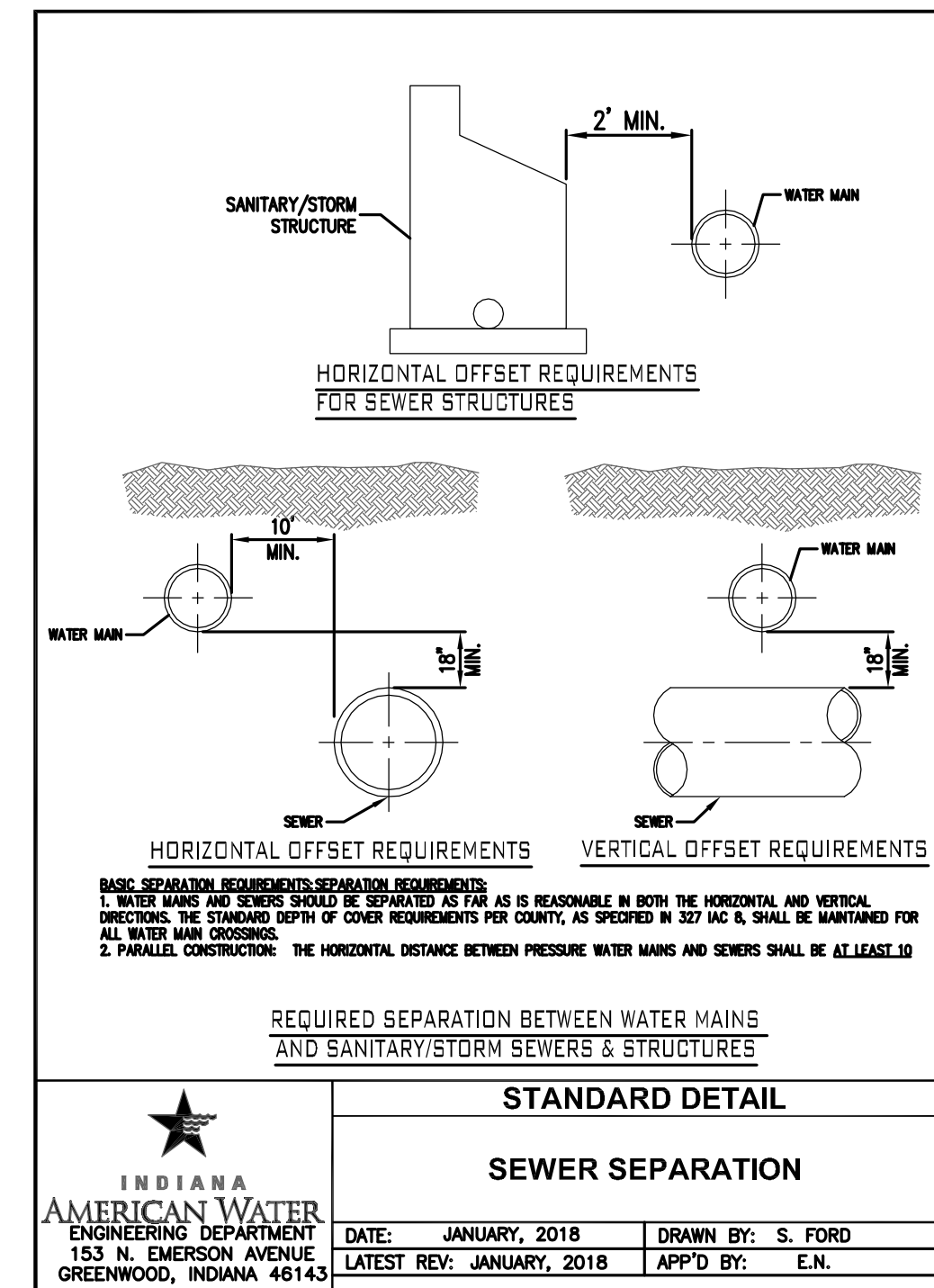
INTENDED USE
 The WSQ LED luminaire is designed for applications such as walkways, parking lots, and commercial buildings. The WSQ LED luminaire is designed for applications such as walkways, parking lots, and commercial buildings. The WSQ LED luminaire is designed for applications such as walkways, parking lots, and commercial buildings.

CONSTRUCTION
 The WSQ LED luminaire is constructed from high-quality materials. The WSQ LED luminaire is constructed from high-quality materials. The WSQ LED luminaire is constructed from high-quality materials.

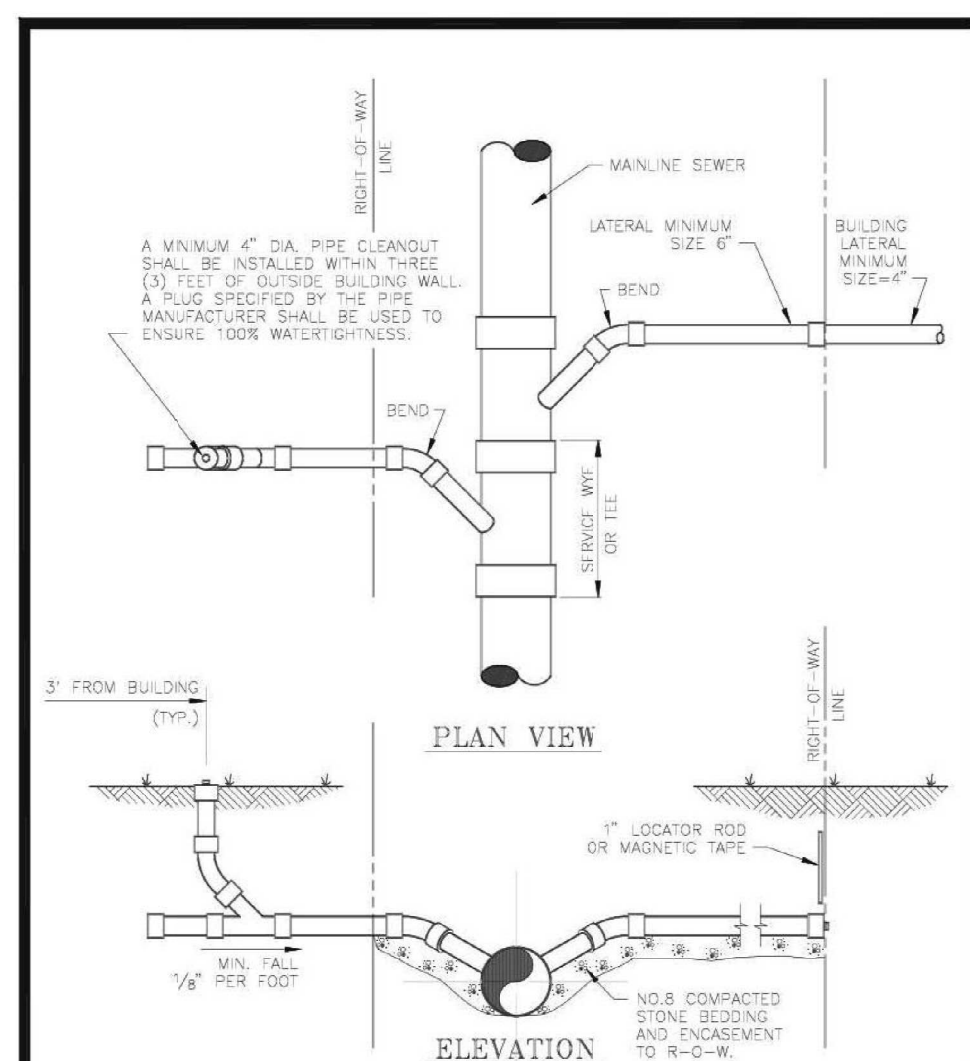
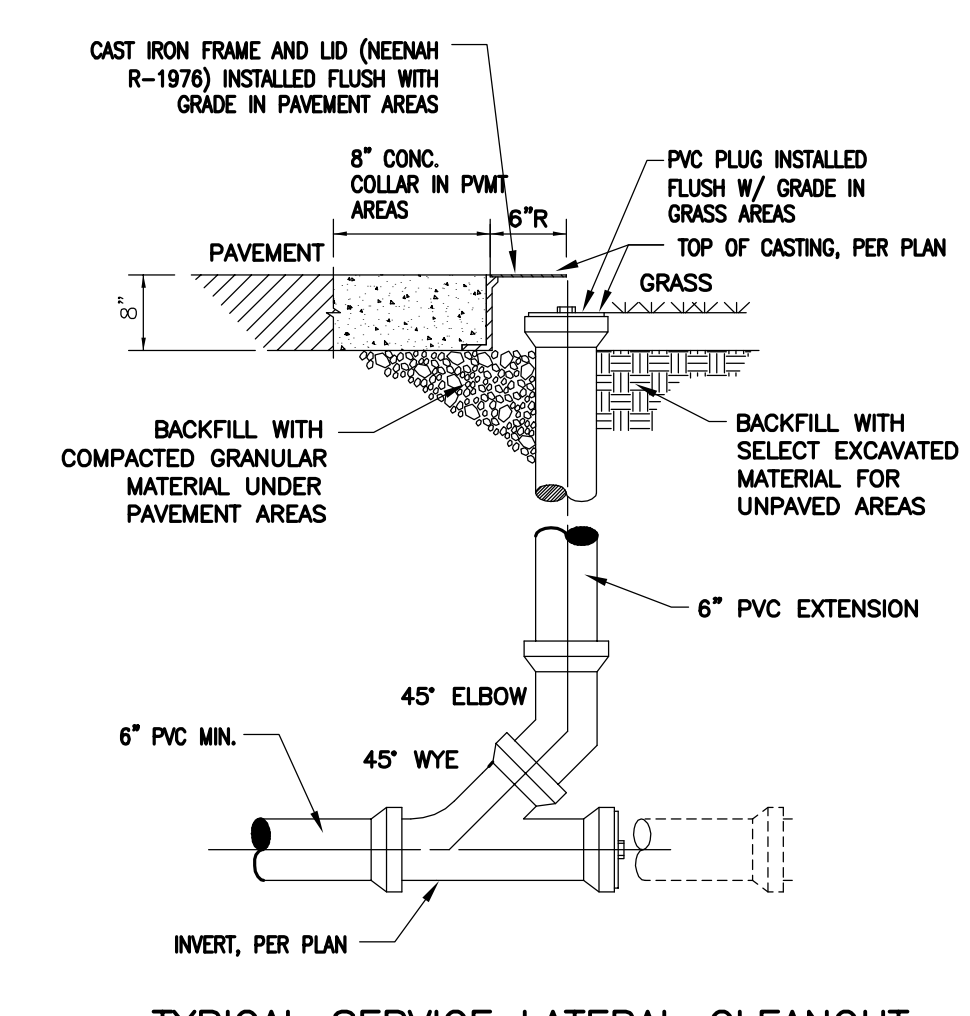
FINISH
 The WSQ LED luminaire is finished with a durable powder coat. The WSQ LED luminaire is finished with a durable powder coat. The WSQ LED luminaire is finished with a durable powder coat.

