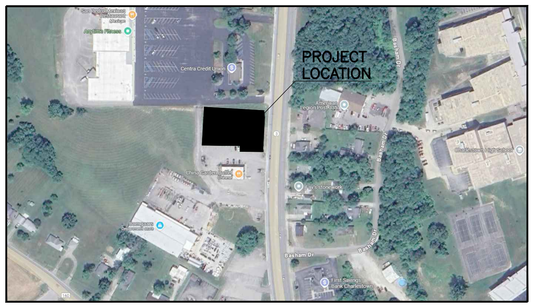
Dunkin'

1095 Market Street (Highway 3)
Charlestown, Indiana 47111

VICINITY MAP

N



LOCATION MAP

UTILITY COMPANIES

GAS – CENTER POINTE ENERGY
6207 High Jackson Rd.
Charlestown, IN 47111
PH: (800) 227–1376

WATER – INDIANA–AMERICAN WATER
4800 N. 825 W.
BOGGSTOWN, IN 46110
PH: (800) 492–8373

STORM SEWER (MS4) UTILITY
304 Main Cross Street
Charlestown, IN 47111
PH: (812) 256–3422

SANITARY SEWER – PUBLIC UTILITY OFFICE
304 Main Cross St.
Charlestown, IN 47111
PH: (812) 256–2427

ELECTRIC – DUKE ENERGY
2727 Central Ave.
Columbus, IN 47201
PH: (800) 521–2232

CHARLESTOWN CITY HALL
304 Main Cross St.
Charlestown, IN 47111
PH: (812) 256–3422

OWNER INFORMATION

om Charlestown realty llc
200 S. Frontage Road, Suite 310
Buff Ridge, IL 60527

PROPOSED PROJECTS ADDRESS

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

BUILDING INFORMATION:

MISCELLANEOUS BUILDING INFORMATION:
OCCUPANCY GROUP: (mixed) A–2
CONSTRUCTION TYPE V–B (non–sprinklered)
TOTAL SQUARE FOOTAGE: 2,187.0 sq.ft.
BUILDING DESIGN TO MEET EARTHQUAKE ZONE ONE
BUILDING TO MEET ADA (AMERICAN DISABILITY ACT)

ENGINEERING AND CERTIFICATION:

VERSATILE
CONSTRUCTION
GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317–535–3579
Cell: 317–509–4142
BaxterEngineeringllc@gmail.com

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UngB	Urban land-Udarents, fragipan substratum, complex, till plain, 0 to 12 percent slopes	0.6	100.0%
Totals for Area of Interest		0.6	100.0%

PLANS CERTIFIED BY:
TRENT A. BAXTER P.E.
REGISTERED P.E. No. 19700309
DATE: May 02, 2025

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER

Trent A Baxter
CERTIFIED BY:

