

ISSUE NO.	DATE	DESCRIPTION
1	10/25/24	SUBMIT FOR GOVERNMENTAL AGENCY APPROVALS

SHEET DESCRIPTION C101 TITLE SHEET C201 EXISTING SITE PLAN C301 DIMENSIONAL PLAN
C201 EXISTING SITE PLAN C301 DIMENSIONAL PLAN
C301 DIMENSIONAL PLAN
C302 GEOMETRIC PLAN
C401 GRADING PLAN
C501-503 STORMWATER POLLUTION PREVENTION PLAN
C601 UTILITY PLAN
C602 STORM SEWER PLAN AND PROFILES
C701 LANDSCAPE PLAN
C801 STORMWATER POLLUTION PREVENTION DETAILS
C901-902 SITE DETAILS
C1001 SPECIFICATIONS

# CRBECK PROPERTIES

# LINVILLE BUSINESS PARK - LOT 3 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA CONSTRUCTION PLANS

**OWNER:** 

CRBECK PROPERTIES 2750 S US HIGHWAY 31 FRANKLIN, IN 46131

PREPARED FOR: ELITE HOMES, LLC 3567 E. 700 N. WHITELAND, IN 46184 PHONE: 317-474-0088 CHRIS DUKE



PARCEL NUMBER: SITE AREA:

41-08-11-012-001.000-009 5.05 ACRES

**IMPERVIOUS AREA:** 

1.47 ACRES

DATES:

EST. PROPOSED START DATE: **EST. COMPLETION DATE:** 

SPRING 2025 **FALL 2025** 

USE:

PROPOSED USE: **EXISTING ZONING:**  INDUSTRIAL LIGHT

#### UTILITY CONTACT INFORMATION

SANITARY SEWERS FRANKLIN PUBLIC WORKS 796 SOUTH STATE ST. FRANKLIN, IN 46131 PHONE #: (317) 736-3640 CONTACT: SALLY BROWN SBROWN@FRANKLIN.IN.GOV

**TELEPHONE** CENTURYLINK 1147 NORTH MORTON STREET FRANKLIN, IN 46131 PHONE #: (317) 736-4863 CONTACT: JOHN C. UNVERFERTH JOHN.C.UNVERFERTH@CENTURYLINK.COM

INDIANA-AMERICAN WATER CO. 153 N. EMERSON AVE. GREENWOOD, IN 46143 PHONE #: (317) 893-3560 CONTACT: ADAM BOONE ADAM.BOONE@AMWATER.COM

**ELECTRIC** DUKE ENERGY 2515 N. MORTON ST. FRANKLIN, IN 46131 PHONE #: (317) 736-2014 CONTACT: REECE HEILERS REECE.HEILERS@DUKE-ENERGY.COM

FLOOD ZONE DESIGNATION

EAST" AND DATUM NAD83 NO TRANS.

THE ACCURACY OF THE FLOOD HAZARD DATA SHOWN ON THIS REPORT IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP OF JOHNSON, INDIANA, COMMUNITY

#180114, MAP #18081C0143E DATED JANUARY 29, 2021, THE DESCRIBED REAL ESTATE LIES WITHIN THE SHADED ZONE "X," WHICH IS AN AREA OF 0.2% ANNUAL CHANCE FLOOD HAZARD, OR AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN ONE FOOT, OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE.

SITE ELEVATIONS ARE BASED ON GPS GEOID "G2012bu7" USING A PROJECTION OF "INDIANA

ONSITE BENCHMARK - ELEVATION 752.90 (NAVD 1983)
METAL REBAR FOUND FLUSH MARKING THE SOUTHWEST CORNER OF THE SUBJECT TRACT,

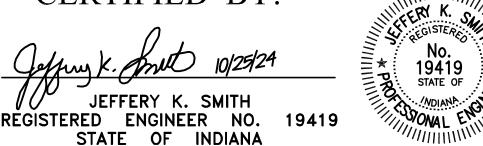
APPROXIMATELY 339' WEST OF LINVILLE WAY AND 62' NORTH OF COMMERCE PARKWAY

VECTREN ENERGY 600 INDUSTRIAL DRIVE FRANKLIN, IN 46131 PHONE #: (317) 736.2915 CONTACT: KIMBERLY BURTON-KELLY KIM.KELLY@CENTERPOINTENERGY.COM

## LEGAL DESCRIPTION

LOT 3 IN LINVILLE BUSINESS PARK SECONDARY PLAT, AS PER PLAT THEREOF, RECORDED IN PLAT CABINET E, ENVELOPE 320, PAGES A-C, AKA INSTRUMENT NUMBER 2018-009566, IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIANA.

**CERTIFIED BY:** 





SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 Airport Parkway Suite A — Greenwood, Indiana 46143 (317)—882—5003 JOB # 23005.01

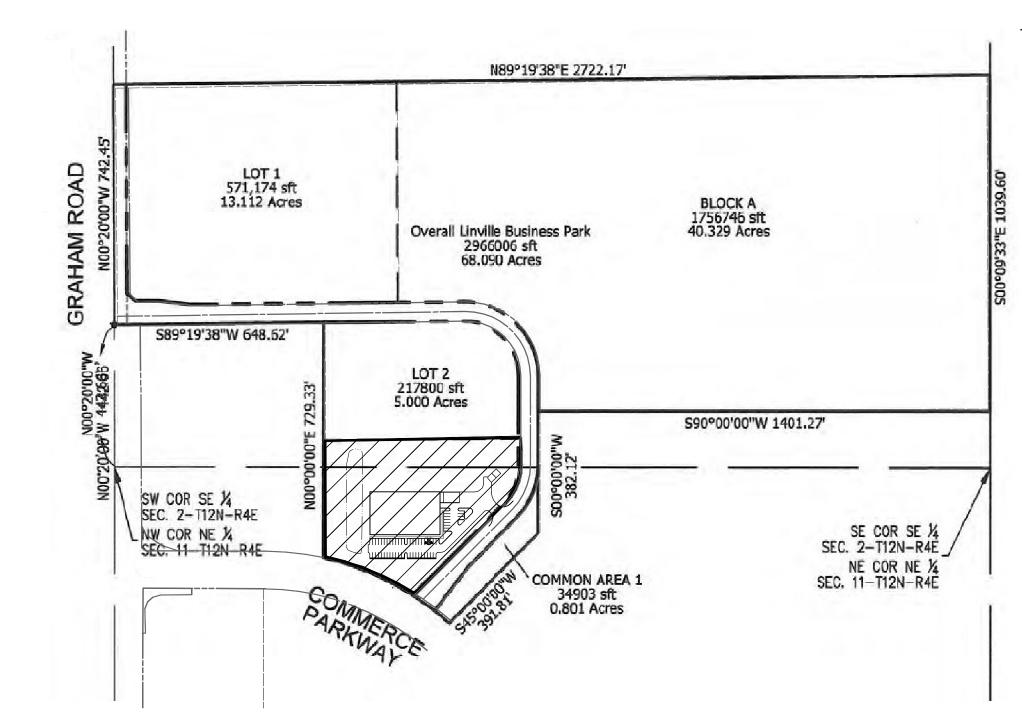
COMMERCE DR COMMERCE DR. ARVIN DR. HAMILTÓN AVE. SITE LOCATION — LOCATION MAP

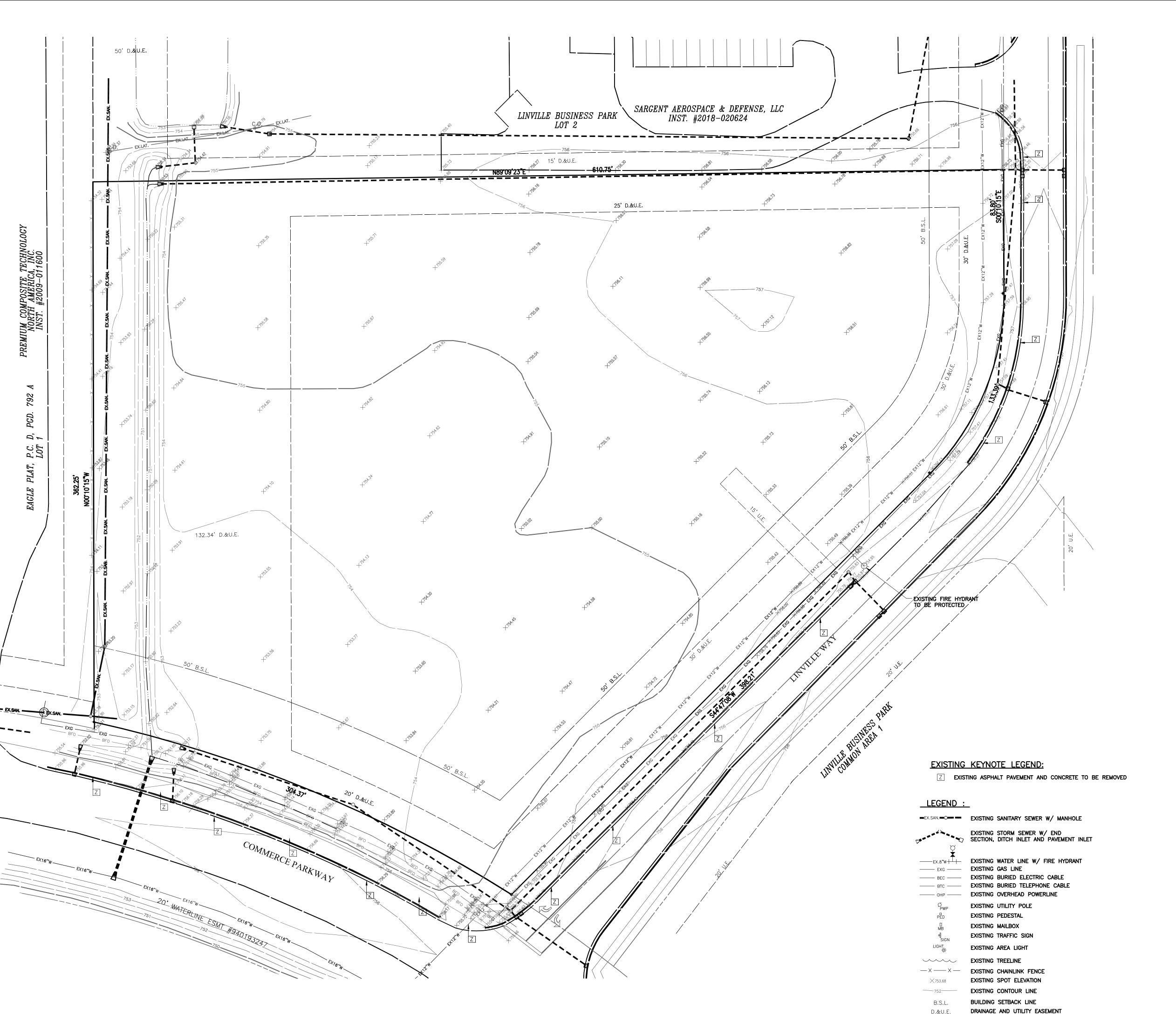
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EARLYWOOD DR

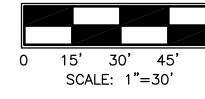
SITE ADDRESS: 91 LINVILLE WAY FRANKLIN, IN 46131











#### **DEMOLITION PLAN NOTES**

1. 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.

2. ALL PERIMETER EROSION CONTROL AND/OR CONSTRUCTION FENCING SHALL BE IN PLACE PRIOR TO ANY SOIL DISTURBANCE

3. 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.

4. 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.

5. ALL EXISTING ON-SITE UTILITIES SHALL REMAIN UNLESS DESIGNATED FOR REMOVAL OR SHOULD THEY INTERFERE WITH PROJECT CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN. ALL UTILITIES WITHIN THE PROPOSED BUILDING FOOTPRINT WILL BE REMOVED UNLESS OTHERWISE NOTED.

6. REMOVE EXISTING UTILITIES ONLY AFTER CRITICAL NEW SYSTEMS ARE IN PLACE AND OPERATIONAL (I.E. STORM DRAINAGE, SERVICES TO EXISTING STRUCTURES). IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE PROPER REMOVAL, INCLUDING SAFE SEQUENCING OF REMOVAL FOR UTILITIES, CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.

7. 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.

8. 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.

9. 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.

9. ALL FOUNDATIONS, SLABS, STRUCTURAL STEEL, MASONRY, SIDEWALKS, RETAINING WALLS, CURBS, APPARATUSES, 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

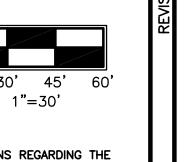
10. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE ACCESS FOR PEDESTRIANS AND VEHICLE TRAFFIC. THE CONTRACTOR WILL MAINTAIN ALL UTILITY SERVICES TO ALL BUSINESSES. IF UTILITY SERVICES MUST BE INTERRUPTED, THE CONTRACTOR SHALL COORDINATE THAT SHUTDOWN TO MINIMIZE IMPACT TO THE BUSINESSES AND EXISTING FACILITIES. COORDINATE SHUTDOWN AT LEAST ONE WEEK IN ADVANCE WITH BUSINESS OWNERS REPRESENTATIVE AND FACILITY MANAGER.

11. MANHOLES, CATCH BASINS, CLEANOUTS, VALVE BOXES, FRAMES COVERS AND GRATES REMAINING IN USE SHALL BE PROTECTED AND ADJUSTED TO FINAL GRADES.

### NOTICES AND PERMITS

 THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY. COUNTY OR STATE AGENCIES PRIOR TO

- 2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
- 3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.



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SITE ENGINEERING—LAND SURV 1257 Airport Parkway Suite A



JOB NUMBER **23005.01** 

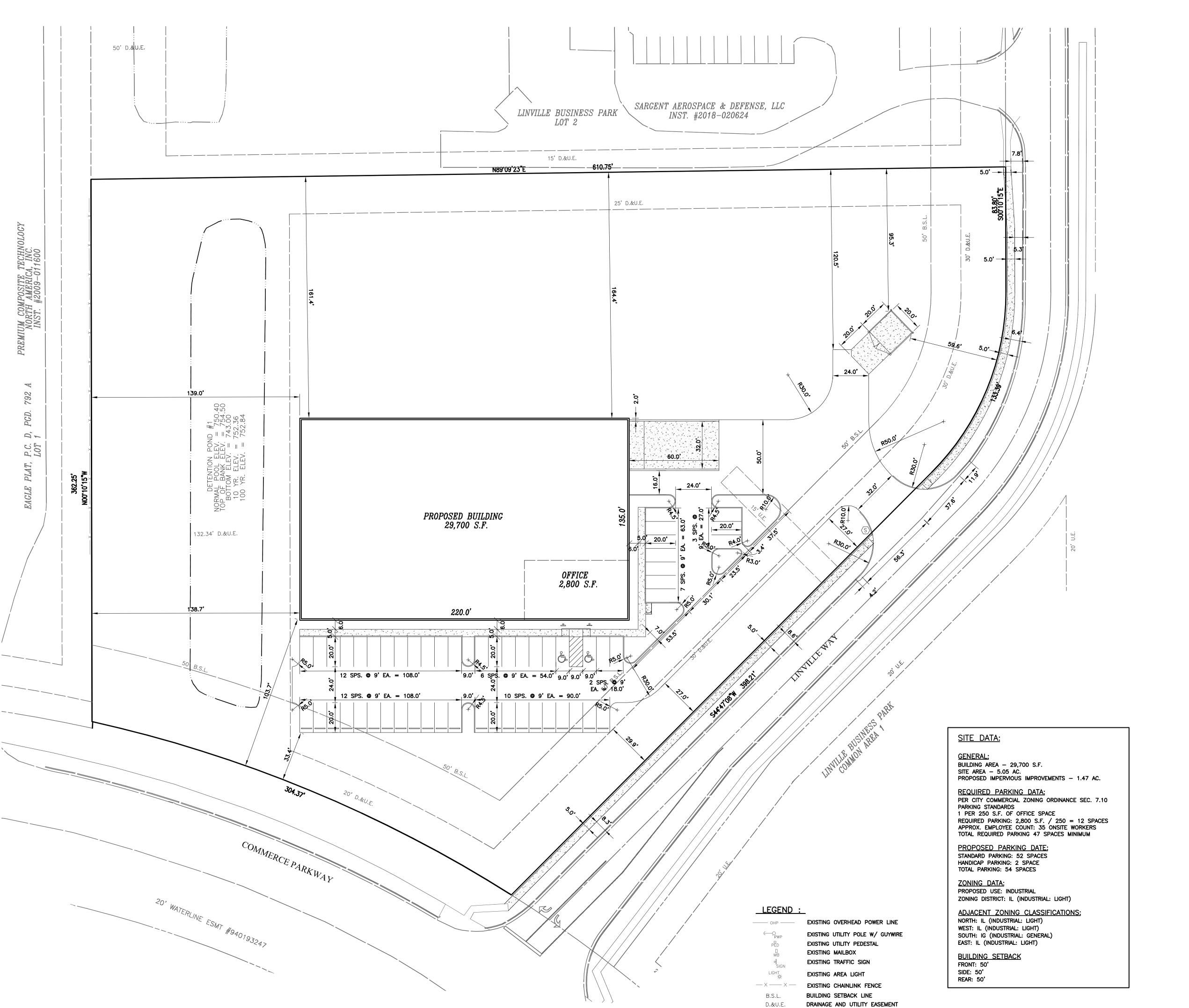
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DATE
OCTOBER 25, 2024

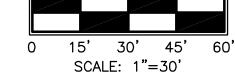


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TO ATTORNEY'S FEES, OCCURRING FROM THEIR USE.