OPTIONS
 The WSQ LED luminaire is available with various options. The WSQ LED luminaire is available with various options. The WSQ LED luminaire is available with various options.

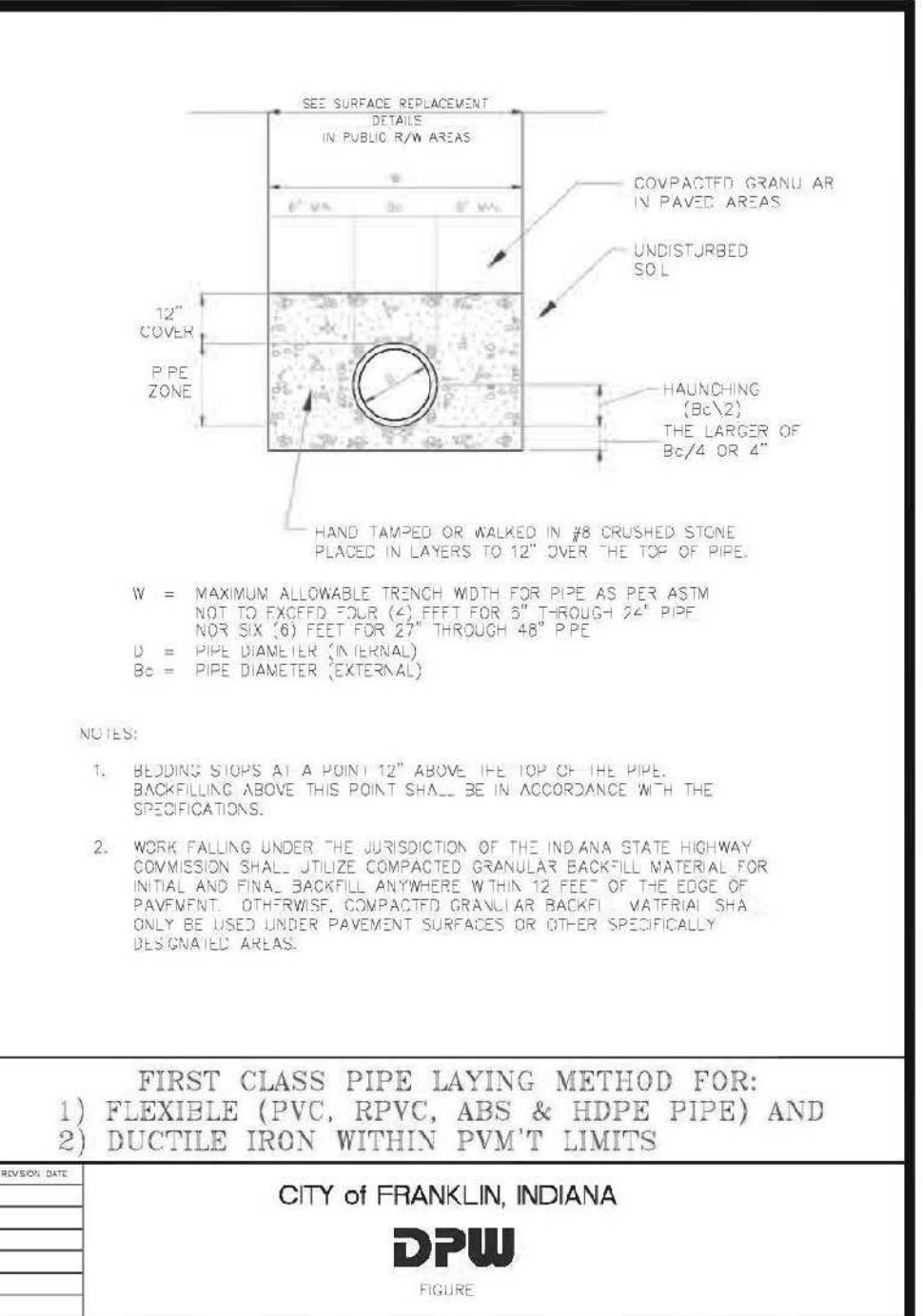
LIGHTING DETAILS



WATER DETAILS



CITY OF FRANKLIN, INDIANA
DPW
 FIGURE



SANITARY SEWER DETAILS

DATE: _____

REVISION: _____

SYMBOL: _____

SCALE: NONE

PROJECT: CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

TITLE: SITE DETAILS

PROJECT: CORNETT BUILDING AT HURRICANE INDUSTRIAL PARK - SECTION 3 - LOT 6 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

TITLE: SITE DETAILS

PROJECTS plus
 GREENWOOD SURVEYING COMPANY

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 46143
 1257 Airport Parkway, Suite A - Greenwood, Indiana (317)-882-5003

SEAL

JEFFERY K. SMITH
 REGISTERED PROFESSIONAL ENGINEER
 No. 19419
 STATE OF INDIANA
 JEFFERY K. SMITH
 10/29/24

JOB NUMBER: 24015

SHEET: C902

DATE: OCTOBER 25, 2024

SITE WORK GENERAL NOTES AND SPECIFICATIONS

GENERAL: WHEREVER A CONFLICT OR DEFICIENCY OCCURS BETWEEN THE CONSTRUCTION STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF FRANKLIN PLANS AND SPECIFICATIONS, THE HIGHER OR MORE RESTRICTIVE STANDARD OR SPECIFICATION SHALL APPLY. REFERENCE MATERIAL: SUBDIVISION CONTROL AND LAND DEVELOPMENT ORDINANCE CHAPTER 102 OF CITY OF FRANKLIN AS REVISED AND CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS

A. NOTICES AND PERMITS 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION. 2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION. 3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES, PRIOR TO STARTING ANY CONSTRUCTION. 4. IT SHALL BE THE CONTRACTORS RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THE PROJECT; FAILURE TO DO SO MAY RESULT IN REMOVAL AND REPLACEMENT OF THE DEFECTIVE WORK. THE DEVELOPER WHO THE DEVELOPER HAVE A QUALIFIED INSPECTOR ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION. 5. IT IS ESSENTIAL THAT THE CONTRACTOR TO BE DONE IN CONJUNCTION WITH THIS PROJECT SHALL BE INSTALLED ACCORDING TO THESE SPECIFICATIONS. THE ENGINEER WILL BE REQUIRED TO CERTIFY TO CERTAIN PORTIONS OF THIS PROJECT UPON COMPLETION, THEREFORE, IT IS NECESSARY TO OBTAIN APPROVAL AND ACCEPTANCE BY THE CITY OF FRANKLIN PLANNING AND ENGINEERING DEPT. THAT CONSTRUCTION WAS DONE IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS.