INDEX TO DRAWINGS

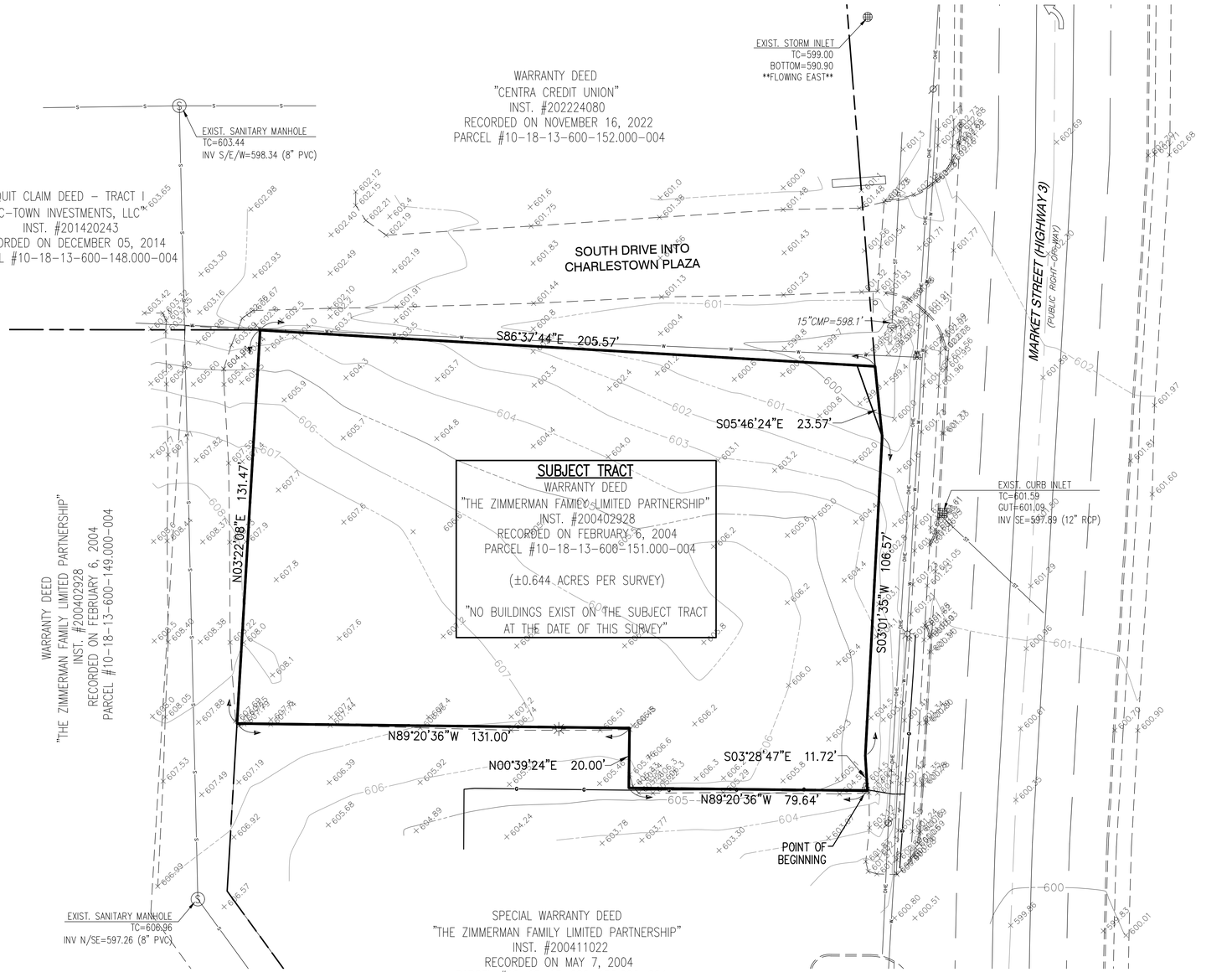
REVISION

09/16/2025	revised per INDOT comments
09/24/2025	revised entry drive, front grading, and sidewalk to public sidewalk
09/24/2025	revised electrical layout per duke
10/10/2025	revised per INDOT comments
12/03/2025	revised stormwater per INDOT comments
01/21/2026	revised address and drive–thru pavement

LEGAL DESCRIPTION:

Being a part of Survey #136 of the Illinois Grant in the Town of Charlestown, Charlestown Township, Clark County, Indiana, being more particularly described as follows:

COMMENCING at a 1"x1" square bolt marking the East corner of said Survey #136; thence South 54 degrees 27 minutes 00 seconds West along the dividing line between Survey #117 and Survey #136 a distance of 1788.00 feet to the centerline of State Road 3 (the next three (3) courses along said centerline); (1) thence North 10 degrees 25 minutes 00 seconds West a distance of 77.30 feet; (2) thence North 08 degrees 03 minutes 00 seconds West a distance of 114.20 feet; (3) thence North 06 degrees 23 minutes 00 seconds West a distance of 58.10 feet; thence North 35 degrees 46 minutes 45 seconds West a distance of 114.32 feet to the West right-of-way of State Road 3 (the next four (4) courses along said right-of-way); (1) thence North 03 degrees 19 minutes 15 seconds West a distance of 31.17 feet; (2) thence North 54 degrees 14 minutes 00 seconds East a distance of 20.15 feet; (3) thence North 00 degrees 39 minutes 24 seconds East a distance of 181.60 feet; (4) thence North 03 degrees 05 minutes 06 seconds West a distance of 87.47 feet to the POINT OF BEGINNING; thence North 89 degrees 20 minutes 36 seconds West a distance of 79.64 feet; thence North 00 degrees 39 minutes 24 seconds East a distance of 20.00 feet; thence North 89 degrees 20 minutes 36 seconds West a distance of 131.00 feet; thence North 03 degrees 22 minutes 08 seconds East a distance of 131.47 feet; thence South 86 degrees 37 minutes 44 seconds East a distance of 205.57 feet to the West right-of-way of State Road 3 (the next three (3) courses along said right-of-way); (1) thence South 05 degrees 46 minutes 24 seconds East a distance of 23.57 feet; (2) thence South 03 degrees 01 minutes 35 seconds West a distance of 106.57 feet; (3) thence South 03 degrees 28 minutes 47 seconds East a distance of 11.72 feet to the POINT OF BEGINNING, containing 0.644 acres, more or less.



BENCHMARK:

ORIGINATING BENCHMARK:
1"x1" SQUARE BOLT FOUND AT THE EAST CORNER OF SURVEY GRANT 136 PER CLARK COUNTY SURVEYOR REFERENCES LOCATED IN THE INTERSECTION OF MONROE STREET AND THE SCHOOL ENTRANCE TO THE CHARLESTOWN HIGH SCHOOL.
ELEVATION= 605.46 (NAVD88)

TEMPORARY ON-SITE BENCHMARK:

TOP OF CASTING OF A SANITARY MANHOLE LOCATED IN A DRIVE ON THE WEST SIDE OF THE SUBJECT TRACT, APPROXIMATELY 60 FEET SOUTH OF THE SOUTHWEST CORNER.
ELEVATION= 606.96 (NAVD88)

FLOOD PLANE INFORMATION:

THIS LOT LIES ENTIRELY IN FLOOD HAZARD ZONE "X" AS SCALED FROM THE F.E.M.A NATIONAL FLOOD HAZARD PANELS FOR CLARK COUNTY, INDIANA, CITY OF CHARLESTOWN, MAP NUMBER 18019C0183E, DATED APRIL 16, 2014.

LEGEND:

- EXISTING WATER MAIN LINE
- EXISTING SANITARY SEWER MAIN LINE
- EXISTING OVERHEAD UTILITY LINE
- EXISTING GAS MAIN LINE
- EXISTING STORM SEWER LINE
- EXISTING STORM SEWER CURB INLET

EXISTING SITE CONDITION PLAN
SCALE: 1"= 20.0'

Know what's below. Call before you dig.