#### **GENERAL NOTES:**

- 1. 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.
- 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH SUBSOIL CONDITIONS.
- 3. 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.
- 4. 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.
- 5. 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.
- 6. ALL GRASS AND/OR SHRUBBERY DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- 7. ALL EXISTING MANHOLE AND CATCH BASIN GRATES, WATER OR GAS VALVES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION
- 8. 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.
- 9. CONSTRUCTION OF ALL SEWER LINES AND STRUCTURES SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODE, RULES AND REGULATIONS
- 10. 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.
- 11. 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.
- 12. ANY FIELD TILES ENCOUNTERED DURING THE COURSE OF CONSTRUCTION SHALL BE PERPETUATED IN COMPLIANCE WITH STATE AND LOCAL LAWS AND REGULATIONS.
- 13. ALL STORM CASTINGS ARE TO BE OF THE "ENVIRONMENTAL" TYPE AND EMBOSSED WITH THE APPROPRIATE LANGUAGE AND SYMBOLS. USE NPDES PHASE II COMPLIANT CASTINGS (DUMP NO WASTE; DRAINS TO RIVER) WHERE AVAILABLE
- 15. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED CONCRETE SIDEWALK OR CONCRETE CURB DISTRIBUTED BY CONSTRUCTION.

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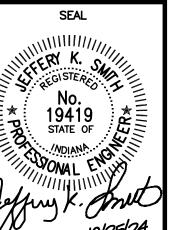
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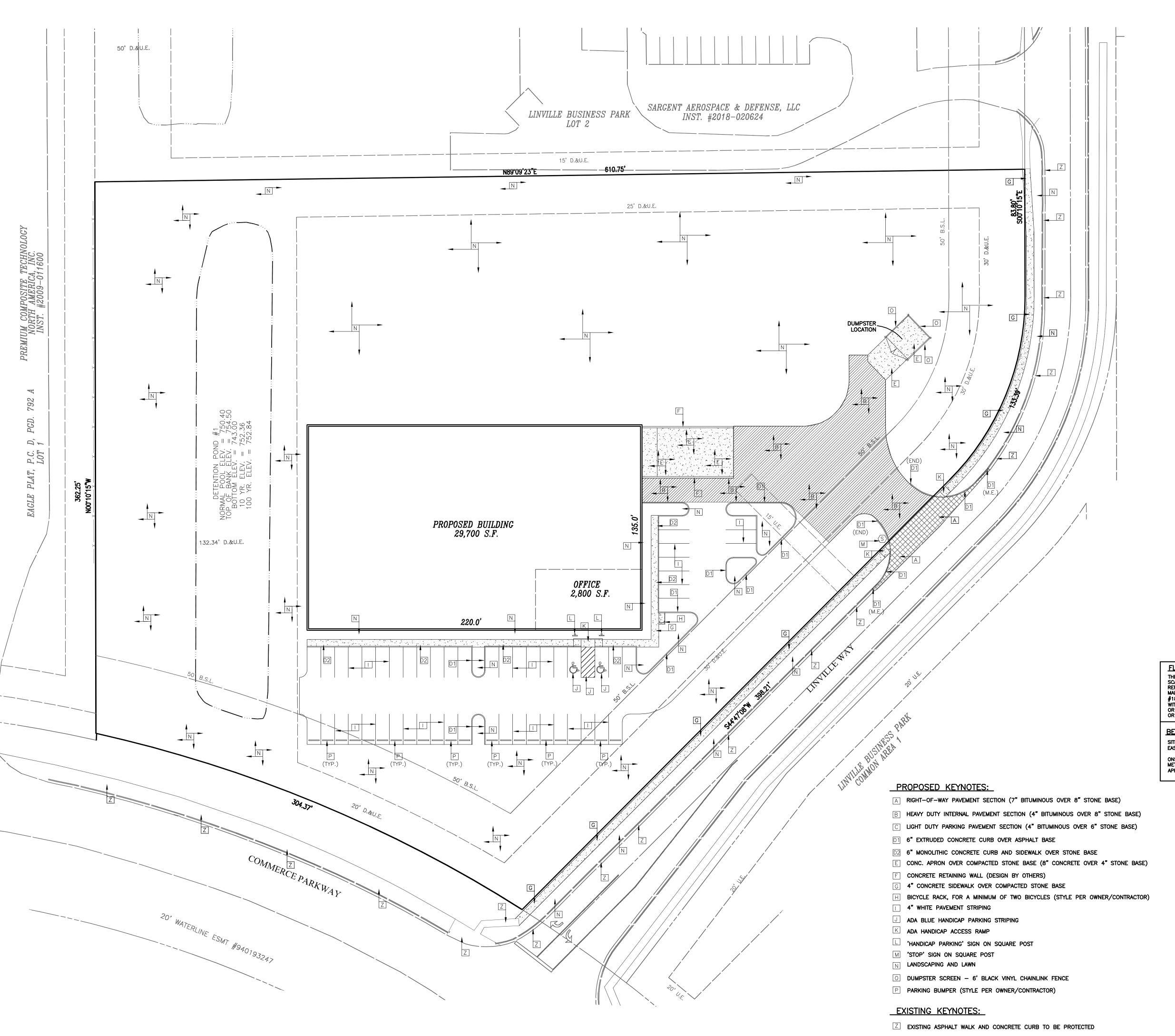
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BUSINESS FRANKLIN,		

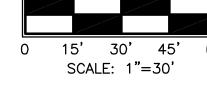
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#### **BENCHMARKS:**

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METAL REBAR FOUND FLUSH MARKING THE SOUTHWEST CORNER OF THE SUBJECT TRACT, APPROXIMATELY 339' WEST OF LINVILLE WAY AND 62' NORTH OF COMMERCE PARKWAY

#### LEGEND :

 $-\times--\times-$  Existing Chainlink Fence BUILDING SETBACK LINE

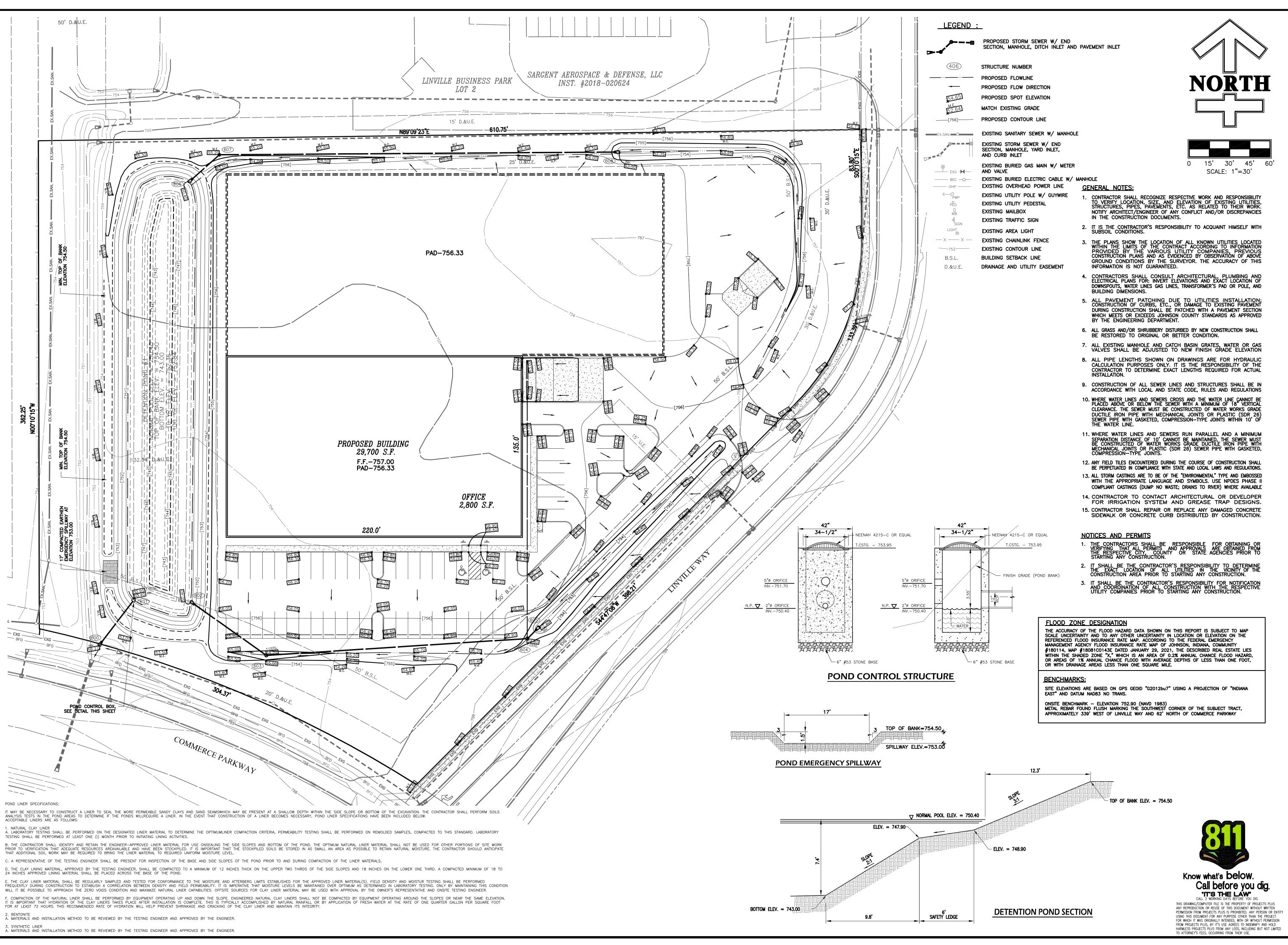
DRAINAGE AND UTILITY EASEMENT



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KLIN, JOHNSON COUNTY, INDIANA

GRADING PLAN

CRBECK PROF BUSINESS CITY OF FRANKLIN,

URVEYING COMPANY

国

GREENWOOD SURVEYING SITE ENGINEERING-LAND SURVEYING-CONS

SEAL

SEAL

No.

19419

STATE OF

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JOB NUMBER **23005.01** 

**C40**2

DATE OCTOBER 25, 2024

- 1				EROSION CONTROL PLAN INDEX								
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Α	.11	C501	A	\22	C501			B11	C501-C503,C801	C6	C501	

A2. VICINITY MAP ON TITLE SHEET - SEE SHEET C101 A3. CRBECK PROPERTIES AT LINVILLE BUSINESS PARK - LOT 3 IS LOCATED AT 91 LINVILLE WAY, FRANKLIN, IN 46131. THE SITE IS A PROPOSED INDUSTRIAL DEVELOPMENT ON 5.05 ACRES, IMPROVEMENTS SHALL CONSIST OF CONSTRUCTION OF AN COMMERCIAL BUILDING, STORM SEWER, SWALES, ASPHALT PAVEMENT, CONCRETE CURBS, CONCRETE WALKS, DETENTION POND AND EARTH WORK. A4. LATITUDE: N39°30'29" LONGITUDE: W86°03'07"

A5. LEGAL DESCRIPTION ON TITLE SHEET — SEE SHEET C101 LEGAL DESCRIPTION - St 1/4 SECTION 2, TOWNSHIP 12 NORTH, RANGE 4 EAST, SEE FULL LEGAL DESCRIPTION ON SHEET C101 A6. ATTACHED

A7. ANY 100 YEAR FLOODPLAINS, FLOODWAYS OF FLOODWAY FRINGES ARE PER FEMA FLOOD INSURANCE RATE MAP OF JOHNSON COUNTY, INDIANA, MAP #18081C0143E, DATED JANUARY 29, 2021, AND ARE SHOWN ON PLANS - SEE SHEET(S) C201. A8. LAND USE OF ADJACENT PROPERTIES: NORTH: INDUSTRIAL SQUTH: INDUSTRIAL

WEST: INDUSTRIAL 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) HUC12: 051202040603 A12. SOIL MAP LOCATED ON STORM SEWER POLLUTION PREVENTION PLAN- SEE SHEET C801

A13. NO WETLANDS EXIST ON SITE A14. NO STATE OR FEDERAL WATER QUALITY PERMITS ARE 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 EAST TO WEST TO AN ONSITE DETENTION POND, RELEASING SOUTHWEST, ULTIMATELY RELEASING TO YOUNG'S CREEK WATERSHED— 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. A EXISTING PERMANENT DETENTION IS SHOWN OFFSITE, NORTH OF SITE.

A21. THE OFFSITE DETENTION POND IS THE ONLY POTENTIAL AREA WERE DISCHARGE WILL ENTER GROUNDWATER.

A23. PROPOSED LAND DISTURBANCE: 4.77 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) C601 A27. STORM WATER WILL DISCHARGE FROM THE SITE INTO AN ONSITE DETENTION FACILITY, RELEASING TO THE SOUTHWESTERLY - SEE SHEET(S)

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 LADEN RUNOFF. 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 SHFFT 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), SEE SHEET(S) C501—C503, FOR DETAIL, SEE GENERAL NOTE ON THE 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 DIVERSIONARY DITCHES TO CHANNEL WATER AS CONSTRUCTION PROCEEDS SO THAT SEDIMENT IS NOT ALLOWED TO FLOW UNFILTER. 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

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

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 STABILÌZÁTION MEASURES IS NECESSARY.

C501-C503, FOR DETAILS, SEE SHEET C801.

B9. NO DEWATERING MEASURES IS NECESSARY.

B11. INDIVIDUAL 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. PERENNIAL 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

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).

AN EROSION CONTROL CONSTRUCTION SEQUENCE SCHEDULING, SHOWING THE IMPLEMENTATION RELATIVE TO LAND DISTURBING B12. 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.

B13. NO EROSION CONTROL FOR INDIVIDUAL BUILDING LOTS CONSTRUCTION REQUIRED B14. 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 B15. 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)

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

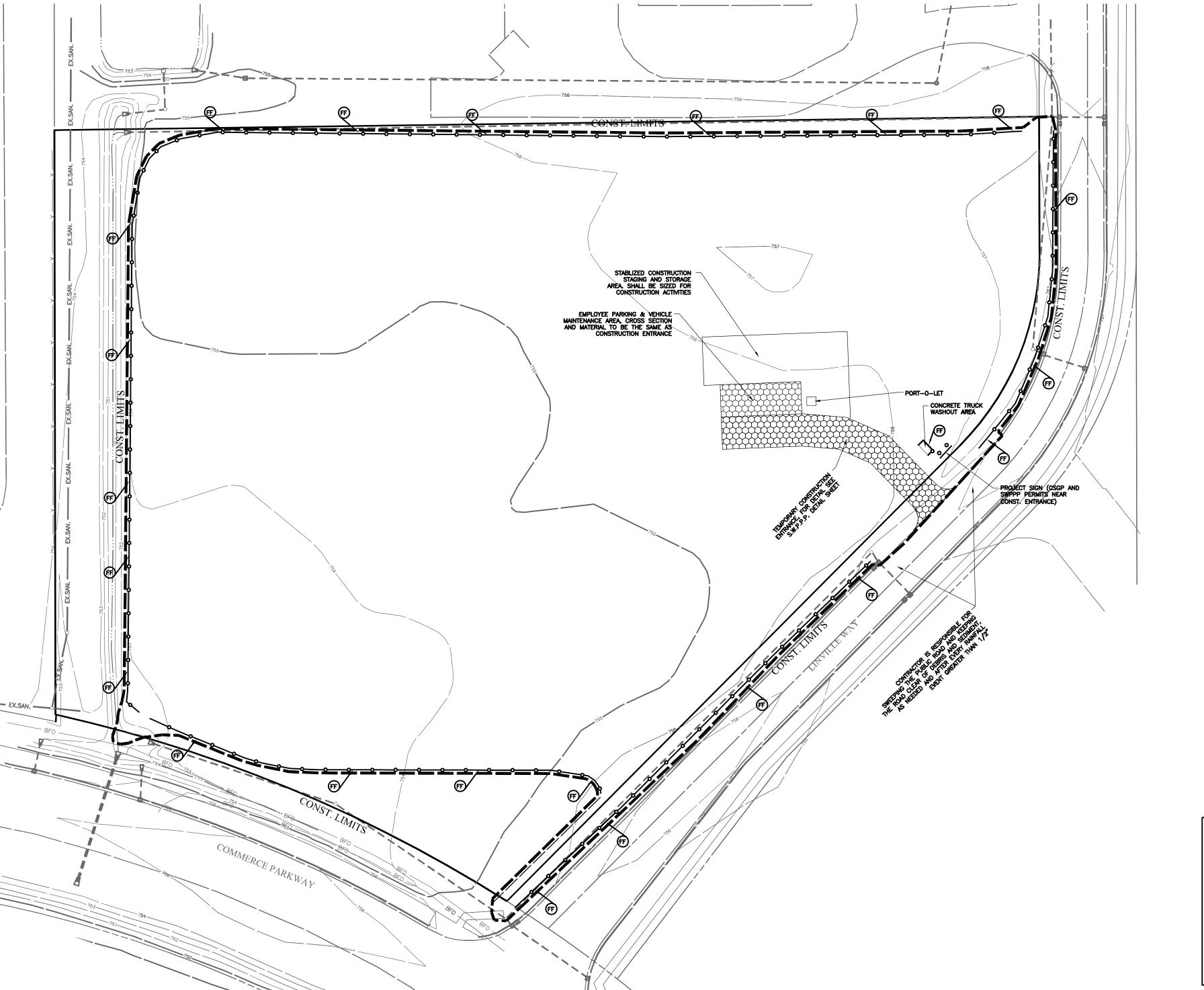
PROCEDURES OUTLINED ON THESE PLAN(S). ANY GRASSED OR VEGETATED AREAS THAT EXPERIENCE EROSION FROM RAINFALL EVENTS SHOULD BE REPAIRED AND REVEGETATED AS SOON AS POSSIBLE.