B. CLEARING AND GRUBBING 1. CLEARING AND GRUBBING SHALL CONSIST OF CUTTING, REMOVAL AND SATISFACTORY DISPOSAL OF ALL TREES, DOWN TIMBER, BRUSH, PROJECTING ROOTS, STUMPS, RUBBISH, Boulders, BROKEN CONCRETE, AND OTHER MATERIAL ON THE PROJECT SITE AND WITHIN THE BOUNDARY AS SHOWN ON THE CONSTRUCTION DOCUMENTS AND/OR AS DESIGNATED BY "CONSTRUCTION LIMITS". 2. SPECIAL CARE SHALL BE TAKEN TO INSURE THAT TREES TO BE LEFT REMAINING IN THE PROJECT AREA SHALL NOT RECEIVE LIMB, BARK OR ROOT INJURIES. WHEN SUCH INJURIES OCCUR, ALL REQUIRED REMEDIAL WORK SHALL BE REMOVED IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICE AND THE SCARS ACCEPTED THOROUGHLY WITH AN APPROPRIATE PAINT. 3. ALL "UNSATURABLE MATERIAL" FROM CLEARING OPERATIONS STATED IN ITEM B-1 SHALL BE REMOVED TO DISPOSAL AREAS(S) OFF THE PROJECT SITE. 4. MATERIALS SHALL NOT BE DISPOSED OF BY BURNING UNLESS APPROVED BY THE LOCAL FIRE MARSHAL.

C. TREE REMOVAL AND PROTECTION 1. TREES SHALL BE REMOVED FROM THE PROJECT SITE ONLY WHERE THE AREA IS TO BE OCCUPIED BY ROAD AND SURFACED AREAS IN ACCORDANCE WITH SPECIFICATIONS OF THE CITY OF FRANKLIN PLANNING AND HIGHWAY DEPARTMENT. 2. TREES SHALL BE REMOVED FROM THE PROJECT SITE AS DIRECTED BY THE DEVELOPER AND SO DESIGNATED. 3. TREES SHALL BE REMOVED FROM THE PROJECT SITE WHERE THEY INTERFERE DIRECTLY WITH THE PLACEMENT OF STORM OR SANITARY SEWERS AND THAT SUCH EXCAVATION IS OR WILL BE FATAL TO SUCH ADJACENT TREES. 4. THE CONTRACTOR SHALL BE RESPONSIBLE TO SAVE AND PROTECT TREES OF VALUE AND WORTH WHICH DO NOT IMPAIR CONSTRUCTION OF IMPROVEMENTS AS DESIGNATED. IN THE EVENT CUT OR FILL EXCAVATION IS REQUIRED IN A SCARCITY AREA, THE DEVELOPER SHALL BE CONSULTED WITH RESPECT TO PROTECTIVE MEASURES TO BE TAKEN, IF ANY, TO PRESERVE SUCH TREES. 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE METHOD FOR PROTECTION OF TOPS, TRUNKS AND ROOTS OF EXISTING TREES ON THE PROJECT SITE THAT ARE TO REMAIN. EXISTING TREES SUBJECT TO CONSTRUCTION DAMAGE SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED BEFORE ANY ADJACENT WORK IS STARTED. EARTH OR MATERIAL AND EQUIPMENT SHALL NOT BE STOCKPILED OR STORED WITHIN THE SPREAD OF BRANCHES. BRANCHES WHICH NEED TO BE REMOVED OR ARE BROKEN SHALL BE NEATLY TRIMMED AND SCARS SHALL BE COVERED WITH TREE PAINT.

D. STRIPPING OF TOPSOIL 1. THE CONTRACTOR SHALL VERIFY THAT ALL TOPSOIL HAS BEEN REMOVED IN THE AREAS TO BE OCCUPIED BY ROAD, WALKS AND DESIGNATED BUILDING AREAS. TOPSOIL SHALL BE MOVED TO A SEPARATE LOCATION. IF NECESSARY, TO REMOVE VEGETABLE MATTER WHERE REQUIRED. 2. TOPSOIL SHALL BE KEPT SEPARATED FROM SUITABLE FILL MATERIALS AND SHALL NOT BE USED AS FILL UNDER PAVEMENT AND/OR BUILDING AREAS. 3. TOPSOIL SHALL BE STORED AT A LOCATION WHERE IT DOES NOT INTERFERE WITH CONSTRUCTION OPERATIONS. EXCESS TOPSOIL SHALL BE USED FOR FINISH GRADING OF SITES OF DRAINAGE SWALES, YARDS OF NEW RESIDENCES, BUFFER STRIPS, ETC. 4. TOPSOIL SHALL BE REASONABLY FREE FROM SUBSOILS DEBRIS AND STONES.

E. GRADING 1. THE CONTRACTOR SHALL PERFORM ALL GRADING OPERATIONS TO BRING SUBGRADES, AFTER FINAL COMPACTION, TO THE REQUIRED GRADES AND SECTIONS FOR SITE IMPROVEMENT. 2. SUBGRADE SHALL BE PROFF ROLLED WITH SUITABLE EQUIPMENT AND ALL SPONGY AND OTHERWISE UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL. 3. SUBGRADE SHALL BE PREPARED IN COMPLIANCE WITH SECTION 207 OF THE CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS, FOR ALL AREAS OF STREET CONSTRUCTION. 4. ALL FILL MATERIAL SHALL BE FORMED FROM SOIL FREE OF DELETERIOUS MATERIAL. PRIOR TO PLACEMENT OF FILL A SAMPLE OF THE PROPOSED FILL MATERIAL SHOULD BE SUBMITTED TO A SOILS ENGINEER FOR HIS APPROVAL. AND COPIES OF THE SOLID PROCTORS SHALL BE SUBMITTED TO PROJECTS PLUS. 5. ALL FILLS IN EXCESS OF TWO (2) FEET SHALL BE CONSIDERED AS STRUCTURAL FILLS AND AS SUCH SHALL BE COMPACTED IN SIX INCH LIFTS WITH COMPACTION TESTS FOR EACH LIFT. COMPACTION FOR ALL STRUCTURAL FILL AREAS SHALL BE 95 PERCENT STANDARD PROCTOR AND TEST RESULTS SHALL BE SUBMITTED TO PROJECTS PLUS. 6. ALL FILL MATERIAL IN AREAS OUTSIDE OF BUILDING AND PAVEMENT AREAS SHALL BE COMPACTED TO THE SAME DEGREE PROTECTED FROM EROSION BY ONE OR MORE OF THE METHODS OF ITEM G. ALL AREAS WHERE BUILDING AND PAVEMENT CONSTRUCTION IS FEASIBLE SHALL NOT BE COVERED WITH MATERIAL PLACED IN THAT LOCATION, AND FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR OR BETTER.

F. STANDARD SANITARY SEWER CONSTRUCTION 1. CURRENT CITY OF FRANKLIN SPECIFICATIONS SHALL PREVAIL AS TO MATERIALS AND METHODS OF CONSTRUCTION. 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS FOR ALL OR PORTIONS OF THIS PROJECT PRIOR TO STARTING ANY CONSTRUCTION. 3. SANITARY SEWERS SHALL BE INSTALLED IN ACCORDANCE WITH 327 IAC 3-6 TECHNICAL STANDARDS FOR SANITARY COLLECTION SYSTEMS, AND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND PERMITS SHALL BE OBTAINED PRIOR TO STARTING AND CONSTRUCTION. 4. SANITARY SEWERS SHOWN ON THE CONSTRUCTION PLANS WERE DESIGNED WITH POLY-VINYL CHLORIDE PIPE IN ACCORDANCE WITH A.S.T.M. D-3034, S.D.R.-35 FOR PIPES THAT ARE 15 INCH IN DIAMETER OR LESS AND WITH DEEP PVC PIPE AND FITTINGS THAT ARE GREATER THAN 18 INCH IN DIAMETER SHALL CONFORM TO A.S.T.M. F-679. ALL SANITARY PIPES GREATER THAN 15 FEET DEEP SHALL BE RATED AS HEAVY WALL S.D.R.-26. ALL FITTINGS REGARDLESS OF DEPTH SHALL BE NOTED AS HEAVY WALL S.D.R.-26. THE FORCEMAIN SHALL BE ANWA C-900, DR14. 5. NOT USED. 6. SANITARY MANHOLES SHALL BE PRECAST CONCRETE IN ACCORDANCE WITH A.S.T.M. C-478. ALL JOINTS AND LIFTING HOLES ON THE EXTERIOR, SHALL BE SEALED WITH NON-SHRINK GROUT. INTERIOR LIFT HOLES PROHIBITED.