UTILITY DISCLAIMER

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N

REVISION

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TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER

Trent A Baxter

CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

Existing & Site Condition Plan

Job No.	Date Stamped
25002	05/02/2025

Drawn By	Checked By	Scale:
caw	tab	1"= 20.0'

CAD FILE:
G:\25002\c100 existing site condition plan.dwg

SHEET TITLE:

C100

GENERAL PROPOSED SITE INFORMATION:

DESCRIPTIONS:	AREAS:
BUILDING AREAS:	
PROPOSED BUILDING:	2,187.00 sq.ft.
TOTAL PROJECT AREA:	0.644± acres
ZONING:	
PROPERTY ZONING:	HISTORIC DOWNTOWN DISTRICT
NORTH ZONING:	HISTORIC DOWNTOWN DISTRICT
SOUTH ZONING:	HISTORIC DOWNTOWN DISTRICT
EAST ZONING:	HISTORIC DOWNTOWN DISTRICT
WEST ZONING:	HISTORIC DOWNTOWN DISTRICT
PARKING INFORMATION:	
PARKING SPACES REQUIRED:	
RESTAURANT:	
1 PER 400.0 sq.ft. & 1 PER 2 EMPLOYEES	5 EMPLOYEES
TOTAL PARKING REQUIRED:	9 SPACES
TOTAL PARKING PROVIDED:	24 SPACES (inc. 1 HDCP SPACE)
PROPERTY BUILDING SET-BACKS:	
NORTH SIDE YARD:	0.0'
SOUTH SIDE YARD:	0.0'
EAST FRONT YARD:	12.0' (MIN.) 22.0' (MAX.)
WEST REAR YARD:	0.0'

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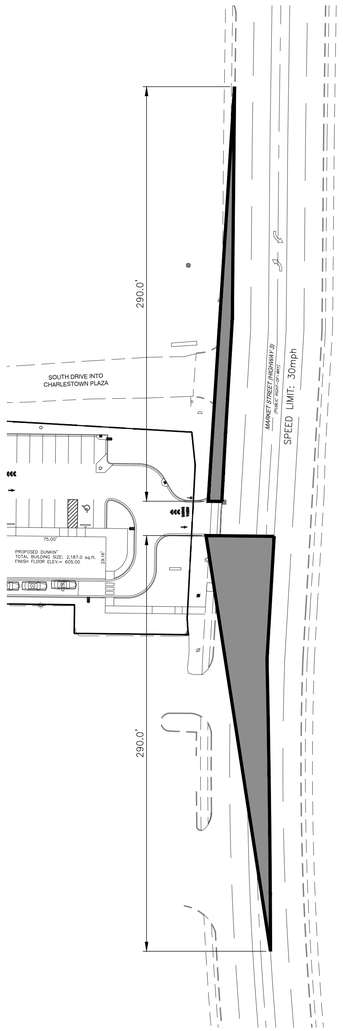
GENERAL NOTES:

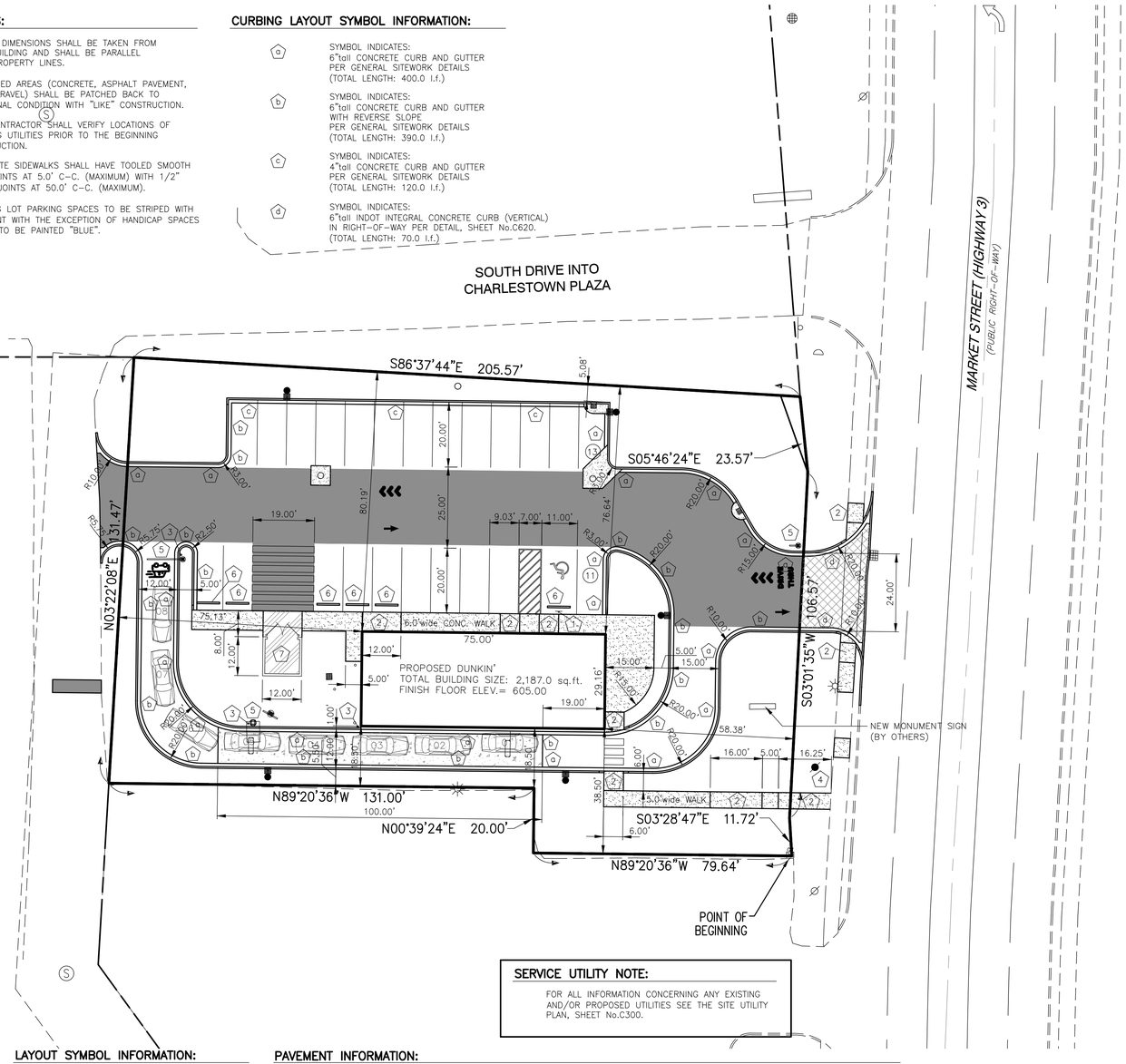
1. ALL LAYOUT DIMENSIONS SHALL BE TAKEN FROM THE NEW BUILDING AND SHALL BE PARALLEL WITH THE PROPERTY LINES.
2. ALL DISTURBED AREAS (CONCRETE, ASPHALT PAVEMENT, DIRT, AND GRAVEL) SHALL BE PATCHED BACK TO THEIR ORIGINAL CONDITION WITH "LIKE" CONSTRUCTION.
3. GENERAL CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION.
4. ALL CONCRETE SIDEWALKS SHALL HAVE TOOLED SMOOTH CONTROL JOINTS AT 5.0' C-C. (MAXIMUM) WITH 1/2" EXPANSION JOINTS AT 50.0' C-C. (MAXIMUM).
5. ALL PARKING LOT PARKING SPACES TO BE STRIPED WITH "WHITE" PAINT WITH THE EXCEPTION OF HANDICAP SPACES WHICH ARE TO BE PAINTED "BLUE".