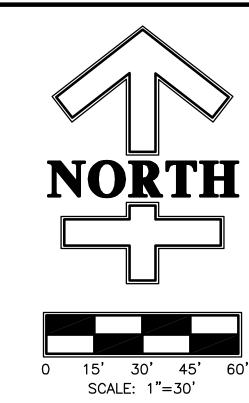
A. DETENTION PONDS BANK EROSION SHOULD BE ADDRESSED AS SOON AS IT BECOMES VISIBLE BY FILLING THE ERODED AREA WITH SUITABLE SOIL AND ESTABLISHING VEGETATION IMMEDIATELY, PREFERABLE BY SODDING. THE SAME MEASURE SHOULD BE USED FOR STEEP BANKS OR ANY BERMS OR SWALES. THE PONDS SHOULD ALSO BE MONITORED FOR 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 ØRIGINAL DESIGN. INSPECTION SHALL INCLUDE INSPECTION OF ANY END SECTIONS, ORIFICES, 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. B. 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. C6. RESPONSIBLE FOR OPERATIONS AND MAINTENANCE:

CHRIS DUKE ELITE HOMES, LLC 3567 E. 700 N. WHITELAND, IN 46184 PHONE: 317-474-0088

CDUKE11@AOL.COM







LEGEND : EXISTING SANITARY SEWER W/ MANHOLE EXISTING STORM SEWER W/ END SECTION, MANHOLE, YARD INLET, AND CURB INLET EXISTING CONTOUR LINE FILTER FENCE

#### GENERAL NOTES:

I. FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE SEEDED. 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 STRIPPING, CUTS OR FILLS HAVE BEEN GRADED SHALL BE SEEDED 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. 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 MIXTURE SHALL BE 60 POUNDS PER ACRE OF PERENNIAL RYE GRASS AND 60 POUNDS PER ACRE OF KENTUCKY 31 FESCUE OR

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.

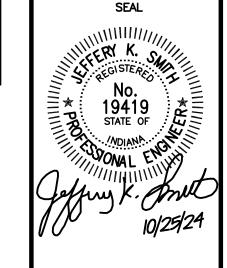
5. PROJECT SITE OWNER OR THEIR REPRESENTATIVE, KNOWLEDGEABLE IN EROSION AND PREVENTION DEFICIENCIES AT LEAST WEEKLY AND AGAIN WITHIN 24 HOURS OF EVERY

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

7. 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

- ALL EROSION CONTROL MEASURES INDICATED SHALL BE MAINTAINED BY THE CONTRACTOR AND OWNER 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 ERÒSION ÁND SEDIMENT CONTROL, BEST MANAGEMENT PRACTICES AND POLLUTION PREVENTION MEASURES MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE INDIANA STORMWATER QUALITY MANUAL.
- FOR EROSION CONTROL IMPLEMENTATION AND MAINTENANCE SCHEDULE SEE "EROSION CONTROL REQUIREMENTS" ON SHEET NO. C801
- ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE "INDIANA STORM WATER QUALITY MANUAL" AND THE SCS "FIELD OFFICE TECHNICAL GUIDE".
- THE OWNER SHALL REQUEST A INSPECTION FROM THE CITY PRIOR TO SUBMITTING THE NOTICE OF TERMINATION (NOT) TO IDEM



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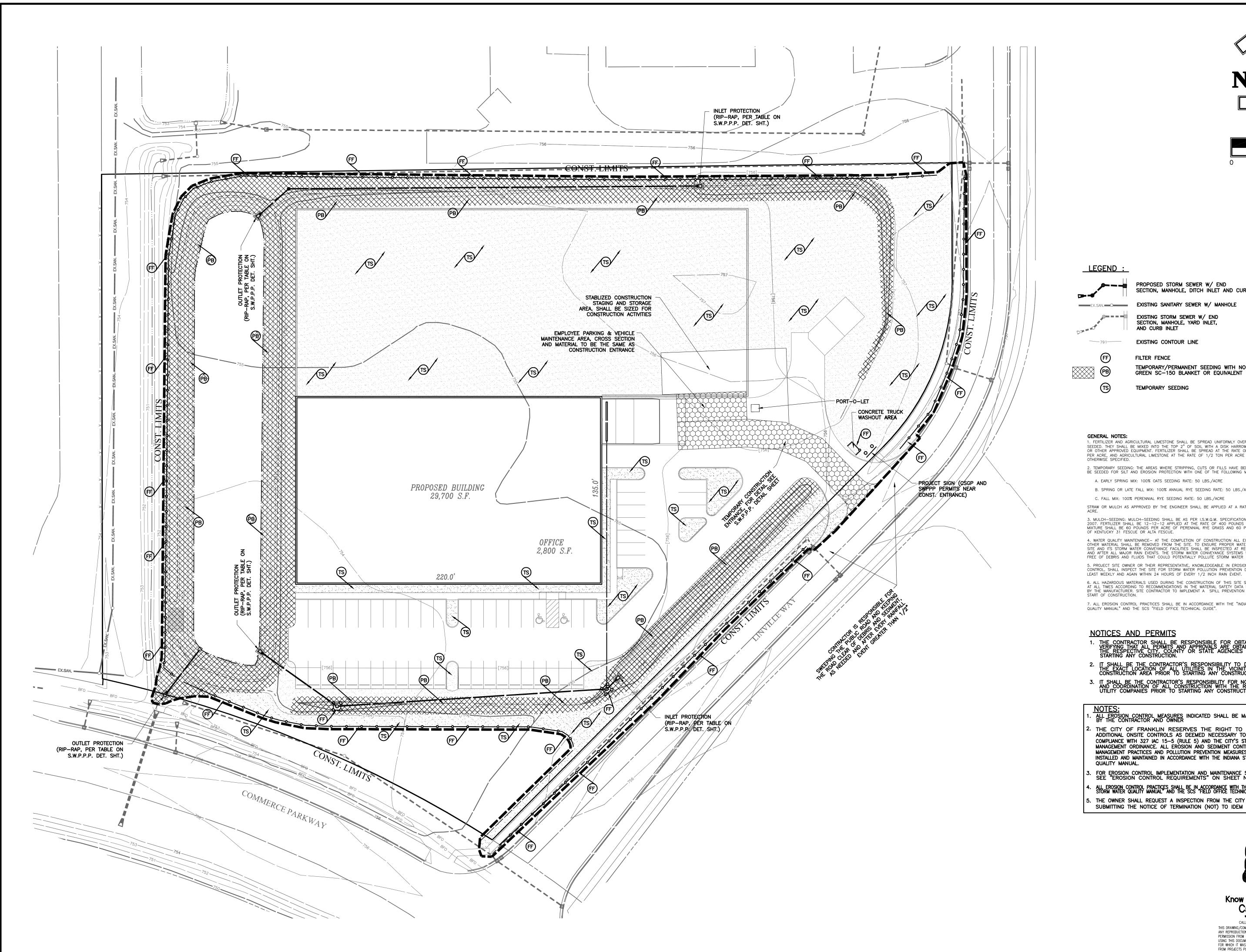
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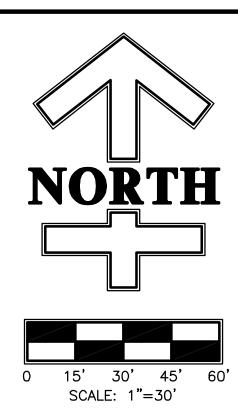
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**OCTOBER 25, 2024** 

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PROPOSED STORM SEWER W/ END SECTION, MANHOLE, DITCH INLET AND CURB INLET

EXISTING SANITARY SEWER W/ MANHOLE EXISTING STORM SEWER W/ END SECTION, MANHOLE, YARD INLET, AND CURB INLET

EXISTING CONTOUR LINE

TEMPORARY/PERMANENT SEEDING WITH NORTH AMERICAN GREEN SC-150 BLANKET OR EQUIVALENT

1. FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE SEEDED. 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 STRIPPING, CUTS OR FILLS HAVE BEEN GRADED SHALL BE SEEDED 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

3. 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 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.

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

ALL EROSION CONTROL MEASURES INDICATED SHALL BE MAINTAINED BY THE CONTRACTOR AND OWNER

- 2. 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
- . FOR EROSION CONTROL IMPLEMENTATION AND MAINTENANCE SCHEDULE SEE "EROSION CONTROL REQUIREMENTS" ON SHEET NO. C801
- ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE "INDIANA STORM WATER QUALITY MANUAL" AND THE SCS "FIELD OFFICE TECHNICAL GUIDE".
- THE OWNER SHALL REQUEST A INSPECTION FROM THE CITY PRIOR TO



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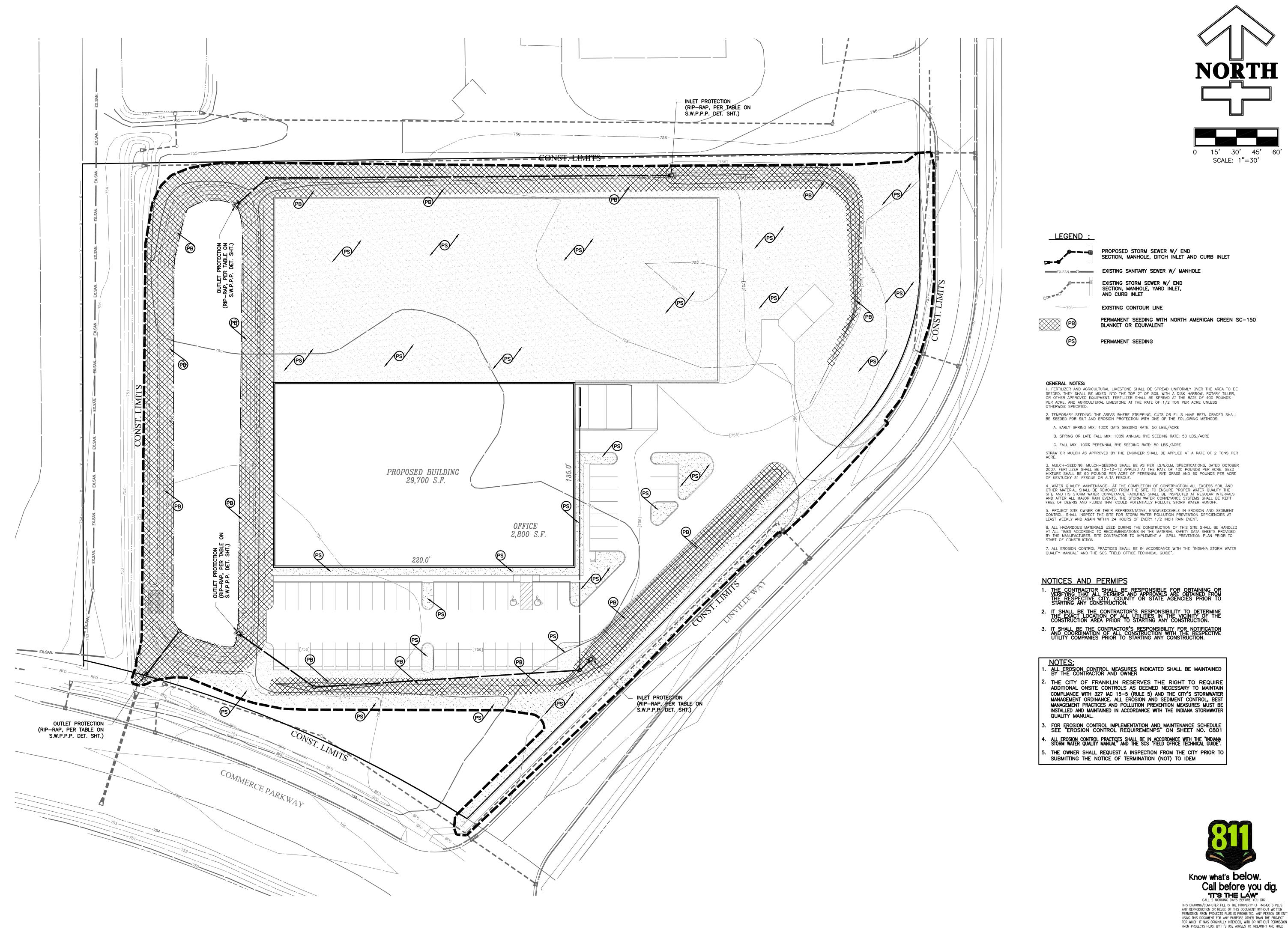
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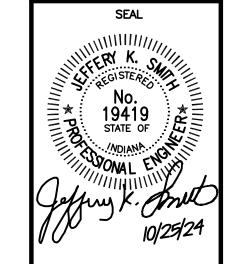
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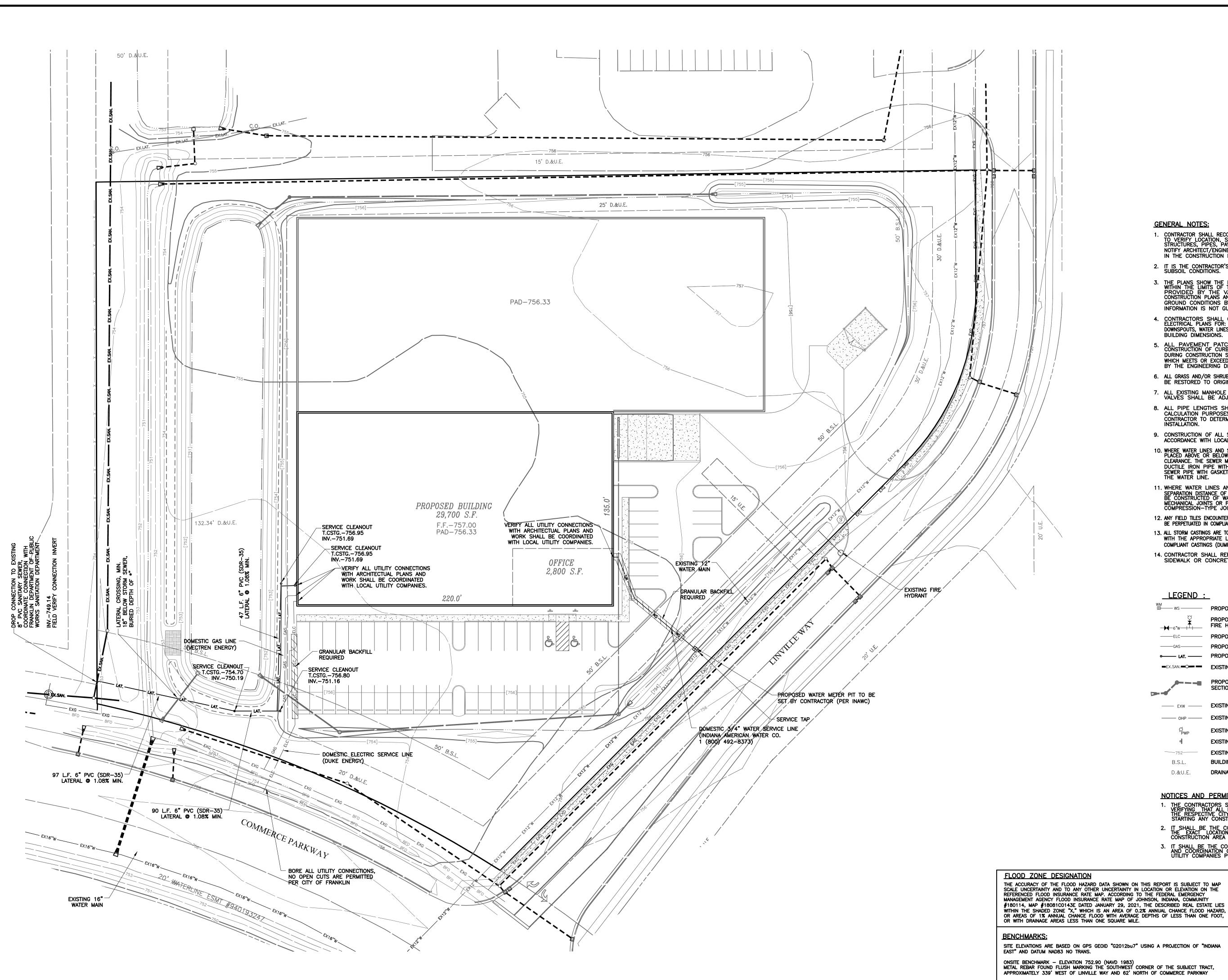
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15' 30' 45' SCALE: 1"=30'

#### **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.
- 2. 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 CHARANTEED. INFORMATION IS NOT GUARANTEED.
- 4. 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 DESCRIPTION OF DIMENSIONS.
- 5. 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.
- 6. ALL GRASS AND/OR SHRUBBERY DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- 7. ALL EXISTING MANHOLE AND CATCH BASIN GRATES, WATER OR GAS VALVES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION
- 8. 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.
- 9. CONSTRUCTION OF ALL SEWER LINES AND STRUCTURES SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODE, RULES AND REGULATIONS
- 10. 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.
- 11. 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.
- 12. ANY FIELD TILES ENCOUNTERED DURING THE COURSE OF CONSTRUCTION SHALL BE PERPETUATED IN COMPLIANCE WITH STATE AND LOCAL LAWS AND REGULATIONS
- 13. ALL STORM CASTINGS ARE TO BE OF THE "ENVIRONMENTAL" TYPE AND EMBOSSED WITH THE APPROPRIATE LANGUAGE AND SYMBOLS. USE NPDES PHASE II COMPLIANT CASTINGS (DUMP NO WASTE; DRAINS TO RIVER) WHERE AVAILABLE
- 14. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED CONCRETE SIDEWALK OR CONCRETE CURB DISTRIBUTED BY CONSTRUCTION.