7. CASTINGS SHALL BE OF TYPE AND KIND AS SHOWN ON THE DETAIL SHEET. 8. PLASTIC SANITARY SEWERS SHALL BE MARKED FOR EASY IDENTIFICATION. 9. WATER AND SEWER LINE CROSSINGS AND SEPARATIONS SHALL BE IN ACCORDANCE WITH TEN STATES STANDARDS AND LOCAL CODES. a. WHERE WATER LINES AND SEWER LINES CROSS AND THE WATER LINE CANNOT BE PLACED ABOVE THE SEWER LINE A MINIMUM OF 18" WITH A MINIMUM COVER OF 48". THE SEWER LINE SHALL BE CONSTRUCTED OF WATERWORKS GRADE CAST IRON PIPE WITH MECHANICAL JOINTS. b. WHERE WATER LINES AND SANITARY SEWER LINES RUN PARALLEL WITH ONE ANOTHER, A MINIMUM OF 10' HORIZONTAL SEPARATION SHALL BE MAINTAINED. 10. ALL FUTURE SEWER INSTALLATION, EITHER CONNECTED TO OR EXTENDED FROM THIS SYSTEM, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE SPECIFICATIONS. 11. NO ROOF DRAINS, FOOTING DRAINS, AND/OR SURFACE WATER DRAINS MAY BE CONNECTED TO THE SANITARY SEWER SYSTEMS, INCLUDING TEMPORARY CONNECTIONS. JOINTS AS CONSTRUCTION, INCLUDING SLUMP PUMPS, ARE PROHIBITED. 12. BUILDINGS SHALL BE SERVICED BY A 6" MINIMUM SANITARY SEWER LATERAL. THE ENDS SHALL BE PLUGGED AND SEALED WITH A WATER TIGHT PLASTIC DISC. WYES ARE TO BE TYPED UP TO 45 DEGREES FROM THE HORIZONTAL, WITH SUITABLE FITTINGS FOR ALL CHANGES IN DIRECTION. IF 6" PVC LATERALS ARE USED, THEY SHALL BE IN ACCORDANCE WITH A.S.T.M. D-3034 AND A.S.T.M. D-2321 FOR PROPER INSTALLATION. MAGNETIC TAPE LOCATOR SHALL BE PLACED AT THE END OF EACH LATERAL TO IDENTIFY THE LOCATION OF THE LATERAL. 13. THE CONTRACTOR SHALL PROVIDE PROECTS PLUS WITH "AS-BUILT" LATERAL LOCATIONS. 14. MANHOLE SECTIONS SHALL HAVE "O" RINGS WHICH SHALL MEET A.S.T.M. C-432. 15. MANHOLE WATERSTOPS SHALL BE INSTALLED AT ALL CONNECTIONS TO MANHOLES, WHERE FLEXIBLE TYPE MANHOLE CONNECTIONS ARE REQUIRED. 16. ALL PRECAST MANHOLES SHALL BE BEDDED ON A GRANULAR FOUNDATION. 17. THE CONTRACTOR SHALL REMOVE BY PUMPING OR OTHER SUITABLE METHODS ANY WATER WHICH MAY ACCUMULATE IN TRENCHES.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTS FOR LEAKAGE, INFILTRATION AND DEFLECTION AS ESTABLISHED BY THE CITY OF FRANKLIN, I.O. #210. THE CONTRACTOR SHALL BOARD OF HEALTH, AND THE SANITARY SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CERTIFIED TESTS RESULTS TO THE CITY OF FRANKLIN, I.O. #210. THE CONTRACTOR SHALL FOR ACCEPTANCE SHALL BE REPAIRED OR REPLACED AT THE SANITARY SEWER CONTRACTORS EXPENSE, INCLUDING RE-EXCAVATION AND BACKFILL. d. DEFLECTION TEST 1. THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX TO WHICH THE PIPE IS MANUFACTURED. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. b. AIR TEST 1. THE AIR TEST SHALL, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C-924 FOR CONCRETE PIPE, ASTM F-403 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS TEST PROCEDURES APPROVED BY THE CITY OF FRANKLIN, I.O. #210. 2. FOR AIR TESTING, (TIME-PRESSURE DROP METHOD) EACH END OF THE SECTION OF PIPE TO BE TESTED SHALL BE PLUGGED WITH AIR STOPPERS FURNISHED BY THE CONTRACTOR. THE STOPPERS SHALL BE SURFACED WITH INSTALLATION BY AN AIR COMPRESSOR, FURNISHED BY THE CONTRACTOR, UNTIL PRESSURE REACHES 4.0 P.S.I.. IF GROUNDWATER ELEVATION IS ABOVE INVERT OF SEWER BEING TESTED, AN ADDITIONAL 1.0 P.S.I. OF AIR PRESSURE SHALL BE ADDED FOR EACH 2.5 FEET OF WATER ABOVE THE INVERT OF THE SEWER AT LEAST 2 MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE. THE RATE OF AIR LOSS SHALL THEN BE DETERMINED BY MEASURING THE TIME INTERVAL REQUIRED FOR PRESSURE TO DECREASE FROM 3.5 TO 2.5 PSI. THE PRESSURE GAUGE AND STOP WATCH WILL BE FURNISHED BY THE OWNER.

16. THE PIPELINE SHALL BE CONSIDERED ACCEPTABLE WHEN TESTED AT AN AVERAGE PRESSURE OF 3.0 PSI IF (1) THE TOTAL RATE OF AIR LOSS FROM ANY SECTION TESTED IN ITS ENTIRETY BETWEEN MANHOLE AND CLEANOUT STRUCTURE DOES NOT EXCEED 2.0 CFM, OR (2) THE SECTION UNDER TEST DOES NOT LOSE AIR AT A RATE GREATER THAN 0.0030 CFM PER SQUARE FOOT OF INTERNAL PIPE SURFACE. 1d. THE REQUIREMENTS OF THIS SPECIFICATION SHALL BE CONSIDERED SATISFIED IF THE TIME REQUIRED IN SECONDS FOR THE PRESSURE TO DECREASE FROM 3.5 TO 2.5 PSI IS NOT LESS THAN SHOWN IN THE "ALLOWABLE TIME TABLE".

ALLOWABLE TIME TABLE: Table with columns for PIPE DIAMETER in. (4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 27, 30, 36) and SPECIFICATION TIME FOR LENGTH (L) SHOWN, MIN. (100 FT., 150 FT., 200 FT., 250 FT., 300 FT., 350 FT., 400 FT., 450 FT.).

1e. FOR EXFILTRATION TEST, THE INLET END OF THE UPSTREAM MANHOLE SHALL BE CLOSED WITH WATER TIGHT BULKHEADS. THEN THE SEWER AND THE UPSTREAM MANHOLE SHALL BE FILLED WITH WATER UNTIL THE ELEVATION OF WATER IN THE UPSTREAM MANHOLE IS TWO FEET HIGHER THAN THE TOP OF THE PIPE IN THE LINE BEING TESTED, OR TWO FEET ABOVE THE EXISTING GROUND WATER IN THE TRENCH, WHICHEVER IS THE HIGHER ELEVATION. THE INFILTRATION WILL BE MEASURED BY DETERMINING THE AMOUNT OF WATER REQUIRED TO MAINTAIN THE INITIAL WATER ELEVATION FOR ONE HOUR FROM THE START OF THE TEST. c. SANITARY MANHOLE VACUUM TESTING ALL MANHOLE VACUUM TESTS SHALL BE CONDUCTED IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY OF FRANKLIN. ALL MANHOLE TESTS SHALL BE IN ACCORDANCE WITH ASTM 1244-93 STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY MEANS OF AIR PRESSURE (VACUUM) TEST. CITY OF FRANKLIN MAY HAVE ADDITIONAL REQUIREMENTS. A THE VACUUM TEST EQUIPMENT SHALL CONSIST OF: INFLATABLE COLLAR FOR ALL INCOMING AND OUTGOING SEWER LINES; AN INFLATABLE PLUG TO SEAL THE MANHOLE AT THE MANHOLE FRAME; AND A VACUUM PUMP. A VACUUM GAUGE SHALL BE LOCATED IN-18" TO 24" FROM THE TEST COLLAR AND THE PUMP TO ACCURATELY INDICATE THE VACUUM IN INCHES OF MERCURY WITHIN THE MANHOLE. THE VACUUM GAUGE SHALL HAVE A RANGE TO NO MORE THAN THIRTY (30) INCHES OF MERCURY, WITH SCALE MARKINGS OF NO GREATER THAN ONE-HALF (1/2) INCH OF MERCURY VACUUM AND AN ACCURACY TO WITHIN ± TWO PERCENT (2%) OF TRUE VACUUM.