CURBING LAYOUT SYMBOL INFORMATION:

- (a) SYMBOL INDICATES: 6"tall CONCRETE CURB AND GUTTER PER GENERAL SITEWORK DETAILS (TOTAL LENGTH: 400.0 l.f.)
- (b) SYMBOL INDICATES: 6"tall CONCRETE CURB AND GUTTER WITH REVERSE SLOPE PER GENERAL SITEWORK DETAILS (TOTAL LENGTH: 390.0 l.f.)
- (c) SYMBOL INDICATES: 4"tall CONCRETE CURB AND GUTTER PER GENERAL SITEWORK DETAILS (TOTAL LENGTH: 120.0 l.f.)
- (d) SYMBOL INDICATES: 6"tall INDOT INTEGRAL CONCRETE CURB (VERTICAL) IN RIGHT-OF-WAY PER DETAIL, SHEET No.C620. (TOTAL LENGTH: 70.0 l.f.)



SITE DISTANCE TRIANGLES PLAN
SCALE: 1"= 50.0'



SITE LAYOUT PLAN
SCALE: 1"= 20.0'

SERVICE UTILITY NOTE:

FOR ALL INFORMATION CONCERNING ANY EXISTING AND/OR PROPOSED UTILITIES SEE THE SITE UTILITY PLAN, SHEET No.C300.

LAYOUT SYMBOL INFORMATION:

- (1) METAL HANDICAP PARKING SIGN (SEE SITEWORK DETAILS)
- (2) CONCRETE HANDICAP RAMPS (SEE SITEWORK DETAILS)
- (3) 6" (CONC. FILLED) PIPE BOLLARDS (SEE SITEWORK DETAILS)
- (4) NEW POWER POLE AND POLE MOUNTED TRANSFORMER LOCATION (CONSTRUCTED AND EXACT PLACEMENT PER LOCAL POWER COMPANY)
- (5) MENU BOARD AND SPEAKER POST (EXACT PLACEMENT, SIZE, TYPE -INC. FOUNDATION BY OTHERS) NOTE: ALL DUNKIN' SIGNS, HEIGHT BARS, MENU BOARDS, SPEAKER POST, ETC. AND ANYTHING ELSE CONCERNING THE DRIVE-THRU ELECTRICAL REQUIREMENTS SHALL BE BY OTHERS
- (6) PREFABRICATED CONCRETE PARKING BUMPERS (SEE SITEWORK DETAILS)
- (7) CONCRETE BLOCK DUMPSTER ENCLOSURE (SEE SITEWORK DETAILS)
- (*) SYMBOL INDICATED THE NUMBER OF PARKING SPACING SHOWN IN A PARTICULAR ROW

PAVEMENT INFORMATION:

NO HATCH INDICATES: NORMAL DUTY PAVEMENT OF 1 1/2" HOT ASPHALT SURFACE OVER 2" BITUMINOUS BASE ON 6" COMPACTED No.53 STONE BASE ON COMPACTED SUB-GRADE TOTAL AREA: 6,400.0 sq.ft. (SEE SITEWORK DETAILS)

HATCH INDICATES: HEAVY DUTY PAVEMENT OF 1 1/2" HOT ASPHALT SURFACE OVER 4" BITUMINOUS BASE ON 8" COMPACTED No.53 STONE BASE ON COMPACTED SUB-GRADE TOTAL AREA: 5,875.0 sq.ft. (SEE SITEWORK DETAILS)

HATCH INDICATES: 6" CONCRETE SLAB WITH 6-6-6 W.W.F. OVER 6" COMPACTED GRANULAR FILL ON COMPACTED SUB-GRADE TOTAL AREA: 1150.0 sq.ft. (SEE SITEWORK DETAILS)

HATCH INDICATES: 7" CONCRETE SLAB WITH 6-6-6 W.W.F. OVER 6" COMPACTED GRANULAR FILL ON COMPACTED SUB-GRADE TOTAL AREA: 225.0 sq.ft. (SEE SITEWORK DETAILS)

HATCH INDICATES: RIGHT-OF-WAY PAVEMENT OF 9" PCCP (CONCRETE) SURFACE ON DENSE GRADED SUBBASE 6 in., ON GEOGRID TYPY 1B, ON SUBGRADE TREATMENT TYPE II (6 in. COARSE AGGREGATED No. 53) TOTAL AREA: 525.0 sq.ft. (SEE SITEWORK DETAILS)

HATCH INDICATES: 4" CONCRETE SIDEWALK WITH 6-6-6 W.W.F. OVER 4" COMPACTED GRANULAR FILL ON COMPACTED SUB-GRADE TOTAL AREA: 1,725.0 sq.ft. (SEE SITEWORK DETAILS)