## <u>LEGEND</u>:

PROPOSED WATER SERVICE LINE W/ WATER METER PROPOSED WATER LINE W/ VALVE AND FIRE HYDRANT AND ASSEMBLY

•---- LAT. ----- PROPOSED SANITARY SEWER LATERAL W/ CLEANOUT EXISTING SANITARY SEWER W/ MANHOLE

PROPOSED STORM SEWER W/ END SECTION, MANHOLE, DITCH INLET AND PAVEMENT INLET

---- EXW ---- EXISTING WATER LINE

EXISTING OVERHEAD POWERLINE EXISTING UTILITY POLE

EXISTING TRAFFIC SIGN EXISTING CONTOUR LINE

B.S.L. BUILDING SETBACK LINE DRAINAGE AND UTILITY EASEMENT D.&U.E.

#### NOTICES AND PERMITS

- 2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
- 3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.

THE ACCURACY OF THE FLOOD HAZARD DATA SHOWN ON THIS REPORT IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP OF JOHNSON, INDIANA, COMMUNITY #180114, MAP #18081C0143E DATED JANUARY 29, 2021, THE DESCRIBED REAL ESTATE LIES

SITE ELEVATIONS ARE BASED ON GPS GEOID "G2012bu7" USING A PROJECTION OF "INDIANA



Know what's below. Call before you dig. 'IT'S THE LAW'

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CRBECK PROF BUSINESS Y OF FRANKLIN,

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SEAL

LA REGISTERS

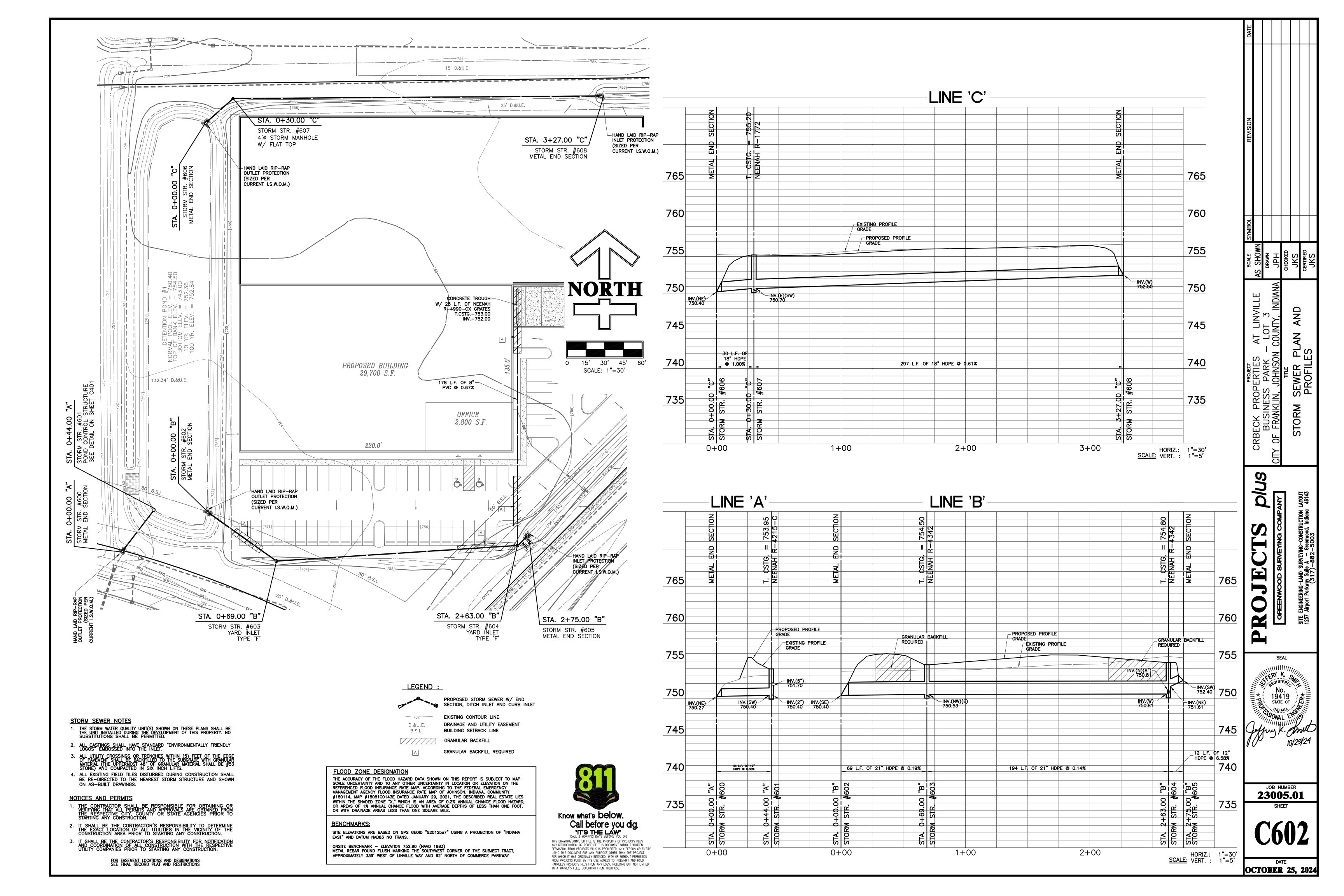
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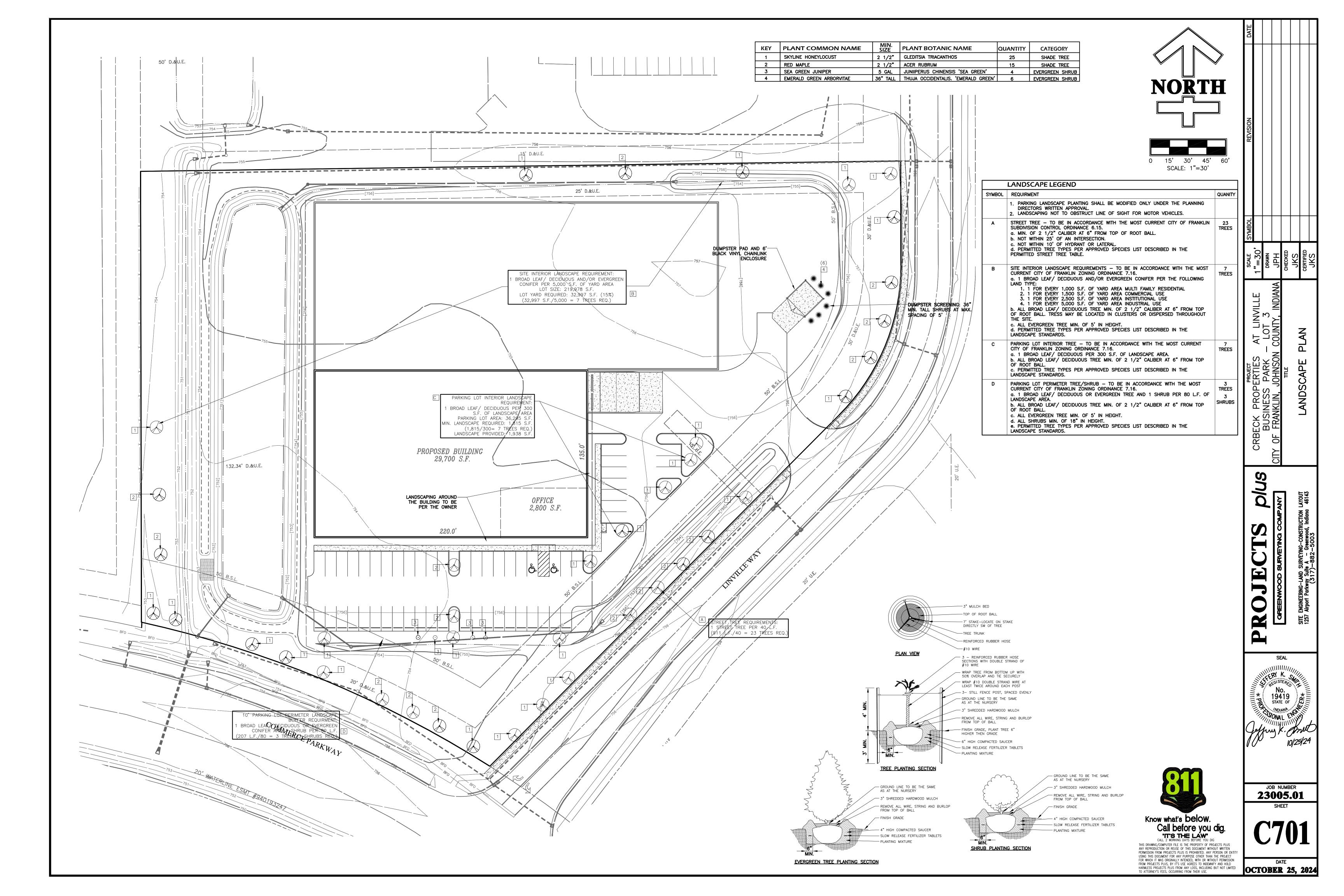
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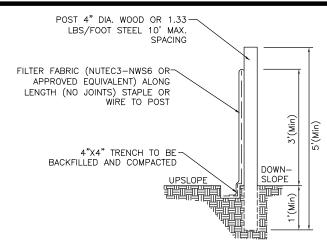
JOB NUMBER

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DATE **OCTOBER 25, 2024** 

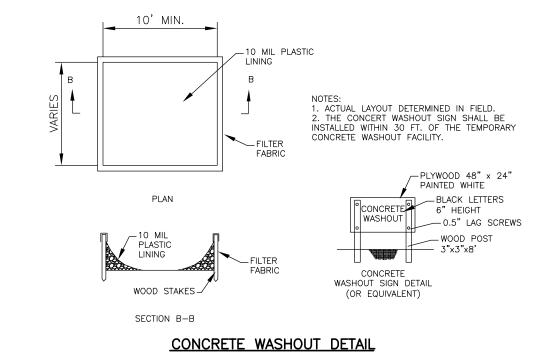






- 1. INSPECT ONCE PER WEEK OR AFTER EACH 1/2" OF RAINFALL. 2. IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECT PORTION IMMEDIATELY. 3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO
- 4. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT. 5. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

#### FILTER FENCE INSTALLATION DETAIL



1. FOR OPTIMUM PERFORMANCE LOWER WATER FROM LEVEL A TO LEVEL B BEFORE INSTALLATION, IF POSSIBLE.

PREPARE SOIL BEFORE INSTALLING BLANKETS INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED.

3. THE TOP EDGE OF THE BLANKET MUST BE ANCHORED IN A 6" DEEP X 6" WIDE

THE TOP EDGE OF THE BLANKET MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 PLACE BLANKETS END OVER END WITH A 3" TO 4" OVERLAP. STAPLE THROUGH BOTH BLANKETS OF THE OVERLAPPED AREA. APPROXIMATELY 6" APART.
 THE EDGE OF THE BLANKET THAT FALLS BELOW NORMAL WATER LEVEL MUST BE ANCHORED IN A 12" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. (STONE MAY BE SUBSTITUTED FOR SOIL BACKFILL).
 IF BANK IS STEEP OR IF WATER LEVEL VARIES MORE THAN THE WIDTH OF THE BLANKET, USE VERTICAL INSTALLATION,

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF 18" OR LONGER METAL/WASHER PINS

REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

SHORELINE APPLICATIONS

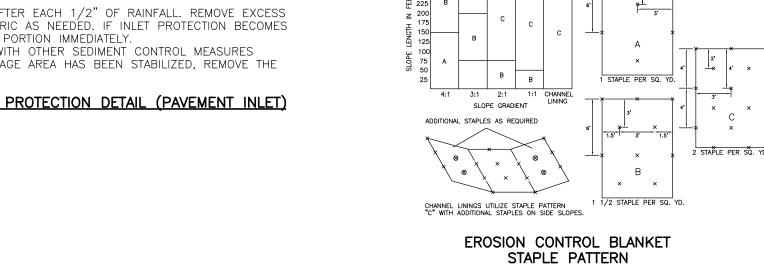
MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKET

1. INSPECT ONCE PER WEEK OR AFTER EACH 1/2" OF RAINFALL.

#### PROTECTION DETAIL (PAVEMENT INLET)

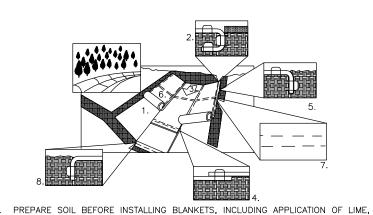
1. INSPECT ONCE PER WEEK OR AFTER EACH 1/2" OF RAINFALL. REMOVE EXCESS DEPOSITS, REPLACE OR CLEAN FABRIC AS NEEDED. IF INLET PROTECTION BECOMES TO BE USED IN CONJUNCTION WITH OTHER SEDIMENT CONTROL MEASURES . AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE INSERT AND SEDIMENT DEPOSITS.

#### TEMPORARY BASKET INSERT PROTECTION DETAIL (PAVEMENT INLET)



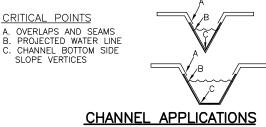
#### GENERAL STAPLE RECOMMENDATIONS

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE ANNUAL RAINFALL. AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED. CHANNEL LININGS REQUIRED A 2.0' MINIMUM OVERLAP AT LONGITUDINAL JOINTS. SIGNEDOES SHALL REQUIRE A 6" MINIMUM OVERLAP. WHERE OVERLAPS OCCUR, THE UPSTREAM BLANKET SHALL OVERLAP THE DOWNSTREAM. IF OTHER THAN NORTH AMERICAN GREEN EROSION CONTROL BLANKETS ARE INSTALLED FOLLOW THE INSTALLATION DIRECTIONS RECOMMENDED BY THAT PRODUCTS COMPANY.



 PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED.
 BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
 PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
 FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED. IN MEDIUM/HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOM-MENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER THE ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE:
HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.



1 CONSTRUCTION EQUIPMENT

SECTION 2 — MATERIAL HANDLING AND SPILL PREVENTION PLAN
MATERIAL HANDLING AND SPILL PREVENTION PLAN:
IN ORDER TO MINIMIZE THE RELEASE OF POTENTIAL POLLUTANTS DURING CONSTRUCTION THE
CONTRACTORS SHALL IMPLEMENT THIS MATERIAL HANDLING AND SPILL PREVENTION PLAN. THE
CONTRACTOR SHALL REVIEW THIS PLAN WITH ALL SUBCONTRACTORS AND REQUIRE THAT THEY IMPLEMENT

A. FUELING, LUBRICATION AND FLUIDS: ALL OPERATIONS INVOLVING THE ADDITION OF FLUIDS TO EQUIPMENT SHOULD BE DONE IN ONE LOCATION, AS DESIGNATED BY THE GENERAL CONTRACTOR, OR DEVELOPER/OWNER, SO THAT SPILLS ARE LIMITED TO ONE LOCATION ON THE SITE, WHICH WILL FACILITATE THE CLEANUP OF SPILLS. IF AN ONSITE-FUELING TANK IS PLANNED TO BE ON SITE, IT SHALL BE INCLEANUP OF SPILLS. IF AN ONSITE-FUELING TANK IS PLANNED TO BE ON SITE, IT SHALL BE DOUBLE WALLED AND STORED IN THIS DESIGNED AREA. THIS LOCATION IS AN AREA THAT WILL NOT ALLOW SPILLED FLUIDS TO MIGRATE INTO SUBSURFACE SOILS. IN THE EVENT OF A SPILL, THE FLUID SHALL IMMEDIATELY BE CLEANED UP BY REMOVING THE CONTAMINATED SOIL OR STONE, WHICH SHALL BE DISPOSED OF IN AN ACCEPTABLE MANNER. SPILLS ON HARD SURFACES SHALL BE SOAKED UP BY AN ACCEPTABLE MATERIAL SUCH AS OIL DRY AND THE ABSORBENT MATERIAL DISPOSED OF IN A PROPER MANNER. THE SPILL SHALL ALSO BE REPORTED IMMEDIATELY TO THE CONTRACTOR'S SUPERINTENDEN B. EQUIPMENT REPAIR, ESPECIALLY WHEN FLUIDS MUST BE REMOVED FROM THE EQUIPMENT OR THE POSSIBILITY OF FLUID SPILLS IS HIGH, SHOULD ALWAYS BE DONE OFFSITE AT A FACILITY THAT IS MORE SUITABLE THAN A CONSTRUCTION SITE TO HANDLE SPILLS. WHEN EQUIPMENT MUST BE REPAIRED ONSITE IT SHOULD BE MOVED TO THE MAINTENANCE AND FUELING AREA IF POSSIBLE. OTHERWISE, SUITABLE ON SITE CONTAINERS SHOULD BE PLACED UNDER THE EQUIPMENT DURING REPAIR TO CATCH ANY SPILLED FLUIDS AND THESE FLUIDS SHOULD BE DISPOSED OF IN A PROPER MANNER.