THE VACUUM TEST SHALL BE CONDUCTED BY PLUGGING ALL INCOMING AND OUTGOING UTILITIES WITH THE MANHOLE AT A LOCATION BEYOND THE CONNECTION OF THE SEWER PIPE WITH THE MANHOLE. ALL PLUGS SHALL BE BLOKED IN PLACE SO AS NOT TO MOVE DURING THE TEST. THE VACUUM TESTING COLLAR SHALL BE INSTALLED IN THE FRAME IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. A VACUUM OF TEN (10) INCHES OF MERCURY SHALL BE DRAWN AND THE VACUUM PUMP TURNED OFF AND THE VALVE BETWEEN THE VACUUM PUMP AND THE VACUUM GAUGE SHALL BE TURNED OFF.

THE TIME PERIOD WHICH IS TAKEN FOR THE VACUUM TO FALL FROM TEN INCHES (10") OF MERCURY TO NINE INCHES (9") OF MERCURY SHALL BE DETERMINED. IF THE TIME TAKEN FOR THE VACUUM TO REDUCE TEN INCHES (10") OF MERCURY TO NINE INCHES (9") OF MERCURY IS LESS THAN THE TIME INDICATED IN THE FOLLOWING TABLE, THEN THE MANHOLE WORK SHALL BE ACCEPTED.

MANHOLE DEPTH (FT.) vs TIME (SEC) TABLE. Columns for DIAMETER= 48" and 72". Rows for depths from 8 to 30 feet.

CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE RESULTS OF EACH MANHOLE VACUUM TEST. SUCH REPORTS SHALL INCLUDE A DESCRIPTION OF THE LOCATION OF THE MANHOLE, THE TIME, DATE AND WEATHER OF THE TEST, LIST OF ALL PERSONS PRESENT, THE DIAMETER AND DEPTH OF THE MANHOLE AND THE ALLOWABLE TEST RESULTS, AND THE ACTUAL TEST RESULTS.

ALL MANHOLES SHALL BE REPAIRED BY CONTRACTOR AND RETESTED AS DESCRIBED ABOVE UNTIL A SUCCESSFUL TEST IS MADE. AFTER EACH TEST, THE TEMPORARY PLUGS SHALL BE REMOVED. 18. PIPE SHALL BE LAID IN OPEN TRENCHES, EXCEPT WHEN CONDITIONS REQUIRE AND THE APPROPRIATE APPROVING AGENCIES GIVE WRITTEN PERMISSION FOR TUNNELING OR JACKING OF PIPE. 19. TRENCH SHALL BE OPENED SUFFICIENTLY AHEAD OF PIPE LAYING TO REVEAL OBSTRUCTIONS AND SHALL BE PROPERLY PROTECTED AND/OR BARRICADED WHEN LEFT UNATTENDED. 20. TRENCHES SHALL BE SHEETED AND BRACED AS NECESSARY TO PROTECT WORKMEN AND ADJACENT UTILITIES. ALL TRENCHING SHALL BE DONE IN ACCORDANCE WITH I.O.S.H.A. STANDARDS TO PROTECT WORKMEN. 21. THE FLOW CHANNELS FOR THE SANITARY SEWER MANHOLES SHALL BE CHASED WITH THE MANHOLES EXTENDING TO THE CROWN OF THE INCOMING AND OUTGOING PIPES. CHANGES IN SIZE AND GRADE SHALL BE MADE BY SMOOTH TRUE CURVES FOR ALL CONNECTING SEWERS AT EACH MANHOLE. 22. NUMBER 53 STONE BACKFILL SHALL BE REQUIRED UNDER ALL PAVEMENT AREAS AND WITHIN 5' OF THE EDGE OF PAVEMENT. 23. ALL TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR. 24. ALL GRAVITY AND FORCEMAIN PIPE SHALL BE INSTALLED WITH BELL END OF THE PIPE AT THE UPSTREAM SIDE OF FLOW OR AT THE END IN WHICH THE FIRST RECEIVES THE FLOW. 25. ALL FORCEMAIN SHALL BE HYDROSTATICALLY TESTED. THE FORCEMAIN TEST SECTION SHALL BE SLOWLY FILLED WITH WATER AND PRESSURIZED TO A TEST PRESSURE 50% HIGHER THAN NORMAL OPERATING PRESSURE. THE TEST DURATION SHALL BE A MINIMUM OF TWO (2) HOURS. SUITABLE MEANS SHALL BE PROVIDED BY THE CONTRACTOR FOR DETERMINING WATER LOST BY LEAKAGE UNDER THE TEST PRESSURE. NO PIPE INSTALLATION WILL BE ACCEPTED UNTIL OR UNLESS THIS LEAKAGE IS LESS THAN TEST (10) PER MILE OF PIPE PER DAY AT THE DESIGNATED TEST PRESSURE. 26. THE CITY OF FRANKLIN SHALL BE NOTIFIED IN ADVANCED OF ALL SANITARY SEWER TESTING.

G. EROSION PROTECTION DURING CONSTRUCTION 1. THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION PROTECTION MEASURES DURING AND AFTER CONSTRUCTION SUCH AS BUT NOT LIMITED TO: a. SILT TRAPS b. STRAW BALE DAMS c. MULCH AND SEEDING f. SOIL STABILIZATION FABRIC 2. SPECIFIC EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AND INSTALLED PER THE EROSION CONTROL PLAN INCLUDED IN THESE CONSTRUCTION PLANS. 3. DETAILS AND PLACEMENT SPECIFICATIONS FOR THE ABOVE ITEMS ARE AVAILABLE ON REQUEST FROM THE ENGINEER. 4. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL DATED OCTOBER 2007 BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM).

H. STORM SEWER CONNECTION 1. STORM SEWER STRUCTURES SHALL COMPLY WITH CURRENT SPECIFICATIONS OF THE CITY OF FRANKLIN PLANNING AND HIGHWAY DEPARTMENTS ALL OTHER RESPONSIBLE AGENCIES IN RESPECT TO DESIGN AND QUALITY OF CONSTRUCTION. 2. ALL STORM SEWER CONSTRUCTION INSIDE PUBLIC RIGHT-OF-WAY, EITHER EXISTING OR TO BE DEDICATED, SHALL BE IN ACCORDANCE WITH CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS SPECIFIED ON THE PLANS. 3. WHERE REINFORCED CONCRETE PIPE IS SHOWN ON THE CONSTRUCTION PLANS, IT SHALL BE IN ACCORDANCE WITH A.S.T.M. C-78 CLASS III WALL "C" UNLESS OTHERWISE SPECIFIED ON THE PLANS. 4. MANHOLES, CATCH BASINS AND INLETS SHALL BE PRECAST CONCRETE. USE OF BRICK OR BLOCK WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE CITY OF FRANKLIN, PLANNING AND HIGHWAY DEPARTMENTS DRAINAGE SECTION PRIOR TO CONSTRUCTION. a. IF THE CONTRACTOR ELECTS TO USE ALTERNATE PRECAST MANHOLES, HE SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER PRIOR TO ANY CONSTRUCTION. 5. PRECAST CONCRETE AND STEEL FOR MANHOLES AND INLETS SHALL BE IN ACCORDANCE WITH A.S.T.M. C-478. 6. CASTINGS SHALL BE AS SHOWN ON THE DETAIL SHEET(S) FOR MANUFACTURER, TYPE AND MODEL NUMBER. 7. NUMBER 53 STONE BACKFILL SHALL BE REQUIRED UNDER ALL PAVEMENT AREAS AND TRENCHES WITHIN FIVE(5) FEET OF THE EDGE OF PAVEMENT. 8. ALL TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR.