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N

REVISION

09/24/2025	revised entry drive, front grading, and sidewalk to public sidewalk
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Trent A Baxter

CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

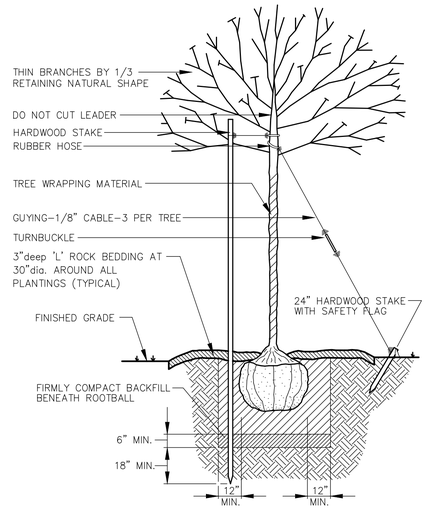
Site Layout Plan

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: 1"= 20.0'	

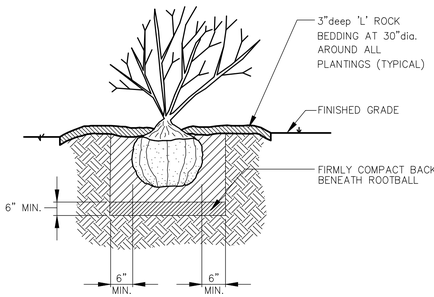
CAD FILE: G:\25002\c200 site layout plan.dwg

SHEET TITLE:

C200



TREE PLANTING DETAIL
NO SCALE



SHRUB PLANTING DETAIL
NO SCALE

SHRUB AND TREE PLANTING NOTES:

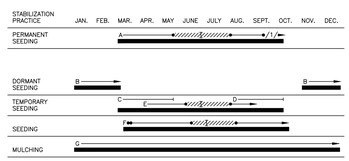
1. GROUND LINE TO BE THE SAME AS NURSERY. ROOTBALL RAISED 1 1/2" ABOVE FIN. GRADE TO ALLOW FOR SETTLING.
2. CONSTRUCT 3"deep 'L' ROCK RING AROUND ALL TREES & SHRUBS. FLOOD TWICE W/ IN 24 HRS.
3. CUT AND REMOVE BURLAP FROM TOP OF ROOTBALL.

PLANTING SPECIFICATIONS:

1. ALL PLANT MATERIALS SHALL CONFORM TO THE STANDARDS SET FORTH IN THE CURRENT EDITION OF THE AMERICAN STANDARDS NURSERY STOCK OF NURSERYMEN. PLANTS SHALL BE TYPICAL OF SPECIES AND VARIETY, AND HAVE NORMAL, WELL-DEVELOPED BRANCHING STRUCTURE AND VIGOROUS FIBROUS ROOT SYSTEM.
2. PLANTS SHALL BE HEALTHY, VIGOROUS PLANTS FREE FROM INSECTS AND DISEASE. TRUNK AND STEMS SHALL BE FIRM WITH NO INDICATION OF FUNGUS CANKERS OR CALLS, INSECT BORERS, DIEBACK, FRONT CRACKS, OR OTHER DEFECTS.
3. ALL PLANTS SHALL BE COMMERCIALLY GROWN AND NO PLANTS FROM THE WILD SHALL BE ACCEPTABLE WITHOUT SPECIFIC APPROVAL FROM THE DIVISION OF BUILDING INSPECTION.
4. TREES SHALL NOT BE ACCEPTABLE IF THEIR CENTRAL LEADER HAS BEEN CUT OR IS DAMAGED SO THAT CUTTING IS NECESSARY.
5. PLANTS SHALL NOT BE PRUNED PRIOR TO INSTALLATION. ANY NECESSARY PRUNING SHALL BE DONE IMMEDIATELY AFTER THE TIME OF INSTALLATION.
6. PLANT HEIGHT SHALL BE MEASURED BEFORE PRUNING WITH BRANCHES IN A NORMAL POSITION. NO PLANT SHALL BE PRUNED BACK TO SUCH AN EXTENT THAT IT NO LONGER MEETS THE REQUIRED SIZE SPECIFICATIONS.
7. ALL DECIDUOUS AND EVERGREEN TREES SHALL BE BALLED AND BURLAPPED. NO BARE ROOT TREES SHALL BE ACCEPTABLE.
8. THE MINIMUM SIZE OF BALLS, BALL DEPTHS, AND BALL DIAMETERS SHALL BE IN ACCORDANCE WITH RECOMMENDED BALLING AND BURLAPPING SPECIFICATIONS AS SET FORTH IN THE CURRENT EDITION OF THE AMERICAN STANDARDS OF NURSERY STOCK.
9. ALL BALLED AND BURLAPPED PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY SHALL BE SEALED IN AND PROTECTED WITH BURLAP OR OTHER ACCEPTED MATERIAL.
10. IDEAL TREES SELECTED FOR THIS PROJECT HAVE A STRAIGHT TRUNK, ROUNDED OR OVAL FORM, AND SYMMETRICAL BRANCHING PATTERN.
11. ALL TREES AND SHRUBS SHOWN ON THIS DRAWING SHALL BE PLACED IN A MANNER TO ALLOW FOR AMPLE ROOM TO DEVELOP.
12. IF WORK IS REQUIRED WITHIN THE EASEMENTS CAUSING REMOVAL OR DAMAGE OF LANDSCAPE MATERIALS, THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR REPLACEMENT OF MATERIALS ACCORDING TO THE APPROVED LANDSCAPE PLAN.
13. INSTALLATION OF A WEED BARRIER IS REQUIRED IN ALL MULCHED/ LANDSCAPED AREAS.