C. ALL REUSABLE FLUID CONTAINERS, SUCH AS GASOLINE CANS, SHALL BE INSPECTED FOR LEAKS EACH TIME THEY ARE USED. IF LEAKS ARE FOUND, THE FLUID SHALL BE REMOVED FROM THE CONTAINER IN A PROPER MANNER AND THE CONTAINER DISPOSED OF IN AN ACCEPTABLE MANNER. EMPTY DISPOSABLE CONTAINER, SUCH AS GREASE TUBES AND LUBRICATING OIL AND BRAKE FLUID CONTAINERS, AND THEIR PACKAGING, SHALL BE DISPOSED OF IN A PROPER MANNER AND SHALL NOT BE LEFT ON THE GROUND OR IN THE OPEN ON THE CONSTRUCTION SITE.

2. CONSTRUCTION MATERIALS AND THEIR PACKAGING
A. EROSION CONTROL MEASURE SHOWN ON THE SUBJECT PROJECT SHALL BE IMPLEMENTED PRIOR TO B. EQUIPMENT REPAIR. ESPECIALLY WHEN FLUIDS MUST BE REMOVED FROM THE EQUIPMENT OR TH

A. EROSION CONTROL MEASURE SHOWN ON THE SUBJECT PROJECT SHALL BE IMPLEMENTED PRIOR TO AND DURING CONSTRUCTION IN THE PROPER SEQUENCING TO MINIMIZE SOIL EROSION. EROSION CONTROLS SHALL BE INSPECTED AND MAINTAINED AS DESCRIBED ELSEWHERE ON THE PLANS. EXCESSIVE DUSTING OF SOIL ON THE SITE SHALL BE MINIMIZED BY REDUCING CONSTRUCTION TRAFFIC ACROSS BARE SOIL DURING DRY AND/OR WINDY WEATHER, AND BY APPLYING WATER OR OTHER ACCEPTABLE DUST ONTROL MEASURES TO THE SOIL. UPON COMPLETION OF CONSTRUCTION AND SUITABLE ESTABLISHMENT F PERMANENT VEGETATION, TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE, CHECK DAMS AND INLET PROTECTION DEVICES SHALL BE REMOVED IN A MANNER TO MINIMIZE ADDITIONAL LAND DISTURBANCE. ANY AREAS DISTURBED BY THESE OPERATIONS SHALL BE PROPERLY REVEGATATED.

B. LARGE WASTE MATERIALS CREATED BY CUTTING, SAWING, DRILLING, OR OTHER OPERATIONS SHALL BE PROPERLY DISPOSED OF IN SUITABLE WASTE CONTAINERS. THE SITE SHALL BE CHECKED AT THE END OF THE DAY, AS A MINIMUM, AND ALL WASTE MATERIALS. INCLUDING THOSE BLOWN ACROSS OR OFF THE SITE BY WIND SHALL BE PICKED UP AND DISPOSED OF IN SUITABLE CONTAINERS. WHERE POSSIBLE, OPERATIONS SUCH AS SAWING THAT CREATE SMALL PARTICLES SHOULD BE PERFORMED IN ONE SPOT IN AN AREA PROTECTED FROM WIND, AND WASTE PARTICLES COLLECTED AND DISPOSED OF FREQUENTLY TO MINIMIZE WIND DISPERSAL.

PACKAGING USED TO TRANSPORT MATERIALS TO THE SITE FOR CONSTRUCTION OF THE FACILITY SHALL BE DISPOSED OF PROPERLY, WEATHER THE MATERIAL IS TAKEN OUT OF ITS PACKAGE AND INCORPORATED INTO THE PROJECT IMMEDIATELY OR STORED ONSITE FOR FUTURE USE. PACKAGED MATERIALS STORED ONSITE SHALL BE INSPECTED REGULARLY AND ANY LOOSE PACKAGING SHALL BE REPAIRED OR DISPOSED OF PROPERLY.

C. ALL DEWATERING OF ACTIVITIES SHALL BE DONE IN ACCORDANCE TO GOOD EROSION CONTROL PRACTICES. THESE PRACTICES SHOULD INCLUDE THE USE OF DIRT BAGS SUCH AS DANDY DIRT BAGS.

THE USE OF THESE TYPES OF DEWATERING DEVICES WILL REMOVE LARGE QUANTITIES OF SILT, SEDIMENT,

AND DIRT AND PREVENT THESE MATERIALS TO ENTER THE STORM SEWER SYSTEM.

D. IF THE USE OF LIME IS USED TO STABILIZE THE SOIL OF THE SITE THEN ALL CONSTRUCTION
EQUIPMENT USED SHALL BE CLEANED OF ALL EXCESS MATERIAL WITH WATER IN THE MAINTENANCE AND REFUELING AREA AS SHOWN WITHIN THESE PLANS.

E. NUTRIENTS AND FERTILIZERS SHALL ONLY BE USED TO ESTABLISH RAPID VEGETATION. WHEN THESE PRODUCTS ARE UTILIZED, THE USER SHOULD PAY STRICT ATTENTION TO THE PRODUCTS RECOMMENDED 3. CONCRETE WASTE WATER A. ALL CONCRETE WASTEWATER SHALL BE DISPOSED OF IN THE DESIGNED AREA AS DIRECTED BY THE GENERAL CONTRACTOR OR DEVELOPER/OWNER. THIS AREA IS TO BE A 3' DEEP. 10' SQUARE PIT AS DETAILED ON THE EROSION CONTROL PLAN. THIS AREA SHALL BE INSPECTED ON A DAILY BASIS AT A MINIMUM. WHEN THIS AREA BECOMES FULL, THE POLLUTANTS SHALL BE EXCAVATED, PLACED IN AN

ACCEPTABLE CONTAINER AND DISPOSED OF IN PROPER MANNER. A. ALL EXCESS PAINT AND THEIR RELATED PRODUCTS SHALL BE DISPOSED OF IN THE MANNER AT WHICH THE MANUFACTURER SUGGESTS. UNDER NO CIRCUMSTANCES WILL PAINT OR THEIR RELATED PRODUCTS BE CLEANED OR DISPOSED OF IN SOIL, SANITARY SEWERS, STORM SEWERS OR DETENTION IN THE EVENT OF ACCIDENTALLY CONTAMINATION ALL EFFORTS SHOULD BE MADE TO REMOVE CONTAMINANTS IN AN APPROPRIATE MANNER. THE JOHNSON COUNTY FIRE DEPARTMENT SHOULD BE CONTACTED IMMEDIATELY TO DETERMINE IF FURTHER MEASURES ARE NEEDED.

#### ALL DISTURBED LAWN AREAS SHALL RECEIVE PERMANENT SEEDING IMMEDIATELY. ALL DISTURBED LAWN AREA TO HAVE A MINIMUM OF 6 INCHES OF TOPSOIL (COMPACTED

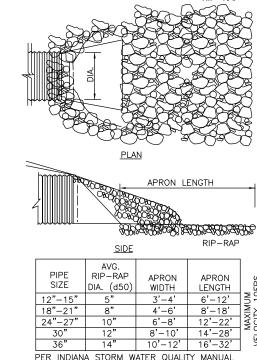
3) TOPSOIL TO BE FERTILE, FRIABLE, SANDY LOAM REASONABLY FREE OF SUBSOIL, CLAY LUMPS, STONES LARGER THAN 1/2", EXCESSIVE QUANTITIES OF SMALL STONE/GRAVEL, BRUSH AND OTHER LITER. 4) SOLVE ANY SURFACE OR SUBSURFACE DRAINAGE PROBLEMS AND CONSTRUCT PERMANENT EROSION 5) PERFORM THE MAJOR FILLING, SHAPING AND SMOOTHING OF GULLIES OR ERODED AREAS. 6) HAVE TOPSOIL TESTED TO CHECK PH AND NUTRIENT LEVELS. PROVIDE FERTILIZER AND SOIL AMENDMENTS AS REQUIRED TO MEET/EXCEED MINIMUM REQUIREMENTS AS SUGGESTED ON SOILS TEST 7) WORK FERTILIZER AND SOIL NUTRIENTS INTO TOP 2-3 INCHES OF THE TOPSOIL WITH A SMALL DISK, HARROW OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.

8) ROLL THE TOPSOIL WITH A WATER BALLAST ROLLER WEIGHING 100 TO 300 POUNDS DEPENDING ON SOÍL TYPE. ROLL WITH TOPSOIL IN A SEMI-DRY CONDITION IN TWO OPPOSITE DIRECTIONS (RIGHT ) RÁKE OR SCARIFY AND CUT OR FILL IRREGULARITIES THAT DEVELOP AS REQUIRED AND AGAIN ROLL UNTIL AREA IS TRUE AND UNIFORM, FREE FROM LUMPS, DEPRESSIONS AND IRREGULARITIES.

10) SOW SEED WITH ADEQUATE EQUIPMENT AT A TIME WHEN LITTLE OR NO WIND IS BLOWING. BROADCAST HALF OF SEED IN ONE DIRECTION AND THE OTHER HALF IN THE OPPOSITE DIRECTION (RIGHT OVER SEED TO A DEPTH OF ½" BY RAKING OR HARROWING. PROVIDE A LIGHT LAYER OF STRAW OR HAY MULCH AT A RATE OF 2 TONS PER ACRE. APPLY TACKIFIER TO STABILIZE MULCH.

12) HYDROSEEDING IS ACCEPTABLE METHOD OF SEEDING. 13) KEEP TOPSOIL RELATIVELY MOIST UNTIL LAWN IS ESTABLISHED.

14) RESEED AREAS THAT DO NOT SHOW PROMPT GERMINATION AT 14 DAY INTERVALS UNTIL AN ACCEPTABLE STAND OF GRASS IS ASSURED. 15) ALL LAWNS SHALL BE GUARANTEED TO HAVE A FULL UNIFORM STAND OF ACCEPTABLE GRASS AT END OF ONE YEAR GUARANTEE PERIOD WITH NO BARE SPOTS COMPRISING MORE THAN 2% OF ANY LAWN AREA. ANY AREA SO NOTED WILL BE REWORKED UNTIL AN ACCEPTABLE STAND OF GRASS IS 16) ALL LAWNS TO BE MAINTAINED UNTIL FINAL INSPECTION BY LANDSCAPE DESIGNER BUT NOT LESS THAN 60 DAYS FROM TIME OF INSTALLATION. MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATION, MULCHING, MOWING AND ALL OTHER NECESSARY OPERATIONS REQUIRED FOR PROPER ESTABLISHMENT OF



DATED OCTOBER 2007

1. INSTALL AT LOCATION SHOWN PLANS. ENSURE SMOOTH TRANSITION TO SURROUNG GRADE. INSTALL NON-WOVEN NEEDLE PUNCHED GEOTEXTILE FABRIC ON COMPACTED SUBGRADE PRIOR TO INSTALLATION OF APRON.

2. INSPECT ONCE PER WEEK OR AFTER EACH RAIN EVENT. CHECK FOR STONE DISPLACEMENT, REPLACE AS NECESSARY. CHECK FOR PIPE UNDERCUTTING AND EROSION SCOURING, REPAIRE AS NEEDED.

3. REFER TO CHAPTER 7 OF THE INDIANA STORM WATER QUALITY MANUAL, DATED, OCTOBER 2007 FOR REQUIRED PRACTICES FOR CONCRETE WASHOUTS DATED OCTOBER 2007

OUTLET PROTECTION DETAIL

# BROOKSTON SILTY CLAY LOAM THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT ENGINEERING USES OF THIS SOIL ARE A SEASONAL HIGH WATER TABLE, HIGH POTENTIAL FROST ACTION, MODERATE SHRINK—SWELL POTENTIAL, AND MODERATE PERMEABILITY. THIS SOIL HAS SEVERE LIMITATIONS FOR BUILDING SITES. THE SITES NEED TO BE ARTIFICIALLY DRAINED AND PROTECTED FROM FLOODING. DWELLINGS AND SWALL BUILDINGS WITH BASEMENTS SHOULD NOT BE CONSTRUCTED ON THIS SOIL. USING PROPERLY DESIGNED FOUNDATIONS AND FOOTINGS HELPS TO PREVENT STRUCTURAL DAMAGE FROM FROST

SOILS TYPE LEGEND

ACTION AND SHRINKING AND SWELLING OF THE SOIL. THIS SOIL HAS SEVERE LIMITATIONS FOR LOCAL ROADS AND STREETS BECAUSE OF SEASONAL HIGH WATER TABLE AND HIGH POTENTIAL FROST ACTION. INSTALLATION OF DRAINAGE DITCHES ALONG ROADS HELPS TO LOWER THE WATER TABLE AND PREVENT DAMAGE FROM FROST ACTION. THE BASE MATERIAL FOR ROADS AND STREETS SHOULD BE REPLACED OR STRENGTHENED WITH SUITABLE MATERIAL.

Cra CROSBY SILT LOAM, 0 TO 3 PERCENT SLOPES
THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT ENGINEERING USES OF THIS SOIL
ARE MODERATE POTENTIAL FROST ACTION, MODERATE PERMEABILITY IN THE SUBSOIL, RAPID PERMEABILITY IN THE UNDERLYING MATERIAL. AND MODERATE SHRINK-SWELL TANK ABSORPITON FIELDS. IT HAS MODERATE LIMITATIONS FOR LOCAL ROADS AND STREETS BECAUSE OF SHRINK—SWELL POTENTIAL. THE BASE MATERIAL FOR ROADS NEEDS TO BE STRENGTHENED OR REPLACED WITH SUITABLE MATERIAL.

MmB2 MIAMI SILT LOAM, 2 TO 6 PERCENT SLOPES, ERODED. THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT ENGINEERING USES ARE MODERATE POTENTIAL FROST ACTION, MODERATE SHRINK—SWELL POTENTIAL, AND MODERATELY SLOW PERMEABILITY. THE SOIL HAS SEVERE LIMITATIONS FOR BUILDING SITES BECAUSE OF SLOPE. THIS SOIL HAS SEVERE LIMITATIONS FOR LOCAL ROADS AND STREETS. THIS SOILS HAS SEVERE LIMITATIONS FOR SEPTIC TANK ABSORPTION FIELDS BECAUSE OF MODERATELY SLOW PERMEABILITY AND SLOPE SLOW PERMEABILITY AND SLOPE.

CsB2 CROSBY-MIAMI SILT LOAM
2 TO 4 PERCENT SLOPES. THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT THE
ENGINEERING USES OF THIS SOIL ARE A SEASONAL HIGH WATER TABLE, MODERATE
SHRINK-SWELL POTENTIAL, HIGH POTENTIAL FROST ACTION, AND SLOW PERMEABILITY. THIS SOIL HAS SOME SEVERE LIMITATIONS FOR BUILDING SITES. THE SITES NEED TO BE ARTIFICIALLY DRAINED TO PREVENT WETNESS FROM BECOMING A PROBLEM. DWELLINGS AND SMALL BUILDINGS WITH BASEMENTS SHOULD NOT BE CONSTRUCTED ON THIS SOIL. USING PROPERLY DRAINED FOUNDATIONS AND FOOTINGS HELPS TO PREVENT STRUCTURAL DAMAGE FROM LOW STRENGTH AND SHRINKING AND SWELLING OF THE SOIL. THIS SOIL HAS SEVER LIMITATIONS FOR LOCAL ROADS AND STREETS.
THE BASE MATERIAL FOR ROADS NEEDS TO BE STRENGTHENED OR REPLACED WITH

MtC3 MIAMI CLAY LOAM
6 TO 12 PERCENT SLOPES, SEVERELY ERODED. THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT THE ENGINEERING USES OF THIS SOIL ARE A MODERATE SHRINK—SWELL POTENTIAL, MODERATE POTENTIAL FROST ACTION, AND SLOW PERMEABILITY. THIS SOIL HAS MODERATE LIMITATIONS FOR LOCAL ROADS AND STREETS. THE BASE MATERIAL FOR ROADS NEEDS TO BE STRENGTHENED OR

WHEAT OR RYE

ANNUAL RYEGRASS

NON-IRRIGATED\*

IRRIGATED

OATS

TEMPORARY SEEDING DATES:

JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC

PERMANENT SEEDING DATES

JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC

IRRIGATION NEEDED DURING THIS PERIOD, TO CONTROL EROSION AT

REMARKS

ENTRENCHED INSTALLATION

\*THIS APPLICATION MAY NOT BE USED

888-736-3650

317-736-3670

317-346-1212

812-477-8773

317-233-7745

317-342-5594

UTILITY / PAVEMENT CONSTRUCTION

(UTILITIES, PAVING)

BUILDING CONSTRUCTION

PRACTICES AS WORK TAKES PLACE.

PRACTICES AS WORK TAKES PLACE.

(TOPSOIL, TREES, AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING, RIP—RAP)

AREAS. REMOVE TEMPORARY CONTROL MEASURES AND STABILIZE. PERMANENT SEED ALL BARE SOIL AREAS.

INSTALL NECESSARY EROSION AND SEDIMENT CONTROL

MAINTENANCE -- INSPECT PRACTICES ONCE A WEEK, & AFTER EACH 1/2" RAIN EVENT.