I. UTILITIES 1. WATER SERVICE a. ALL MAIN WATER LINES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE INDIANA-AMERICAN WATER COMPANY (UTILITY DEPT.) AND COORDINATION OF CONSTRUCTION OF THESE MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COORDINATED PRIOR TO STARTING ANY CONSTRUCTION. b. INSTALLATION SHOP DRAWINGS FOR ALL WATER MAIN CONSTRUCTION SHALL MEET CITY OF FRANKLIN UTILITIES AND INDIANA STATE BOARD OF HEALTH SPECIFICATIONS. c. ALL SANITARY SEWER (F-90 & F9-b) FOR VERTICAL AND HORIZONTAL SEPARATIONS. d. GRANULAR BACKFILL (NO.53 STONE) SHALL BE REQUIRED FOR ALL UTILITIES UNDER PAVEMENT AREAS AND TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR. 2. ELECTRIC AND TELEPHONE a. CONDUIT SHALL BE REQUIRED FOR ALL CROSSINGS UNDER PAVEMENT AREAS. b. THE CONTRACTOR SHALL COORDINATE PLACEMENT OF THESE CONDUITS WITH THE POWER AND TELEPHONE COMPANIES PRIOR TO CONSTRUCTION. c. GRANULAR BACKFILL (NO.53 STONE) SHALL BE REQUIRED FOR ALL CROSSINGS UNDER PAVEMENT AREAS AND TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR. d. CONCRETE TIE FOR ELECTRIC AND TELEPHONE TRANSFORMERS SHALL BE SET AT THE APPROXIMATE GROUND GRADE AS SHOWN ON THE SITE DEVELOPMENT GRADING PLANS FOR THE RESPECTIVE LOCATIONS. e. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH EACH UTILITY FOR INSTALLATION OF ANY LINES OR CONDUITS OR ANY OTHER EQUIPMENT REQUIRED IN THE PROJECT. THE UTILITIES SHALL BE NOTIFIED PRIOR TO THE PLACEMENT OF PAVEMENT A MINIMUM OF 7 WORKING DAYS SO THAT THEY MIGHT INSTALL ANY CROSSINGS. J. GRANULAR BACKFILL SHALL BE IN ACCORDANCE WITH CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS K. PAVEMENT CONSTRUCTION 1. ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND CONFORM TO THE MINIMUM STANDARDS OF CITY OF FRANKLIN PLANNING AND HIGHWAY DEPARTMENTS, AND IF THEIR ARE AREAS UNDEFINED USING THE CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS 2. FLEXIBLE PAVEMENT a. MATERIALS 01. GENERAL: USE LOCALLY AVAILABLE MATERIALS AND GRADATIONS WHICH EXHIBIT A SATISFACTORY RECORD OF PREVIOUS INSTALLATIONS. 02. COMPACTED AGGREGATE BASE: SOUND, ANGULAR CRUSHED LIMESTONE, CRUSHED OR UNCRUSHED GRAVEL, OR CRUSHED OR PROCESSED AIR-COOLED BLAST FURNACE SLAG. COURSE AGGREGATE SHALL BE CLASS A, B, C OR D AND CONFORM TO INDIANA DEPARTMENT OF TRANSPORTATION (I.N.D.O.T.) STANDARD SPECIFICATION SECTION 903. 03. BASE COURSE: SOUND, ANGULAR CRUSHED STONE, CRUSHED OR UNCRUSHED GRAVEL, OR CRUSHED SLAG, SAND, STONE, OR SLAG SCREENINGS. COARSE AGGREGATES SHALL BE CLASS A OR B AND CONFORM TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 903. 04. COURSE AGGREGATE FOR SURFACE AND BINDER MIXTURES: CRUSHED STONE, CRUSHED GRAVEL, CRUSHED SLAB, SAND, STONE, OR SLAG SCREENINGS. SURFACE COURSE AGGREGATES SHALL BE CLASS A AND CONFORM TO I.N.D.O.T. STANDARD SPECIFICATIONS SECTION 903. 05. ASPHALT CEMENT: PETROLEUM ASPHALT CEMENT, AP 5 WITH PENETRATION OF 60-70 OR VISCOSITY GRADED ASPHALT CEMENT AC-20 CONFORMING TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 903. 06. PRIME COAT: MEDIUM-CURE LIQUID ASPHALT OR ASPHALT EMULSION CONFORMING TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 408. 07. TACK COAT: RAPID-CURE LIQUID ASPHALT OR ASPHALT EMULSION CONFORMING TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 409. 08. LANE MARKING PAINT: CHLORINATED RUBBER-ALKYD TYPE, ASHTO M248 (FS TT-11-P15), TYPE III. 09. SEAL COAT: ASPHALT PAVEMENT SEALER (BLACK) ASTM-D-3320. b. ASPHALT-AGGREGATE MIXTURE ALL BITUMINOUS MIXTURES ARE TO CONFORM TO CURRENT I.N.D.O.T. SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT A JOB MIX FORMULA PER EACH TYPE OF ASPHALT PRIOR TO CONSTRUCTION c. SURFACE PREPARATION 01. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE APPLYING PRIME COAT. 02. PROOF ROLL SUBGRADE SURFACE TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL COMPACTION. 03. NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING. 04. AGGREGATE BASE: AFTER PLACEMENT, PROOF ROLL COMPACTED AGGREGATE BASE SURFACE TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL COMPACTION. 05. NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT AGGREGATE BASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING. 06. REMOVE LOOSE MATERIAL FROM COMPACTED AGGREGATE BASE SURFACE IMMEDIATELY BEFORE APPLYING PRIME COAT. 07. TACK COAT: APPLY TO CONTACT SURFACES OF PREVIOUSLY CONSTRUCTED ASPHALT AND SURFACES ABUTTING OR PROJECTING INTO ASPHALT CONCRETE PAVEMENT. DISTRIBUTE AT RATE OF 0.05 TO 0.15 GAL PER SQ. YD. OF SURFACE. 08. ALLOW TO DRY UNTIL AT PROPER CONDITION TO RECEIVE PAVING. 09. EXERCISE CARE IN APPLYING BITUMINOUS MATERIALS TO AVOID SMEARING OF ADJOINING SURFACES. REMOVE AND CLEAN DAMAGED MATERIALS. 10. PLACING THE MIX 01. GENERAL: PLACE BITUMINOUS AGGREGATE MIXTURE ON PREPARED SURFACE, SPREAD AND STRIKE-OFF. SPREAD MIXTURE AT MINIMUM TEMPERATURE OF 225 DEGREES F. (107 DEGREES C). PLACE MIX IN ACCESSIBLE AND SHALL AREAS BY HAND. PLACE EACH COURSE TO REQUIRED GRADE, CROSS-SECTION, AND COMPACTED THICKNESS. 02. BASE COURSE, COMPACTED AGGREGATE: SPREAD AND COMPACT IN TWO LIFTS AS FOLLOWS: 1. FIRST LIFT: NO. 5'S SHALL BE A MINIMUM OF 4" OR 1/2 THE TOTAL DEPTH OF AGGREGATE. EXTEND THE FIRST LIFT 4" OR A DISTANCE EQUAL TO THE DEPTH OF THE LIFT BEYOND THE SECOND LIFT. 2. SECOND LIFT: SIZE NO. 53.