Seasonal Soil Protection Chart

TABLE "A"
SEASONAL SOIL PROTECTION CHART



A= KENTUCKY BLUEGRASS 40 LBS/ACRE; CREEPING RED FESCUE 40 LBS/ACRE; PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 20 LBS/ACRE.

B= KENTUCKY BLUEGRASS 60 LBS/ACRE; CREEPING RED FESCUE 60 LBS/ACRE; PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 30 LBS/ACRE.

C= SPRING OATS 3BUSHEL/ACRE.

D= WHEAT OR RYE 2 BUSHEL/ACRE.

E= ANNUAL RYEGRASS 40 LBS/ACRE. (1 LB/1,000 S.F.)

F= SOD.

G= STRAW MULCH 2 TONS/ACRE.

•/•= IRRIGATION NEEDED DURING JUNE, JULY AND / OR SEPT.

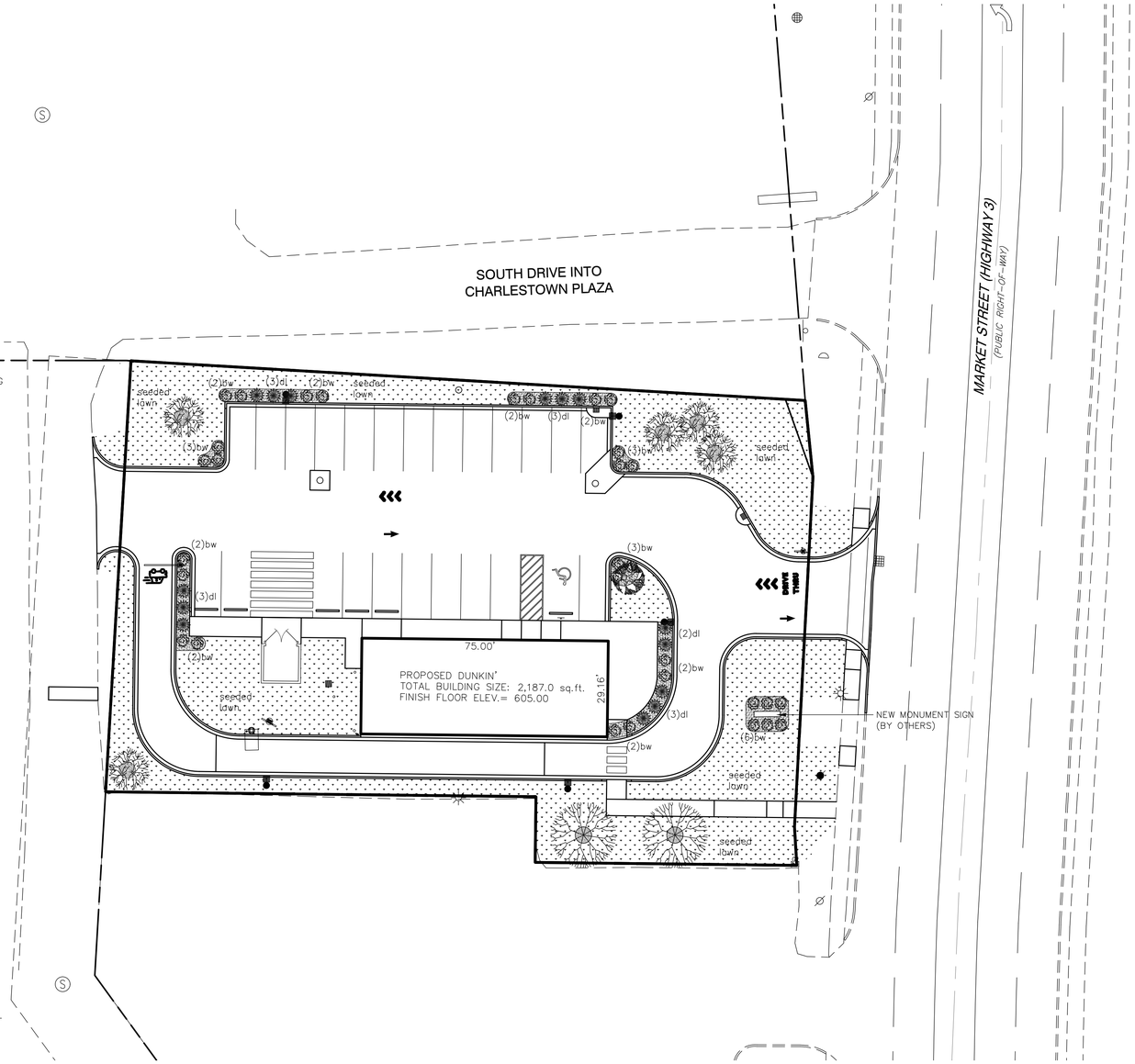
•• = IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

Landscaping Notes

1. All plant materials to meet minimum standards set by American Association of Nurserymen, latest published addition of American Standard for Nursery Stock.
2. All areas disturbed by construction and not otherwise paved or landscaped and all lawn areas shall be seeded with straw as specified.
3. All lawn areas to be raked smooth, fertilized and watered prior to seeding.

% of mix.	Name of grass	Application
39.86%	Falcon IV tall fescue	1.5 #/1,000 sq.ft.
29.80%	Scorpion II tall fescue	1.5 #/1,000 sq.ft.
29.60%	Six point tall fescue	1.5 #/1,000 sq.ft.
00.72%	Inert	1.5 #/1,000 sq.ft.
00.02%	Other weeds	1.5 #/1,000 sq.ft.