LANDSCAPING AND FINAL STABILIZATION STABILIZE ALL OPEN AREAS INCLUDING BORROW AND SPOIL INSPECT WEEKLY AND AFTER EACH 1/2" RAIN EVENT, UNTIL THE STAND IS WEEK OF SUCCESSFULLY ESTABLISHED. REPAIR DAMAGED, BARE, OR SPARSE AREAS . . .

WITH LOGS SMALLER THAN 12 IN.

TIMES OTHER THAN IN THE SHADED AREAS, USE MULCH

LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF

MULCH IS APPLIED.

TEMPORARY SEEDING:

1000 SQ.FT. ACRE

\* NOT NECESSARY WHERE MULCH IS APPLIED.

—WOOD MULCH OR COMPOST

TO 1/2 HEIGHT OF LOG

UNTRENCHED INSTALLATION

\*\* INCREASE SEEDING APPLICATION BY 50%

FIGURE 5-3

WHEAT OR RYE 3.5 LBS. 2 BU. COVER SEED 1" TO 1-1/2" DEEP SPRING OATS 2.3 LBS. 3 BU. COVER SEED TO 1" DEEP

ANNUAL RYEGRASS 1 LB. 40 LBS. COVER SEED TO 1/4" DEEP

SEEDING SCHEDULE

ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONSSPECIFICATIONS

1. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG.

2. FILL LOG NETTING UNIFORMLY WITH COMPOST OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.

3. INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS.

4. FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE

ALONG LOG.

5. STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER.

6. USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG.

7. WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE.

8. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF 1/2 THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH. REPLACE FILTER LOG IF TORN. REINSTALL FILTER LOG IF LOGENTINIONG OR DISLODGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADFOLIATE VEGETATIVE FSTABI ISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

THIS PLAN TO BE USED FOR EROSION CONTROL PURPOSES ONLY. THE CITY ENGINEER AND

MS4/EROSION CONTROL INSPECTOR HAS THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL

MEASURES IN THE FIELD AS CONDITIONS WARRANT

ALL EROSION CONTROL PRACTICES SHALL BE IN

ACCORDANCE WITH THE INDIANA STORM WATER

QUALITY MANUAL DATED OCTOBER 2007 BY THE

INDIANA DEPARTMENT OF ENVIRONMENTAL

EMERGENCY RESPONSE TO ANY LIFE THREATENING PROBLEM

SECTION 1 — EMERGENCY RESPONSE NUMBERS

INDIANA DEPARTMENT OF NATURAL RESOURCES

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CITY OF FRANKLIN FIRE DEPARTMENT

JOHNSON COUNTY SOIL AND WATER

MANAGEMENT (IDEM).

CITY OF FRANKLIN MS4

CITY OF FRANKLIN POLICE DEPARTMENT

SHEET FLOW

WORK AREA



### SOILS MAP

EROSION CONTROL REQUIREMENTS FOR COMPLIANCE WITH IDEM GENERAL PERMIT RULES FOR

STORM WATER RUNOFF FROM CONSTRUCTION SITES

# 1. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH

THE INDIANA STORM WATER QUALITY MANUAL DATED OCTOBER 2007 BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM). 2. THE EROSION CONTROL MEASURES INCLUDED IN THIS PLAN SHALL BE INSTALLED PRIOR TO INITIAL LAND DISTURBANCE ACTIVITIES OR AS SOON AS PRACTICAL. SEDIMENT SHALL BE PREVENTED FROM DISCHARGING FROM THE PROJECT SITE BY INSTALLING AND MAINTAINING SILT FENCE, STRAW BALES, SEDIMENT BASINS, ETC. AS SHOWN I=ON THIS PLAN. IF SHOWN ON THIS PLAN, ENERGY-DISSIPATION DEVICES OR EROSION

CONTROL AT THE OUTFALL OF THE STORM SEWER SYSTEM SHALL BE INSTALLED AT THE TIME OF THE CONSTRUCTION OF THE OUTFALL. THE PROPOSED DETENTION BASIN SHALL BE UTILIZED AS A SEDIMENT BASIN DURING CONSTRUCTION FOR AS LONG AS PRACTICAL. 3. ALL ON-SITE STORM DRAIN INLETS SHALL BE PROTECTED AGAINST SEDIMENTATION WITH FILTER FABRIC, OR EQUIVALENT BARRIERS AS SHOWN ON THIS PLAN.

4. EXCEPT AS PREVENTED BY INCLEMENT WEATHER CONDITIONS OR OTHER CIRCUMSTANCES BEYOND THE CONTROL OF THE CONTRACTOR / DEVELOPER APPROPRIATE EROSION CONTROL PRACTICES WILL BE INITIATED WITHIN (7) SEVEN DAYS OF THE LAST LAND DISTURBING ACTIVITY AT THE SITE. THE SITE SHALL BE STABILIZED BY SEEDING, SODDING, MULCHING, COVERING OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES

5. THIS EROSION CONTROL PLAN SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE CONSTRUCTION SITE. ALL MEASURES INVOLVING EROSION CONTROL PRACTICES SHALL BE INSTALLED UNDER THE GUIDANCE OF A QUALIFIED PERSONNEL EXPERIENCED IN EROSION CONTROL AND FOLLOWING THE PLANS AND SPECIFICATIONS INCLUDED HEREIN. 6. DURING THE PERIOD OF CONSTRUCTION ACTIVITY, ALL SEDIMENT BASINS AND OTHER EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE TRANSFER OF REQUIRED MAINTENANCE RESPONSIBILITIES WITH THE OWNER.

7. PUBLIC OR PRIVATE ROADWAYS SHALL BE KEPT CLEARED OF ACCUMULATED SEDIMENT. BULK CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE POINT OF LIKELY ORIGIN OR OTHER SUITABLE LOCATION.

8. THE CONTRACTOR SHALL CONTROL WASTES, GARBAGE, DEBRIS, WASTEWATER, AND OTHER SUBSTANCES ON THE SITE IN SUCH A WAY THAT THEY SHALL NOT BE TRANSPORTED FROM THE SITE BY THE ACTION OF WINDS, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL OR MANAGEMENT OF ALL WASTES AND UNUSED BUILDING MATERIALS APPROPRIATE TO THE

OLLUTION DETAILS

STORMWATER F

S

STATE OF

"ANDIAN".

JOB NUMBER

23005.01

**OCTOBER 25, 2024** 

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			PROJECT ERTIE PARY
EROSION CONTROL CONSTRUCTION	DN SEQUENCE SCHEDULING		SS SS
CONSTRUCTION SCHEDULE CONSIDERATIONS	MONITORING AND MAINTENANCE SCHEDULE	CONSTRUCTION START	Д Ш :
BEFORE CONSTRUCTION, EVALUATE, MARK, AND PROTECT IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, UNIQUE AREAS (e.g., WETLANDS) TO BE PRESERVED, ON—SITE SEPTIC SYSTEM ABSORPTION FIELDS, AND VEGETATION SUITABLE FOR FILTER STRIPS, ESPECIALLY IN PERIMETER AREAS.	ESTABLISH AND EVALUATE PROJECT ASSIGN SUPERINTENDENT WHOM WILL BE IN CHARGE OF OVERSEEING EROSION FACILITIES.	WEEK OF . (LASTING APPOX. 1 WEEK)	ECK BUSII
	INSPECT CONSTRUCTION ENTRANCE WEEKLY AND AFTER EACH 1/2" RAIN	WEEK OF	CRBI
STABILIZE BARE AREAS IMMEDIATELY WITH GRAVEL AND TEMPORARY VEGETATION PRIOR TO COMMENCING WORK.	INCLUDING REMOVAL OF IMMEDIATED SEDIMENTS BY SWEEPING OR BRUSHING. IF FLUSHING PROVIDE ADEQUATE SEDIMENT TRAPS FOR WATER CONVEYANCE.	(LASTING APPOX. 1 WEEK)	j j
INSTALL PRINCIPAL BASINS AFTER CONSTRUCTION SITE IS ASSESSED. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING. CONSTRUCT DETENTION BASINS AFTER CONSTRUCTED, INSTALL PERIMETER SWALES.	INSPECT THE FABRIC BARRIER WEEKLY AND AFTER EACH 1/2" RAIN EVENT, AND MAKE NEEDED REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE POOL AREA TO PROVIDE STORAGE FOR THE NEXT STORM. AVOID DAMAGING OR UNDERCUTTING THE FABRIC DURING SEDIMENT REMOVAL. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL AND SEDIMENT, GRADE THE AREA TO THE ELEVATION OF THE TOP OF THE INLET, THEN STABILIZE.	WEEK OF . (LASTING APPOX. 1 WEEK)	SN
INSTALL PRACTICES AFTER PRINCIPAL SEDIMENT TRAPS ARE INSTALLED BUT BEFORE SITE GRADING. INSTALL ADDITIONAL RUNOFF CONTROL MEASURES DURING GRADING AS NEEDED.	INSPECT THE SEDIMENT BASIN WEEKLY AND AFTER EACH 1/2" RAIN EVENT. REMOVE AND PROPERLY DISPOSE OF SEDIMENT WHEN IT ACCUMULATES TO ONE—HALF THE DESIGN VOLUME (LEVEL MARKED BY A REFERENCE STAKE) PERIODICALLY CHECK THE EMBANKMENT, EMERGENCY SPILLWAY, AND	WEEK OF (LASTING APPOX. 1 WEEK)	p
	REMOVE THE BASIN AFTER THE DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, NISPECTED, AND APPROVED. DO SO BY DRAINING ANY WATER, REMOVING THE SEDIMENT POOL DOES NOT DRAIN PROPERLY.		SL;
WHERE NECESSARY, STABILIZE STREAMBANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL CONVEYANCE SYSTEM WITH RUNOFF CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.	DEPTH.		OJEC
BEGIN MAJOR CLEARING AND GRADING AFTER INSTALLING THE KEY SEDIMENT AND RUNOFF MEASURES. CLEAR BORROW AND DISPOSAL AREAS AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES.	INSPECT NEWLY TOPSOILED AREAS WEEKLY UNTIL VEGETATION IS ESTABLISHED.  REPAIR ERODED OR DAMAGED AREAS AND REVEGETATE.	WEEK OF . (LASTING APPOX. 4 WEEK)	
APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETED.	INSPECT WEEKLY AND ESPECIALLY AFTER EACH 1/2" RAIN EVENT, UNTIL THE STAND IS SUCCESSFULLY ESTABLISHED. (CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE: VIGOROUS DARK GREEN OR BLUISH-GREEN SEEDLINGS; UNIFORM DENSITY WITH NURSE PLANTS, LEGUMES, AND GRASSES WELL INTER—MIXES; GREEN LEAVES; AND THE PERENNIALS REMAINING GREEN THROUGHOUT THE SUMMER, AT LEAST AT THE PLANT BASE.)  PLAN TO ADD FERTILIZER THE FOLLOWING GROWING SEASON ACCORDING TO SOIL TEST RECOMMENDATIONS. REPAIR DAMAGED, BARE, OR SPARSE AREAS BY FILLING ANY GULLIES, RE-FERTILIZING, OVER-OR RE-SEEDING, AND MULCHING.  IF PLANT COVER IS SPARSE OR PATCHY, REVIEW THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCHING; THEN REPAIR THE AFFECTED AREA EITHER BY OVER-SEEDING OR BY RE-SEEDING AND MULCHING AFTER RE- PREPARING THE SEEDBED.  IF VEGETATION FAILS TO GROW, CONSIDER SOIL TESTING TO DETERMINE ACIDITY OR NUTRIENT DEFICIENCY PROBLEMS.  IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.  INSPECT AFTER STORM EVENTS TO CHECK FOR MOVEMENT OF MULCH OR FOR EROSION.  IF WASHOUT, BREAKAGE, OR EROSION IS PRESENT, REPAIR THE SURFACE, THEN RE-SEED, RE-MULCH AND, IF APPLICABLE, INSTALL NEW NETTING.  CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.  INSPECT PERIODICALLY FOR DISPLACED ROCK MATERIAL, SLUMPING, AND EROSION AT EDGE, ESPECIALLY DOWNSTREAM OR DOWN SLOPE.  (PROPERLY DESIGNED AND INSTALLED RIPRAP USUALLY REQUIRES VERY LITTLE MAINTENANCE IF PROMPTLY REPAIRED.)	WEEK OF . (LASTING APPOX. 2 WEEK)	Jeffunder 15
	BEFORE CONSTRUCTION, EVALUATE, MARK, AND PROTECT IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, UNIQUE AREAS (e.g., WETLANDS) TO BE PRESERVED, ON-SITE SEPTIC SYSTEM ABSORPTION FIELDS, AND VEGETATION SUITABLE FOR FILTER STRIPS, ESPECIALLY IN PERIMETER AREAS.  STABILIZE BARE AREAS IMMEDIATELY WITH GRAVEL AND TEMPORARY VEGETATION PRIOR TO COMMENCING WORK.  INSTALL PRINCIPAL BASINS AFTER CONSTRUCTION SITE IS ASSESSED. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING. CONSTRUCT DETENTION BASINS AFTER CONSTRUCTED, INSTALL PERIMETER SWALES.  INSTALL PRACTICES AFTER PRINCIPAL SEDIMENT TRAPS ARE INSTALLED BUT BEFORE SITE GRADING. INSTALL ADDITIONAL RUNOFF CONTROL MEASURES DURING GRADING AS NEEDED.  WHERE NECESSARY, STABILIZE STREAMBANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL CONVEYANCE SYSTEM WITH RUNOFF CONTROL MEASURES DURING GRADING AS NEEDED.  WHERE NECESSARY, STABILIZE STREAMBANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL CONVEYANCE SYSTEM WITH RUNOFF CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.  BEGIN MAJOR CLEARING AND GRADING AFTER INSTALLING THE KEY SEDIMENT AND RUNOFF MEASURES. CLEAR BORROW AND DISPOSAL AREAS A SECOED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES.  APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS	SEFORE CONSTRUCTION, EXALISTE, MAKE, MAD PROTECT MORNING TREES AND ASSOCIATED ACCITING COUNTS.  MORNING THE SEPTIC STEEM ASSOCIATED ACCITING COUNTS.  MORNING THE SEPTIC STEEM ASSOCIATED ACCITING COUNTS.  MORNING THE SEPTIC STEEM ASSOCIATED ACCITING COUNTS.  MORNING THE ACCITING THE ACCITING COUNTS.  MORNING THE AC	ECONSTRUCTION SCHEDULE CONSIDERATIONS  MONITORING AND MAINTENANCE SCHEDULE  (CONSTRUCTION STATE AND MAINTENANCE AND INDUITE MARKERS (M. METALE STATE AND MAINTENANCE SCHEDULE)  (CONSTRUCTION SCHEDULE)  (CONSTRUCTION STATE AND MAINTENANCE AND INDUITE MARKERS (M. METALE STATE AND MAINTENANCE SCHEDULE)  (CONSTRUCTION SCHEDULE)  (CONSTRUCTION STATE AND MAINTENANCE AND

DURING VEGETATIVE ESTABLISHMENT, INSPECT WEEKLY AND AFTER EACH 1/2" RAIN EVENT FOR ANY EROSION BELOW THE BLANKET. IF ANY AREA

DURING VEGETATIVE ESTABLISHMENT, INSPECT WEEKLY AND AFTER EACH WEEK OF

AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA

IF PLANT COVER IS SPARSE OR PATCHY, REVIEW THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCHING; THEN

REPAIR THE AFFECTED AREA EITHER BY OVER-SEEDING OR BY RE-SEEDING AND MULCHING AFTER RE- PREPARING THE SEEDBED.

IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.

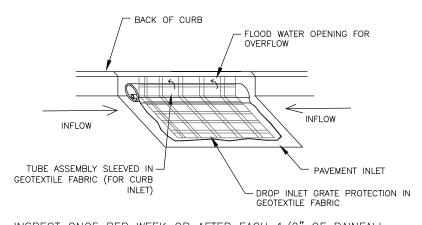
SHOWS EROSION, PULLBACK THAT PORTION OF THE BLANKET COVERING IT ADD SOIL, RE-SEED THE AREA, AND RE- LAY AND STAPLE THE BLANKET. (LASTING APPOX. 6 WEEK)

1/2" RAIN EVENT FOR ANY EROSION BELOW THE BLANKET. IF ANY AREA SHOWS EROSION, PULLBACK THAT PORTION OF THE BLANKET. IF ANY AREA ADD SOIL, RE-SEED THE AREA, AND RE- LAY AND STAPLE THE BLANKET.