d. GRANULAR BACKFILL (NO.53 STONE) SHALL BE REQUIRED FOR ALL CROSSINGS UNDER PAVEMENT AREAS AND TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR. 2. ELECTRIC AND TELEPHONE a. CONDUIT SHALL BE REQUIRED FOR ALL CROSSINGS UNDER PAVEMENT AREAS. b. THE CONTRACTOR SHALL COORDINATE PLACEMENT OF THESE CONDUITS WITH THE POWER AND TELEPHONE COMPANIES PRIOR TO CONSTRUCTION. c. GRANULAR BACKFILL (NO.53 STONE) SHALL BE REQUIRED FOR ALL CROSSINGS UNDER PAVEMENT AREAS AND TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR. d. CONCRETE TIE FOR ELECTRIC AND TELEPHONE TRANSFORMERS SHALL BE SET AT THE APPROXIMATE GROUND GRADE AS SHOWN ON THE SITE DEVELOPMENT GRADING PLANS FOR THE RESPECTIVE LOCATIONS. e. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH EACH UTILITY FOR INSTALLATION OF ANY LINES OR CONDUITS OR ANY OTHER EQUIPMENT REQUIRED IN THE PROJECT. THE UTILITIES SHALL BE NOTIFIED PRIOR TO THE PLACEMENT OF PAVEMENT A MINIMUM OF 7 WORKING DAYS SO THAT THEY MIGHT INSTALL ANY CROSSINGS. J. GRANULAR BACKFILL SHALL BE IN ACCORDANCE WITH CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS K. PAVEMENT CONSTRUCTION 1. ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND CONFORM TO THE MINIMUM STANDARDS OF CITY OF FRANKLIN PLANNING AND HIGHWAY DEPARTMENTS, AND IF THEIR ARE AREAS UNDEFINED USING THE CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS 2. FLEXIBLE PAVEMENT a. MATERIALS 01. GENERAL: USE LOCALLY AVAILABLE MATERIALS AND GRADATIONS WHICH EXHIBIT A SATISFACTORY RECORD OF PREVIOUS INSTALLATIONS. 02. COMPACTED AGGREGATE BASE: SOUND, ANGULAR CRUSHED LIMESTONE, CRUSHED OR UNCRUSHED GRAVEL, OR CRUSHED OR PROCESSED AIR-COOLED BLAST FURNACE SLAG. COURSE AGGREGATE SHALL BE CLASS A, B, C OR D AND CONFORM TO INDIANA DEPARTMENT OF TRANSPORTATION (I.N.D.O.T.) STANDARD SPECIFICATION SECTION 903. 03. BASE COURSE: SOUND, ANGULAR CRUSHED STONE, CRUSHED OR UNCRUSHED GRAVEL, OR CRUSHED SLAG, SAND, STONE, OR SLAG SCREENINGS. COARSE AGGREGATES SHALL BE CLASS A OR B AND CONFORM TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 903. 04. COURSE AGGREGATE FOR SURFACE AND BINDER MIXTURES: CRUSHED STONE, CRUSHED GRAVEL, CRUSHED SLAB, SAND, STONE, OR SLAG SCREENINGS. SURFACE COURSE AGGREGATES SHALL BE CLASS A AND CONFORM TO I.N.D.O.T. STANDARD SPECIFICATIONS SECTION 903. 05. ASPHALT CEMENT: PETROLEUM ASPHALT CEMENT, AP 5 WITH PENETRATION OF 60-70 OR VISCOSITY GRADED ASPHALT CEMENT AC-20 CONFORMING TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 903. 06. PRIME COAT: MEDIUM-CURE LIQUID ASPHALT OR ASPHALT EMULSION CONFORMING TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 408. 07. TACK COAT: RAPID-CURE LIQUID ASPHALT OR ASPHALT EMULSION CONFORMING TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 409. 08. LANE MARKING PAINT: CHLORINATED RUBBER-ALKYD TYPE, ASHTO M248 (FS TT-11-P15), TYPE III. 09. SEAL COAT: ASPHALT PAVEMENT SEALER (BLACK) ASTM-D-3320. b. ASPHALT-AGGREGATE MIXTURE ALL BITUMINOUS MIXTURES ARE TO CONFORM TO CURRENT I.N.D.O.T. SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT A JOB MIX FORMULA PER EACH TYPE OF ASPHALT PRIOR TO CONSTRUCTION c. SURFACE PREPARATION 01. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE APPLYING PRIME COAT. 02. PROOF ROLL SUBGRADE SURFACE TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL COMPACTION. 03. NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING. 04. AGGREGATE BASE: AFTER PLACEMENT, PROOF ROLL COMPACTED AGGREGATE BASE SURFACE TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL COMPACTION. 05. NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT AGGREGATE BASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING. 06. REMOVE LOOSE MATERIAL FROM COMPACTED AGGREGATE BASE SURFACE IMMEDIATELY BEFORE APPLYING PRIME COAT. 07. TACK COAT: APPLY TO CONTACT SURFACES OF PREVIOUSLY CONSTRUCTED ASPHALT AND SURFACES ABUTTING OR PROJECTING INTO ASPHALT CONCRETE PAVEMENT. DISTRIBUTE AT RATE OF 0.05 TO 0.15 GAL PER SQ. YD. OF SURFACE. 08. ALLOW TO DRY UNTIL AT PROPER CONDITION TO RECEIVE PAVING. 09. EXERCISE CARE IN APPLYING BITUMINOUS MATERIALS TO AVOID SMEARING OF ADJOINING SURFACES. REMOVE AND CLEAN DAMAGED MATERIALS. 10. PLACING THE MIX 01. GENERAL: PLACE BITUMINOUS AGGREGATE MIXTURE ON PREPARED SURFACE, SPREAD AND STRIKE-OFF. SPREAD MIXTURE AT MINIMUM TEMPERATURE OF 225 DEGREES F. (107 DEGREES C). PLACE MIX IN ACCESSIBLE AND SHALL AREAS BY HAND. PLACE EACH COURSE TO REQUIRED GRADE, CROSS-SECTION, AND COMPACTED THICKNESS. 02. BASE COURSE, COMPACTED AGGREGATE: SPREAD AND COMPACT IN TWO LIFTS AS FOLLOWS: 1. FIRST LIFT: NO. 5'S SHALL BE A MINIMUM OF 4" OR 1/2 THE TOTAL DEPTH OF AGGREGATE. EXTEND THE FIRST LIFT 4" OR A DISTANCE EQUAL TO THE DEPTH OF THE LIFT BEYOND THE SECOND LIFT. 2. SECOND LIFT: SIZE NO. 53.

3. TESTING SERVICE SHALL SUBMIT CERTIFIED RESULTS TO THE OWNER AND ARCHITECT/ENGINEER WITHIN 72 HOURS AFTER TESTS ARE MADE, WITH THEIR COMMENTS AND RECOMMENDATIONS FOR ACTION. 4. PAVEMENT WHICH FAILS TO COMPLY WITH APPROVED JOB MIX FORMULA SHALL BE REPLACED AS DIRECTED BY THE ARCHITECT/ENGINEER. 94. SURFACE SMOOTHNESS: TEST FINISHED SURFACE FOR SMOOTHNESS USING METHOD 207 APPLIED PARALLEL WITH, AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE WILL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING TOLERANCES FOR SMOOTHNESS. AGGREGATE BASE COURSE SURFACE: 1/4". BASE COURSE SURFACE: 1/4". BINDER COURSE SURFACE: 1/8". WEARING COURSE SURFACE: 1/8". 1. CHECK SURFACED AREAS AT INTERVALS AS DIRECTED BY TESTING SERVICE. 95. DENSITY TESTS: DENSITY TESTS SHALL BE MADE AT EACH LIFT. TESTS SHALL BE AS FOLLOWS: 1. TESTS WILL BE REQUIRED AT VARIOUS TIMES AND LOCATIONS FOR SUBGRADE AND BASE COURSES FOR ASPHALT PAVING AREAS. 96. TESTING SERVICE SHALL SUBMIT CERTIFIED RESULTS TO THE OWNER AND ENGINEER WITHIN 72 HOURS AFTER TESTS ARE MADE WITH THEIR COMMENTS AND RECOMMENDATIONS FOR ACTION. 3. SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH I.N.D.O.T. STANDARD SPECIFICATIONS SECTION 207 SUBSECTION 501.07. NO TRAFFIC SHALL BE PERMITTED ON THE PREPARED SUBGRADE PRIOR TO PAVING. 4. FINISH GRADING SECTION "E" FOR ADDITIONAL COMPACTION REQUIREMENTS. L. CONCRETE CURB AND WALKS 1. SEE DETAIL SHEET FOR TYPE AND DETAILS. 2. CONCRETE SHALL BE READY MIXED PORTLAND CEMENT CONFORMING TO A.S.T.M. C-150 AND WATER, AGGREGATE SHALL CONFORM TO A.S.T.M. C-33. CONCRETE SHALL BE 6 BAG CLASS "A" WITH COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS BEING MINIMUM 4000 P.S.I. WHERE REQUIRED. 3. REINFORCEMENT a. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A-185 b. REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615 4. APPLICATION a. PLACE CONCRETE ON A MOIST, COMPACTED SUBGRADE OR FORMED AND CURED PORTLAND CEMENT CONCRETE ON MUDDY OR FROZEN SUBGRADE. b. CONCRETE SHALL BE DEPOSITED SO AS TO REQUIRE AS MUCH VIBRATION AS PRACTICABLE. c. CONCRETE IS TO BE PLACED AT AN ATMOSPHERIC TEMPERATURE OF 35 DEGREES F OR LESS, CURRENT I.N.D.O.T. SPECIFICATIONS SHALL APPLY. d. EXCEPT AS OTHERWISE SPECIFIED, CURE ALL CONCRETE BY ONE OF THE METHODS DESCRIBED IN CURRENT I.N.D.O.T. SPECIFICATIONS. M. FINISH GRADING AND SEEDING ALL EROSION CONTROL MEASURES ARE REQUIRED TO BE PER INDIANA STORMWATER QUALITY MANUAL SPECIFICATION, DATED OCTOBER 2007, OR MOST CURRENT 1. OVER THE APPROVED ROUGH GRADE (SEE SECTION E), SPREAD 4" MINIMUM OF TOPSOIL OR APPROVED FILL TO SUCH DEPTH AS WILL FINISH TO THE REQUIRED FINISH GRADES AND CONTOURS AFTER ROLLING AND NATURAL SETTLEMENT. NEW GRADES SHALL SLOPE UNIFORMLY BETWEEN LEVELS ESTABLISHED ON THE PLANS AND INTERSECTIONS OF NEW GRADES WITH EXISTING GRADES SHALL BE UNIFORM AND SMOOTH. 2. TEMPORARY SEEDING - THE AREAS WHERE STRIPPING, CUTS OR FILLS HAVE BEEN GRADED SHALL BE SEEDDED FOR SILT AND EROSION PROTECTION SHALL BE AS PER I.S.W.Q.M. SPECIFICATIONS (TEMPORARY SEEDING). SEEDING SHALL BE WITH ONE OF THE FOLLOWING METHODS: a. EARLY SPRING MIX: 100% SPRING OATS SEEDING RATE: 150 LBS./ACRE b. SPRING OR LATE FALL MIX: 100% ANNUAL RYEGRASS SEEDING RATE: 40 LBS./ACRE c. FALL MIX: 100% PERENNIAL RYE SEEDING RATE: 150 LBS./ACRE 3. MULCHING - MULCHING IS REQUIRED FOR ALL TEMPORARY AND PERMANENT SEEDED AREAS AS TO PREVENT REMOVAL BY WIND OR WATER. MULCHING SHALL BE ANCHORED AS OUTLINED IN I.S.W.Q.M. SPECIFICATIONS (MULCHING), BY A COMBINATION OF THE FOLLOWING: a. MULCH ANCHORING TOOL OR FARM DISK b. CLEANING WITH DOZER TRACKS c. WOOD HYDROMULCH FIBERS d. SYNTHETIC TACKIFIERS, BINDER OR SOILD STABILIZERS e. NETTING 4. EROSION CONTROL BLANKET/NETTING - BLANKET IS REQUIRED AT SLOPED AREAS AND EROSION CHANNELS TO PREVENT EROSION AND PROTECT SOIL AND SEEDING FROM WATER RUNOFF. EROSION CONTROL BLANKETS SHALL BE INSTALLED PER CURRENT I.S.W.Q.M. SPECIFICATIONS (SURFACE STABILIZATION).