4. Planting soil for tree and shrub pits to be backfilled with the soil that was removed from the planting pit.



SITE LANDSCAPING PLAN
SCALE: 1"= 20.0'

NOTE:
ALL DISTURBED AREAS (OVER THIS ENTIRE PROJECT DEVELOPMENT) SHALL BE FINISH GRADED AND SEEDED PER EROSION CONTROL PLANS PRIOR TO COMPLETION.

LANDSCAPE LEGEND:

EVERGREEN SHADE TREES:
BOTANICAL NAME: PICEA ABIES
COMMON NAME: NORWAY SPRUCE
CALIPER: 2" (single stem)
QUANTITY: 02
5.0'dia. MULCH BEDDING

DECIDUOUS ORNAMENTAL TREES:
BOTANICAL NAME: CERCIS CANADENSIS
COMMON NAME: EASTERN REDBUD
CALIPER: 1 1/2" (single stem)
QUANTITY: 05
5.0'dia. MULCH BEDDING

DECIDUOUS ORNAMENTAL TREE:
BOTANICAL NAME: LIRIODENDRON TULIPIFERA
COMMON NAME: TULIP TREE
CALIPER: 1 1/2" (single stem)
QUANTITY: 01
5.0'dia. MULCH BEDDING

(*)bw
EVERGREEN SHRUB:
BOTANICAL NAME: BUXUS CALYCANTHUS
COMMON NAME: MELANOCARPA BOXWOOD
HEIGHT AT PLANTING: 24" (MIN)
QUANTITY: 31
(MATURE HT.= 24"tall)

(*)dl
DECIDUOUS SHRUB:
BOTANICAL NAME: SYRINGA MEYERI 'PALIBIN'
COMMON NAME: DWARF LILAC
HEIGHT AT PLANTING: 24" (MIN)
QUANTITY: 14
(MATURE HT.= 36"tall)

HATCH INDICATES:
AREAS OF LAWN (SEEDED) ON THIS PROJECT

HATCH INDICATES:
AREAS OF MULCH BEDDING ON THIS PROJECT

Indiana 811
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N

REVISION
09/24/2025 revised entry drive, front grading, and sidewalk to public sidewalk
10/10/2025 revised per INDOT comments
12/03/2025 revised stormwater per INDOT comments

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER
Trent A Baxter
CERTIFIED BY:

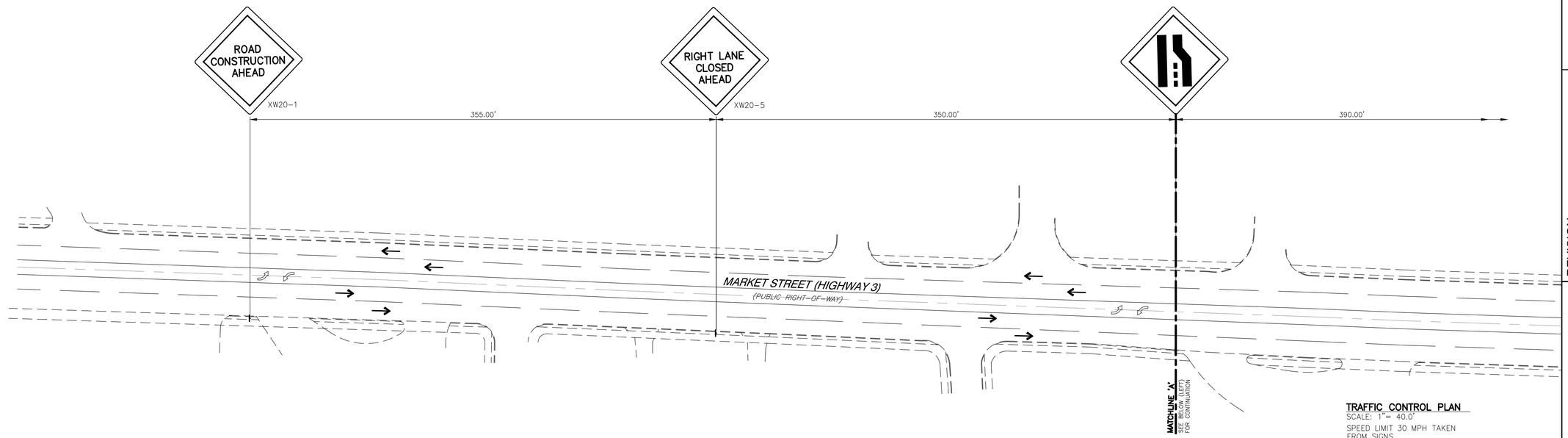
Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

Site Landscaping & Plan

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: 1"= 20.0'	

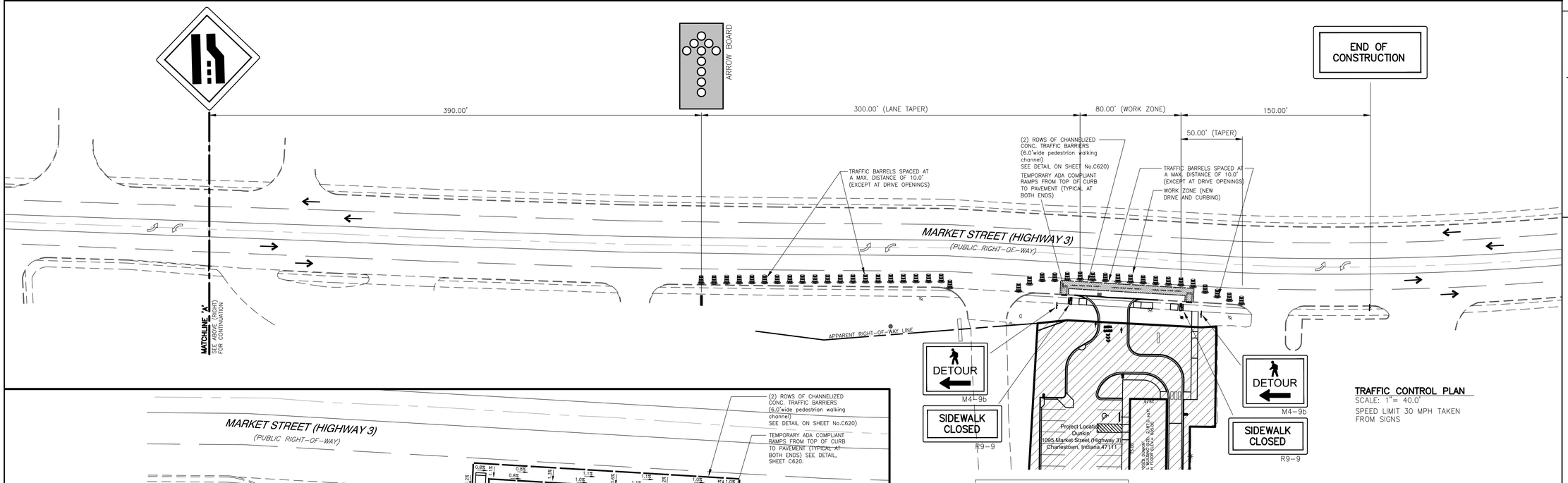
CAD FILE:
G:\25002\C200 site landscaping plan.dwg