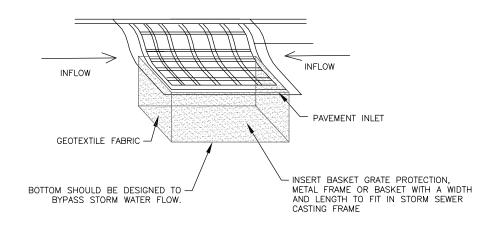
AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA

PERPONENTIAL OF THE PROPERTY OF THE P

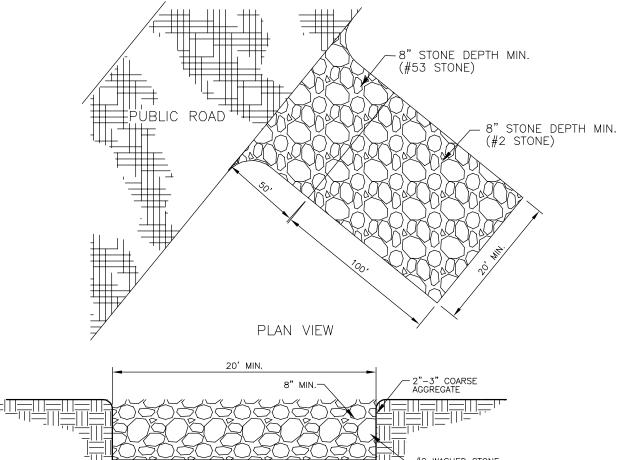
BY FILLING ANY GULLIES, RE-FERTILIZING, OVER-OR RE-SEEDING, AND (LASTING APPOX. 2 WEEK



2. IF INLET PROTECTION BECOMES INEFFECTIVE, REPLACE THE AFFECT PORTION IMMEDIATELY. 3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT. 4. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FABRIC AND SEDIMENT DEPOSITS BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.



INEFFECTIVE, REPLACE THE AFFECT PORTION IMMEDIATELY.

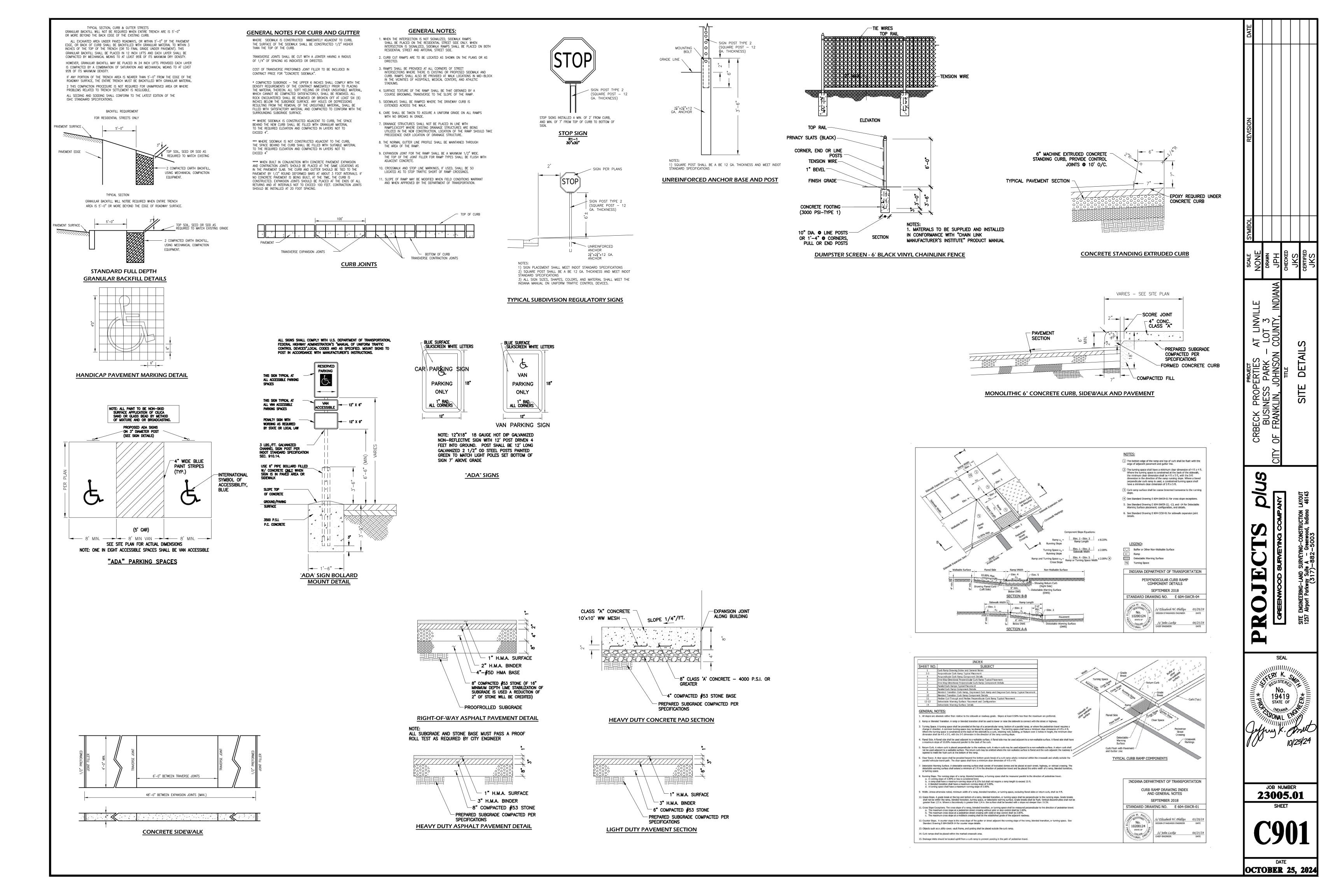


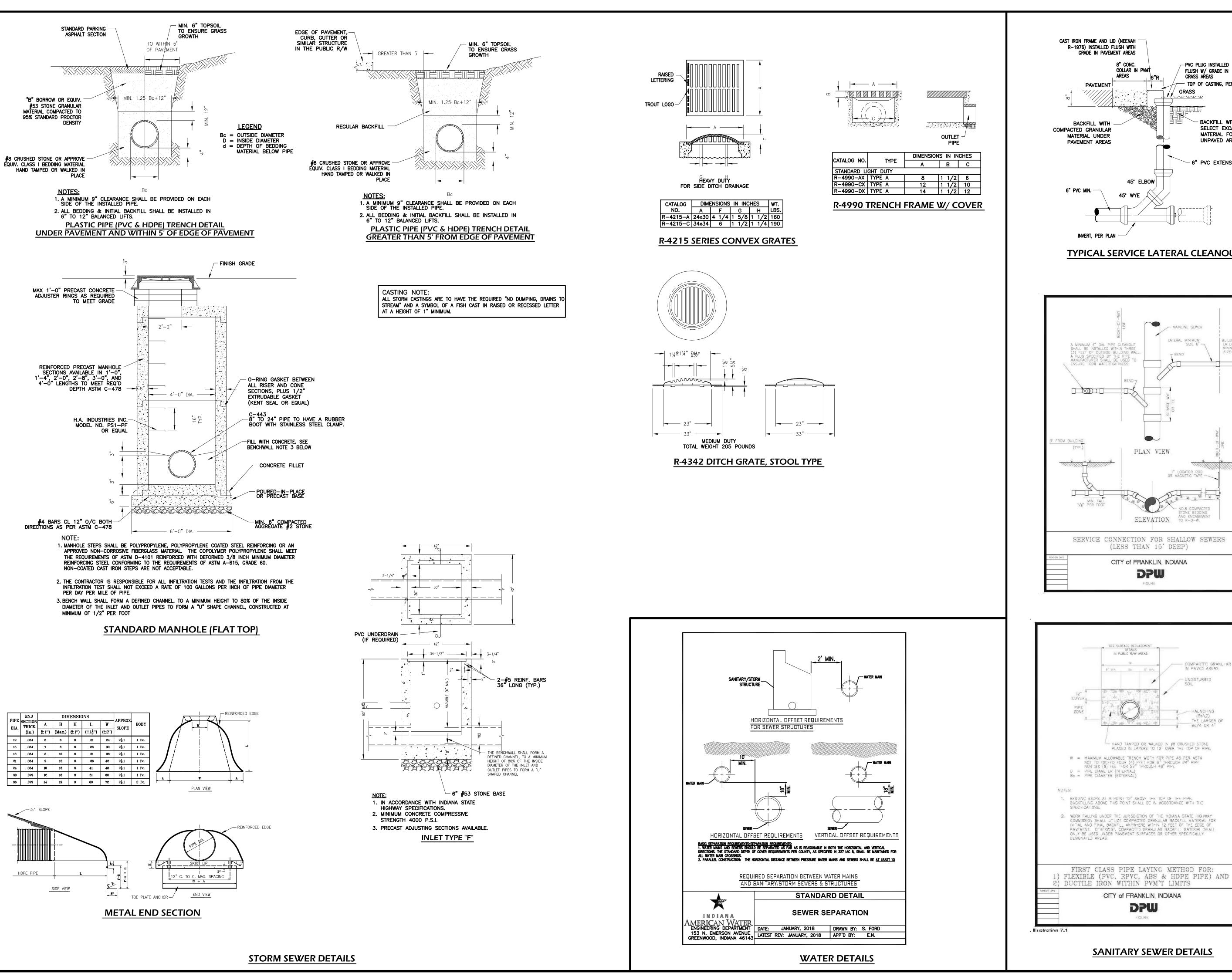
PROFILE VIEW TEMPORARY CONSTRUCTION ENTRANCE DETAIL

COMPACTED SUBGRADE-

AS REQUIRED.

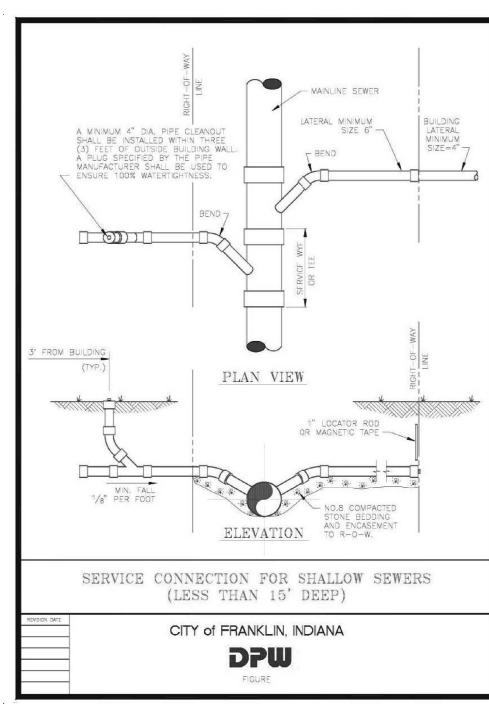
1. STONE SIZE SHALL CONFORM TO ASTM D48 SIZE #1(2" TO 3" DIA.) 2. PERIODIC STONE TOP DRESSING & WASHING

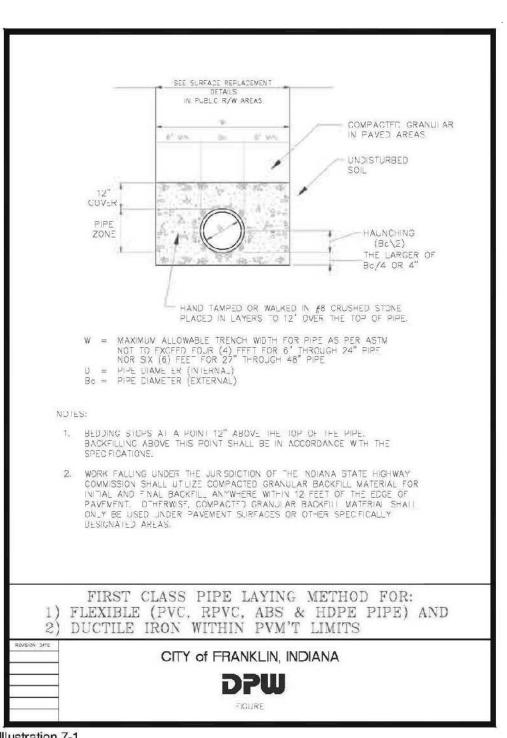




TOP OF CASTING, PER PLAN BACKFILL WITH SELECT EXCAVATED MATERIAL FOR UNPAVED AREAS - 6" PVC EXTENSION

TYPICAL SERVICE LATERAL CLEANOUT





SEAL

LA REGISTERS

No.

19419

STATE OF

JE

**DETAILS** 

23005.01

JOB NUMBER

SITE WORK GENERAL NOTES AND SPECIFICATIONS

WHEREVER A CONFLICT OR DEFICIENCY OCCURS BETWEEN THE CONSTRUCTION STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF FRANKLIN PLANNING AND ENGINEERING DEPARTMENTS. 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

NOTICES AND PERMITS 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. IT SHALL BE THE CONTRACTORS RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES, PRIOR TO STARTING ANY CONSTRUCTION.

IT SHALL BE THE 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. IT IS RECOMMENDED THAT THE DEVELOPER HAVE A QUALIFIED INSPECTOR ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION. . It is essential that the work 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 CLEARING AND GRUBBING SHALL CONSIST OF CUTTING REMOVAL AND SATISFACTORY DISPOSAL OF ALL TREES, DOWN TIMBER, BRUSH, PROJECTING ROOTS, STUMPS, RUBBISH, BOULDERS, BROKEN CONCRETE, FENCING (AS DESIGNATED) 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 ROUGH EDGES OF SCARRED AREAS SHALL BE REMOVED IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICE AND THE SCARS COATED

THOROUGHLY WITH AN ASPHALTIC BASE TREE PAINT 3. ALL "UNSUITABLE MATERIAL" FROM CLEARING OPERATIONS STATED IN ITEM B-1 SHALL BE REMOVED TO DISPOSAL AREA(S) OFF OF 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 DEPARTMENTS.

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

. THE CONTRACTOR SHALL ENDEAVOR TO SAVE AND PROTECT TREES OF VALUE AND WORTH WHICH DO NOT IMPAIR CONSTRUCTION OF IMPROVEMENTS AS DESIGNATED. IN THE EVENT CUT OR FILL EXCEEDS 0.5 FOOT OVER THE ROOT AREA, THE DEVELOPER SHALL BE CONSULTED WITH RESPECT TO PROTECTIVE MEASURES TO BE TAKEN, IF ANY, TO PRESERVE SUCH TREES.

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.

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 REMOVED TO A DEPTH OF SIX (6) INCHES OR DEEPER, 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. . TOPSOIL SHALL BE STORED AT A LOCATION WHERE IT DOES NOT INTERFERE WITH CONSTRUCTION OPERATIONS. EXCESS TOPSOIL SHALL BE USED FOR FINISH GRADING OF SITE. OF DRAINAGE SWALES, YARDS OF NEW RESIDENCES, BUFFER

. TOPSOIL SHALL BE REASONABLY FREE FROM SUBSOILS DEBRIS AND STONES.

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 PROOF ROLLED WITH SUITABLE EQUIPMENT AND ALL SPONGY AND OTHERWISE UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL

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. . 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. . ALL FILL MATERIAL IN AREAS OUTSIDE OF BUILDING AND PAVEMENT AREAS SHALL BE COMPACTED LIGHTLY AND PROTECTED FROM EROSION BY ONE OR MORE OF THE METHODS OF ITEM G. ALL AREAS WHERE BUILDING AND PAVEMENT CONSTRUCTION IS FEASIBLE SHALL NOT HAVE UNSUITABLE MATERIAL PLACED IN THAT LOCATION, AND FILL SHALL BE

. STANDARD SANITARY SEWER CONSTRUCTION

I. CURRENT CITY OF FRANKLIN SPECIFICATIONS SHALL PREVAIL AS TO MATERIALS AND METHODS OF CONSTRUCTION 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR

COMPACTED TO 95% STANDARD PROCTOR OR BETTER.

VERIFYING ALL PERMITS FOR ALL OR PORTIONS OF THIS PROJECT PRIOR TO STARTING ANY CONSTRUCTION. 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 ARE LESS THAN 15 FEET 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 AWWA C-900, DR14.

NOT USED 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

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 DURING CONSTRUCTION, INCLUDING SUMP 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 TILTED UP TO 45 DEGREES FROM THE HORIZONTAL. WITI 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 PROJECTS PLUS WITH "AS-BUILT" LATERAL LOCATIONS. 14. MANHOLE SECTIONS SHALL HAVE "O" RINGS WHICH SHALI

MEET A.S.T.M. C-433. 15. MANHOLE WATERSTOPS SHALL BE INSTALLED AT ALL CONNECTIONS TO MANHOLES, WHERE FLEXIBLE TYPE MANHOLE CONNECTIONS ARE NOT USED.

16. ALL PRECAST MANHOLES SHALL BE BEDDED ON A GRANULAR 17. THE CONTRACTOR SHALL REMOVE BY PUMPING OR OTHER SUITABLE METHODS ANY WATER WHICH MAY ACCUMULATE IN

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTS FOR LEAKAGE, INFILTRATION AND DEFLECTION AS ESTABLISHED BY THE CITY OF FRANKLIN, I.D.E.M. AND THE STATE BOARD OF HEALTH, AND THE SANITARY SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CERTIFIED TESTS RESULTS O THE ENGINEER. ANY PORTIONS NOT PASSING SAID TESTS FOR ACCEPTANCE SHALL BE REPAIRED OR REPLACED AT THE SANITARY SEWER CONTRACTORS EXPENSE, INCLUDING RE-

a. DEFLECTION TEST 1a. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM.

EXCAVATION AND BACKFILL.

1b. NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. IF DEFLECTION EXCEEDS 5 PERCENT, REPLACEMENT OR CORRECTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH REQUIREMENTS IN THE APPROVED SPECIFICATIONS.

1c. 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.