1. APPLY FIRST COAT IN LENGTHWISE FASHION TO PAVEMENT SURFACE. 2. APPLY SECOND COAT IN CROSS WISE FASHION (90 DEGREES TO DIRECTION OF FIRST COAT). 3. APPLY SEALER AT UNIFORM RATE AS RECOMMENDED BY MANUFACTURER. F. TRAFFIC AND LANE MARKINGS 1. CLEANING: SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST. 2. STRIPPING: USE CHLORINATED RUBBER BASE TRAFFIC LANE-MARKING PAINT, FACTORY-MIXED, QUICK-DRYING, AND NON-BLEEDING. COLOR: YELLOW. 1. DO NOT APPLY TRAFFIC AND LANE MARKING PAINT UNTIL LAYOUT AND PLACEMENT HAS BEEN VERIFIED WITH ARCHITECT/ENGINEER. 2. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. APPLY IN TWO COATS AT MANUFACTURER'S RECOMMENDED RATES. 9. FIELD QUALITY CONTROL g1. TESTING AND INSPECTION SERVICE: 1. OWNER SHALL EMPLOY A TESTING LABORATORY TO PERFORM PAVEMENT TESTING AND INSPECTION SERVICE FOR QUALITY CONTROL DURING PAVING OPERATIONS. 2. TESTING SERVICE SHALL HAVE REPRESENTATIVE PRESENT TO OBSERVE AND PERFORM TESTS AT ALL TIMES PAVING WORK IS IN PROGRESS. 3. GENERAL: TESTING SERVICE REPRESENTATIVE SHALL TAKE A MINIMUM OF TWO SAMPLES PER LIFT OF BITUMINOUS AGGREGATE MIX EACH DAY BEFORE PAVING OPERATION. LABORATORY TEST SHALL BE PERFORMED ON THESE SAMPLES TO DETERMINE AGGREGATE GRADATION AND ASPHALT CONTENT. 1. TEST IN-PLACE COMPACTED BITUMINOUS AGGREGATE MIX COURSES FOR COMPLIANCE WITH REQUIREMENTS FOR THICKNESS, DENSITY AND AIR VOIDS AND SURFACE COURSE (1/4" PLUS OR MINUS). REMOVE AND REPLACE UNACCEPTABLE PAVING AS DIRECTED BY ENGINEER. 2. A TEST SECTION AT A MINIMUM SIZE OF 100' x 12' SHALL BE PLACED AT A LOCATION AS DIRECTED BY THE COUNTY ENGINEER. THE TESTING SERVICE SHALL BE REQUIRED TO PREPARE AND MAINTAIN THE TESTING SERVICE. THE TESTING SERVICE SHALL BE REQUIRED TO DETERMINE A TARGET DENSITY FOR THE REMAINDER OF THE PAVEMENT. g3. THICKNESS: IN-PLACE COMPACTED THICKNESS WILL NOT BE ACCEPTABLE IF EXCEEDING FOLLOWING ALLOWABLE VARIATION FROM REQUIRED THICKNESS: AGGREGATE BASE COURSE: 1/2", PLUS OR MINUS. BINDER COURSE: 1/2", PLUS OR MINUS. SURFACE COURSE: 1/4", PLUS OR MINUS. 1. A MINIMUM OF TWO PAVEMENT CORES PER COMPACTED LIFT SHALL BE TAKEN. CORES ARE TO BE TAKEN AT LOCATIONS AND AT TIMES OF DAY AS DIRECTED BY THE TESTING SERVICE. THE FOLLOWING TESTS SHALL BE PERFORMED BY THE TESTING SERVICE, ON EACH PAVEMENT COURSE: 2. A TEST SECTION AT A MINIMUM SIZE OF 100'x12' SHALL BE PLACED AT A LOCATION AS DIRECTED BY THE COUNTY ENGINEER. THE TESTING SERVICE SHALL BE REQUIRED TO PREPARE AND MAINTAIN THE TESTING SERVICE. THE TESTING SERVICE SHALL BE REQUIRED TO DETERMINE A TARGET DENSITY FOR THE REMAINDER OF THE PAVEMENT.

3. TESTING SERVICE SHALL SUBMIT CERTIFIED RESULTS TO THE OWNER AND ARCHITECT/ENGINEER WITHIN 72 HOURS AFTER TESTS ARE MADE, WITH THEIR COMMENTS AND RECOMMENDATIONS FOR ACTION. 4. PAVEMENT WHICH FAILS TO COMPLY WITH APPROVED JOB MIX FORMULA SHALL BE REPLACED AS DIRECTED BY THE ARCHITECT/ENGINEER. 94. SURFACE SMOOTHNESS: TEST FINISHED SURFACE FOR SMOOTHNESS USING METHOD 207 APPLIED PARALLEL WITH, AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE WILL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING TOLERANCES FOR SMOOTHNESS. AGGREGATE BASE COURSE SURFACE: 1/4". BASE COURSE SURFACE: 1/4". BINDER COURSE SURFACE: 1/8". WEARING COURSE SURFACE: 1/8". 1. CHECK SURFACED AREAS AT INTERVALS AS DIRECTED BY TESTING SERVICE. 95. DENSITY TESTS: DENSITY TESTS SHALL BE MADE AT EACH LIFT. TESTS SHALL BE AS FOLLOWS: 1. TESTS WILL BE REQUIRED AT VARIOUS TIMES AND LOCATIONS FOR SUBGRADE AND BASE COURSES FOR ASPHALT PAVING AREAS. 96. TESTING SERVICE SHALL SUBMIT CERTIFIED RESULTS TO THE OWNER AND ENGINEER WITHIN 72 HOURS AFTER TESTS ARE MADE WITH THEIR COMMENTS AND RECOMMENDATIONS FOR ACTION. 3. SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH I.N.D.O.T. STANDARD SPECIFICATIONS SECTION 207 SUBSECTION 501.07. NO TRAFFIC SHALL BE PERMITTED ON THE PREPARED SUBGRADE PRIOR TO PAVING. 4. FINISH GRADING SECTION "E" FOR ADDITIONAL COMPACTION REQUIREMENTS. L. CONCRETE CURB AND WALKS 1. SEE DETAIL SHEET FOR TYPE AND DETAILS. 2. CONCRETE SHALL BE READY MIXED PORTLAND CEMENT CONFORMING TO A.S.T.M. C-150 AND WATER, AGGREGATE SHALL CONFORM TO A.S.T.M. C-33. CONCRETE SHALL BE 6 BAG CLASS "A" WITH COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS BEING MINIMUM 4000 P.S.I. WHERE REQUIRED. 3. REINFORCEMENT a. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A-185 b. REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615 4. APPLICATION a. PLACE CONCRETE ON A MOIST, COMPACTED SUBGRADE OR FORMED AND CURED PORTLAND CEMENT CONCRETE ON MUDDY OR FROZEN SUBGRADE. b. CONCRETE SHALL BE DEPOSITED SO AS TO REQUIRE AS MUCH VIBRATION AS PRACTICABLE. c. CONCRETE IS TO BE PLACED AT AN ATMOSPHERIC TEMPERATURE OF 35 DEGREES F OR LESS, CURRENT I.N.D.O.T. SPECIFICATIONS SHALL APPLY. d. EXCEPT AS OTHERWISE SPECIFIED, CURE ALL CONCRETE BY ONE OF THE METHODS DESCRIBED IN CURRENT I.N.D.O.T. SPECIFICATIONS. M. FINISH GRADING AND SEEDING ALL EROSION CONTROL MEASURES ARE REQUIRED TO BE PER INDIANA STORMWATER QUALITY MANUAL SPECIFICATION, DATED OCTOBER 2007, OR MOST CURRENT 1. OVER THE APPROVED ROUGH GRADE (SEE SECTION E),