1a. 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-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS TEST PROCEDURES APPROVED

1b. FOR AIR TESTING, (TIME-PRESSURE DROP METHOD) EACH END OF THE SECTIONOF PIPE TO BE TESTED SHALL BE PLUGGED WITH AIR STOPPERS FURNISHED BY THE CONTRACTOR.AIR SHALL SLOWLY BE SUPPLIED TO THE PLUGGED PIPE NSTALLATION 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 2.3 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

1c. 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 GRÉATER 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:

PIPE	MINIMUM	LENGTH FOR	TIME FOR	SPECIFICATION TIME FOR LENGTH (L) SHOWN, MIN;S								
AMETER in.	TIME MINUS.	MINIMUM TIME FT.	LONGER LENGTHS	100 FT.	150 FT.	200 FT.	250 FT.	300 FT.	350 FT.	400 FT.	450 FT.	
4	3:48	597	0.380	3:48	3:48	3:48	3:48	3:48	3:48	3:48	3:48	н.
6	5:40	388	0.854	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24	l
8	7:34	298	1.520	7:34	7:34	7:34	7:34	7:34	8:52	10:06	11:24	l
10	8:26	239	2.374	8:26	8:26	8:26	8:53	11:52	13:51	15:49	17:48	1
12	11:20	199	3.418	11:20	11:24	11:24	14:15	17:06	19:56	22:47	25:38	l
16	14:10	159	5.342	14:10	14:10	17:48	22:15	28:42	31:09	35:38	40:04	l
18	17:00	133	7.892	17:00	19:18	25:38	32.:03	38:27	44:62	51:16	57:41	l
21	19:50	114	10.470	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31	l
24	22:40	99	13.674	22:47	34:11	48:34	56:58	68:22	79:46	81:10	102:33	ı
27	26:30	88	17.808	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48	l
30	28:20	80	21.366	35:37	58:25	71:13	89:02	106:50	124:38	142:26	160:16	l
33	31:10	72	26.852	48:05	64:38	86:10	107:43	128:16	150:43	172:21	193:53	l
36	34:00	68	30.768	51:17	78:66	102:34	128:12	163:50	179:29	205:07	210:46	l

1e. FOR EXFILTRATION TEST, THE INLET END OF THE UPSTREAM AND DOWNSTREAM MANHOLES SHALL BE CLOSED WITH WATERTIGHT 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 EXFILTRATION 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

VACUUM.

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 ASTMC 1244-93 STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE (VACUUM) TEST. CITY OF FRANKLIN MAY HAVE ADDITIONAL REQUIREMENTS.

THE VACUUM TEST EQUIPMENT SHALL CONSIST OF: INFLATABLE PLUGS FOR ALL INCOMING AND OUTGOING SEWER LINES; AN INFLATABLE TEST COLLAR TO SEAL THE MANHOLE AT THE MANHOLE FRAME; AND A VACUUM PUMP. A VACUUM GAUGE SHALL BE LOCATED IN-LINE BETWEEN 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

THE VACUUM TEST SHALL BE CONDUCTED BY PLUGGING ALL INCOMING AND OUTGOING SEWER LINES IN THE MANHOLE AT A LOCATION BEYOND THE CONNECTION OF THE SEWER PIPE WITH THE MANHOLE. ALL PLUGS SHALL BE BLOCKED IN PLACE SO AS NOT TO MOVE DURING THE TEST. THE VACUUM TESTING COLLAR SHALL BE INFLATED 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 THE 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 CONSIDERED NOT ACCEPTABLE AND SHALL BE REJECTED. IF THE TIME IS EQUAL TO OR EXCEEDS THE TIME INDICATED BELOW, THE MANHOLE WORK SHALL BE ACCEPTED.

**MANHOLE** DEPTH (FT.) DIAMETER= 48" FOR EACH ADDITIONAL 2' ADD: 5

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. A LIST OF ALL PERSONS PRESENT. THE DIAMETER AND DEPTH OF THE MANHOLE AND THE ALLOWABLE TEST RESULTS, AND THE ACTUAL TEST

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 STRUCTURES. 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 U-SHAPED WITH THE BENCHWALLS 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

22. NUMBER 53 STONE BACKFILL SHALL BE REQUIRED UNDER ALI PAVEMENT AREAS AND WITHIN 5' OF THE EDGE OF PAVEMENT 23. ALL TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR. 25. THE MINIMUM CELL CLASSIFICATION FOR P.V.C. SHALL BE

12454B OR C PER A.S.T.M. STANDARDS 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 THEN TEN (10) GALLONS PER INCH OF PIPE DIAMETE PER MILE OF PIPE PER DAY, AT THE DESIGNATED TEST

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. SILTATION BASINS

o. SILT TRAPS STRAW BALE DAMS

d. SOIL CEMENT . MULCH AND SEEDING . SOIL STABILIZATION FABRIC

 a. JUTE NETTING 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. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE

WITH THE INDIANA STORM WATER QUALITY MANUAL DATED OCTOBER 2007 BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM). . 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

3. WHERE REINFORCED CONCRETE PIPE IS SHOWN ON THE CONSTRUCTION PLANS, IT SHALL BE IN ACCORDANCE WITH A.S.T.M. C-76 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 ENGINEER AND APPROVED 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 STRUCTURES, HE SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER PRIOR TO ANY CONSTRUCTION. 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. . 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 AND MATERIALS FOR ALL WATER MAIN CONSTRUCTION SHALL MEET CITY OF FRANKLIN UTILITIES AND INDIANA STATE BOARD OF HEALTH

SPECIFICATIONS. c. SEE SANITARY SEWER (F-9a & F9-b) FOR VERTICAL AND HORIZONTAL SEPARATIONS.

d. GRANULAR BACKFILL (NO.53 STONE) SHALL BE REQUIRED FOR ALL UTILITIES CROSSINGS UNDER AND WITHIN 5 FEET OF PAVEMENT, AREAS AND TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED

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 SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR. d. CONCRETE PADS 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 USE THE CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS

2. FLEXIBLE PAVEMENT

. GENERAL: USE LOCALLY AVAILABLE MATERIALS AND GRADATIONS WHICH EXHIBIT A SATISFACTORY RECORD OF PREVIOUS INSTALLATIONS.

d2. 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.

a3. BASE COURT AGGREGATE: 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.

a4. COARSE AGGREGATE FOR SURFACE AND BINDER MIXTURES: CRUSHED STONE, CRUSHED GRAVEL, CRUSHED SLAB, AND SHARP EDGED NATURAL SAND. SURFACE COARSE AGGREGATES SHALL BE CLASS A AND CONFORM TO I.N.D.O.T. STANDARD SPECIFICATIONS SECTION 903.

a5. 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.

d6. PRIME COAT: MEDIUM-CURE LIQUID ASPHALT OR ASPHALT EMULSION CONFORMING TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 408.

a7. TACK COAT: RAPID-CURE LIQUID ASPHALT OR ASPHALT EMULSION CONFORMING TO I.N.D.O.T. STANDARD SPECIFICATION SECTION 409.

a8. LANE MARKING PAINT: CHLORINATED RUBBER-ALKYD TYPE, AASHTO M248 (FS TT-P-115), TYPE III.

a9. SEAL COAT: ASPHALT PAVEMENT SEALER (BLACK) ASTM-

b. ASPHALT-AGGREGATE MIXTURE ALL BITUMINOUS MIXTURES ARE TO CONFORM TO CURRENT I.N.D.O.T. SPECIFICATIONS. CONTRACTOR SHALL PROVIDE A JOB

MIX FORMULA PER EACH TYPE OF ASPHALT PRIOR TO CONSTRUCTION b1. SURFACE COURSE: #11

b2. BINDER COURSE: #8

b3. BASE COURSE: TYPE: #5D

c. SURFACE PREPARATION

c1. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE APPLYING PRIME COAT.

1. PROOF ROLL SUBGRADE SURFACE TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL COMPACTION.

2. NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING. c2. AGGREGATE BASE: AFTER PLACEMENT, PROOF ROLL

COMPACTED AGGREGATE BASE SURFACE TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL 1. NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL

DEFICIENT AGGREGATE BASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING. 2. REMOVE LOOSE MATERIAL FROM COMPACTED AGGREGATE BASE SURFACE IMMEDIATELY BEFORE

APPLYING PRIME COAT.

GAL. PER SQ. YD. OF SURFACE.

c3. 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

1. ALLOW TO DRY UNTIL AT PROPER CONDITION TO RECEIVE PAVING.

2. EXERCISE CARE IN APPLYING BITUMINOUS MATERIALS TO AVOID SMEARING OF ADJOINING SURFACES. REMOVE AND CLEAN DAMAGED

d. PLACING THE MIX

d1. 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 INACCESSIBLE AND SMALL AREAS BY HAND. PLACE EACH COURSE TO REQUIRED GRADE, CROSS-SECTION, AND COMPACTED THICKNESS.

d2. 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

2. SECOND LIFT: SIZE NO. 53.

d3. PRIME COAT: SUBBASE SURFACE SHALL BE PRIMED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 408 OF I.N.D.O.T. STANDARD SPECIFICATIONS.

d4. HOT ASPHALT CONCRETE BINDER COURSE: SPREAD AND ROLL TO MINIMUM FINISH DEPTHS INDICATED ON

d5. TACK COAT: BINDER COURSE SHALL BE TACKED PRIOR TO THE INSTALLATION OF THE SURFACE COURSE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 409 OF I.N.D.O.T. STANDARD SPECIFICATIONS.

d6. SURFACE COURSE: SPREAD AND ROLL TO MINIMUM FINISH DEPTH INDICATED ON DETAILS. FINISH ELEVATION SHALL BE TRUE TO LINE AND GRADE WITHIN 1/2" OF TRUE ELEVATION.

d7. PAVER PLACING: PLACE IN STRIPS NOT LESS THAN 10' WIDE, UNLESS OTHERWISE ACCEPTABLE TO ARCHITECT/ENGINEER. AFTER FIRST STRIP HAS BEEN PLACED AND ROLLED, PLACE SUCCEEDING STRIPS AND EXTEND ROLLING TO OVERLAP PREVIOUS STRIPS. COMPLETE BINDER COURSE FOR A SECTION BEFORE PLACING SURFACE COURSE.

d8. JOINTS: MAKE JOINTS BETWEEN OLD AND NEW PAVEMENTS, OR BETWEEN PAVER PASSES, OR BETWEEN SUCCESSIVÉ DAYS WORK, TO ENSURE CONTINUOUS BOND BETWEEN ADJOINING WORK, CONSTRUCT JOINTS TO HAVE SAME TEXTURE, DENSITY AND SMOOTHNESS AS OTHER SECTIONS. CLEAN CONTACT SURFACES AND APPLY TACK COAT.

e1. GENERAL: BEGIN ROLLING WHEN MIXTURE WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT. 1. COMPACT MIXTURE WITH HOT HAND TAMPERS OR VIBRATING PLATE COMPACTORS IN AREAS

INACCESSIBLE TO ROLLERS.

e2. BREAKDOWN ROLLING: ACCOMPLISH BREAKDOWN OR INITIAL ROLLING IMMEDIATELY FOLLOWING ROLLING OF JOINTS AND OUTSIDE EDGE. CHECK SURFACE AFTER BREAKDOWN ROLLING, AND REPAIR DISPLACED AREAS BY LOOSENING AND FILLING, IF REQUIRED, WITH HOT

e3. SECOND ROLLING: FOLLOW BREAKDOWN ROLLING AS SOON AS POSSIBLE, WHICH MIXTURE IS HOT. CONTINUE SECOND ROLLING UNTIL MIXTURE HAS BEEN THOROUGHLY COMPACTED.

e4. FINISH ROLLING: PERFORM FINISH ROLLING WHILE MIXTURE IS STILL WARM ENOUGH FOR REMOVAL OF ROLLER MARKS, CONTINUE ROLLING UNTIL ROLLER MARKS ARE ELIMINATED AND COURSE HAS ATTAINED MAXIMUM DENSITY.

e5. PATCHING: REMOVE AND REPLACE PAVING AREAS MIXED WITH FOREIGN MATERIALS AND DEFECTIVE AREAS. CUT OUT SUCH AREAS AND FILL WITH FRESH, HOT BITUMINOUS AGGREGATE MIX. COMPACT BY ROLLING TO MAXIMUM SURFACE DENSITY AND SMOOTHNESS.

e6. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED. e7. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC

UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME

e8. SEAL COAT: ALLOW PAVEMENT 30 DAYS TO CURE BEFORE SEALER IS APPLIED, ACCORDING TO MANUFACTURER'S RECOMMENDATIONS APPLY TWO COATS OF PAVEMENT SEALER. DO NOT APPLY SEAL COAT UNTIL AFTER SURFACE COURSE HAS BEEN CHECKED AND ANY IRREGULARITIES OR ERRORS HAVE BEEN SATISFACTORILY CORRECTED.

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

f. TRAFFIC AND LANE MARKINGS

AND NON-BLEEDING.

BY MANUFACTURER.

f1. CLEANING: SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST. f2. STRIPPING: USE CHLORINATED RUBBER BASE TRAFFIC LANE-MARKING PAINT, FACTORY-MIXED, QUICK-DRYING,

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

g. 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

2. TESTING SERVICE SHALL HAVE REPRESENTATIVE

PRESENT TO OBSERVE AND PERFORM TESTS AT ALL TIMES PAVING WORK IS IN PROGRESS. q2. GENERAL: TESTING SERVICE REPRESENTATIVE SHALL TAKE A MINIMUM OF TWO SAMPLES PER LIFT OF BITUMINOUS AGGREGATE MIX EACH DAY BEFORE PAVING

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 SMOOTHNESS. REPAIR OR REMOVE AND REPLACE UNACCEPTABLE PAVING AS DIRECTED BY

OPERATION. LABORATORY TEST SHALL BE PERFORMED

ENGINEER. 2. A TEST SECTION AT A MINIMUM SIZE OF 100' X 12' SHALL BE PLACED AT A LOCATION AS DIRECTED BY THE COUNTY PRIOR TO FULL PRODUCTION FOR EACH TYPE OF MIX. THE TEST SECTION SHALL BE COMPACTED 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. BASE COURSE: 1/2", PLUS OR MINUS. BINDER COURSE: 1/4", 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 CORE: 2 A TEST SECTION AT A MINIMUM SIZE OF 100'x12' SHALL BE PLACED AT A LOCATION AS DIRECTED BY THE COUNTY PRIOR TO FULL PRODUCTION FOR EACH TYPE OF MIX. THE TEST SECTION SHALL BE COMPACTED TO DETERMINE A

TARGET DENSITY OF 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

DIRECTED BY THE ARCHITECT/ENGINEER.

4. PAVEMENT WHICH FAILS TO COMPLY WITH APPROVED JOB MIX FORMULA SHALL BE REPLACED AS

g4. SURFACE SMOOTHNESS: TEST FINISHED SURFACE FOR SMOOTHNESS, USING 10' STRAIGHTEDGE 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.

g5. DENSITY TESTS: DENSITY TESTS SHALL BE MADE AT EACH LIFT. TESTS SHALL BE AS FOLLOWS: 1. TESTS WILL BE REQUIRED AT VARIOUS TIMES AND

q6. 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 AND SUBSECTION 501.07. NO TRAFFIC SHALL BE PERMITTED ON THE PREPARED SUBGRADE PRIOR TO PAVING.

4. SEE GRADING, SECTION "E" FOR ADDITIONAL COMPACTION

LOCATIONS FOR SUBGRADE AND BASE COURSES FOR

L. CONCRETE CURB AND WALKS1. SEE DETAIL SHEET FOR TYPE AND DETAILS.

REQUIREMENTS.

ASPHALT PAVING AREAS.

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 BAG CLASS "A" WITH COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS BEING MINIMUM 4000 P.S.I. WHERE REQUIRED,

S. REINFORCEMENT a. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A-185 . REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615 4. APPLICATION

a. PLACE CONCRETE ONLY ON A MOIST, COMPACTED

SUBGRADE OR BASE FREE FROM LOOSE MATERIAL. PLACE NO CONCRETE ON MUDDY OR FROZEN SUBGRADE. b. CONCRETE SHALL BE DEPOSITED SO AS TO REQUIRE AS LITTLE REHANDLING AS PRACTICABLE. WHEN CONCRETE S TO BE PLACED AT AN ATMOSPHERIC TEMPERATURE OF

35 DEGREES F OR LESS, CURRENT I.N.D.O.T. SPECIFICATIONS SHALL APPLY. c. 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

2. TEMPORARY SEEDING - THE AREAS WHERE STRIPPING, CUTS OR FILLS HAVE BEEN GRADED SHALL BE SEEDED FOR SILT AND EROSION PROTECTION SHALL BE AS PER I.S.W.Q.M.

SPECIFICATIONS (TEMPORARY SEEDING). SEEDING SHA

c. FALL MIX: 100% PERENNIAL RYE

SEEDING RATE 150 LBS./ACRE

a. EARLY SPRING MIX: 100% SPRING OATS SEEDING RATE: 100 LBS./ACRE b. SPRING OR LATE FALL MÍX: 100% ANNUAL RYEGRASS SEEDING RATE: 40 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.

STABLIZERS e. NETTING 4. EROSION CONTROL BLANKET/NETTING - BLANKET IS REQUIRED AT SLOPED AREAS AND CONVEYANCE CHANNELS TO PREVENT EROSION AND PROTECT SOIL AND SEEDING FROM WATER RUNOFF

EROSION CONTROL BLANKETS SHALL BE INSTALLED PER CURREN

CLEATING WITH DOZER TRACKS c. WOOD HYDROMULCH

FIBERS d. SYNTHETIC TACKIFIERS, BINDER OR SOILD

I.S.W.Q.M. SPECIFICATIONS (SURFACE STABILIZTATION).

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