SHEET TITLE:
C210



TRAFFIC CONTROL PLAN
SCALE: 1"= 40.0'

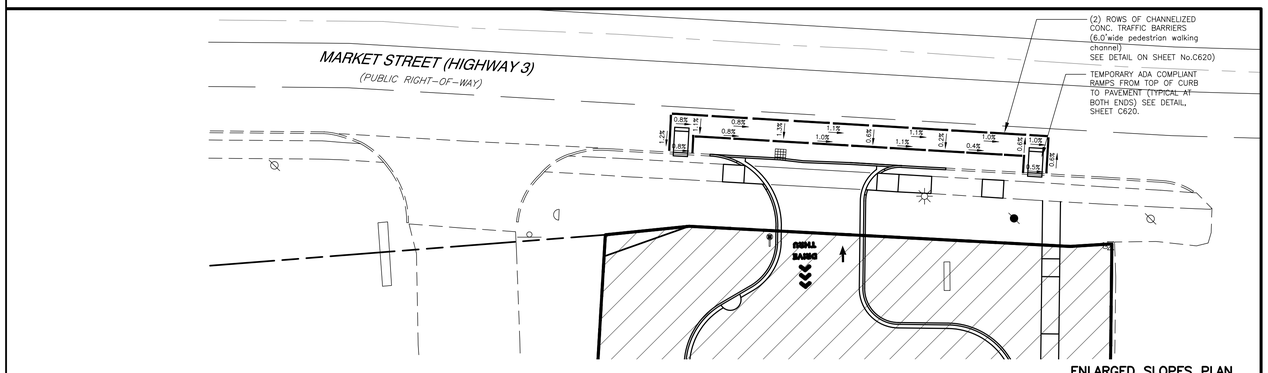
SPEED LIMIT 30 MPH TAKEN FROM SIGNS



TRAFFIC CONTROL PLAN
SCALE: 1"= 40.0'

SPEED LIMIT 30 MPH TAKEN FROM SIGNS

NOTE:
LANE CLOSURES WILL REMAIN IN PLACE WHILE ALL WORK BEING DONE IN THE RIGHT-OF-WAY IS COMPLETED.



ENLARGED SLOPES PLAN
SCALE: 1"= 20.0'

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Trent A Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

Site Traffic Control Plan

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: 1"= 20.0'	

CAD FILE:
G:\25002\c220 site traffic control plan.dwg

SHEET TITLE:
C220

Indiana 811
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UTILITY CONSTRUCTION NOTES:

1. Site Contractor shall have approval of all governing agencies having jurisdiction over these systems prior to any installations.
2. The Sanitary Sewer pipe material shall be pvc unless otherwise noted. All pipes shall meet the ASTM 3034 with the wall thickness equal to SDR 35. The pipe shall be joined with rubber ring gaskets as specified in ASTM 3034 and shall be installed in accordance with ASTM 2321. Furthermore the pipe material cell classification shall be 12454B as per ASTM 1784.
3. All trenching, pipe laying, and backfilling shall be in accordance with all federal OSHA regulations.
4. Site contractor shall be responsible for repairs to any existing utilities damaged during construction.
5. The contractor shall refer to the Architect's plans and specifications for the actual location of all utility entrances to include sanitary sewer laterals, domestic and fire protection water services, electrical, telephone, and gas services. The contractor shall coordinate installation of utilities in such a manner as to avoid conflicts and assure proper depths are achieved, as well as coordinating with the regulatory agency as to the location and scheduling of all tie-ins/connections to said services.
6. All vertical bends on the proposed water mains shall be restrained with a mechanical joint fittings supplied with retainer glands. Any joints 25 feet or less from either side of the vertical bends shall be restrained with a retainer gland.
7. All dimensions shown here are to centerline of pipe, fitting, or structure.
8. All valves shall be installed in a cast iron valve box with cover.
9. Thrust blocking shall be provided at all horizontal bends, tees, and fire hydrants.
10. The minimum cover depths of all water line/mains shall be 54" deep.
11. All pipes 3" in diameter and smaller shall be type K copper. All fittings shall be copper or cast bronze. All joints shall be solder or flare type joints.
12. The minimum horizontal separation between the closest two points of the water service and sanitary sewer service lines is to be ten feet (10'). The minimum vertical separation between the closest two points of the water service and sanitary sewer service lines is twenty-four inches (24").
13. All water mains shall be hydrostatically tested and disinfected before acceptance, as per AWWA standard specifications.

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION (TICKET No.2411044992, Date: 11/04/2024) AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

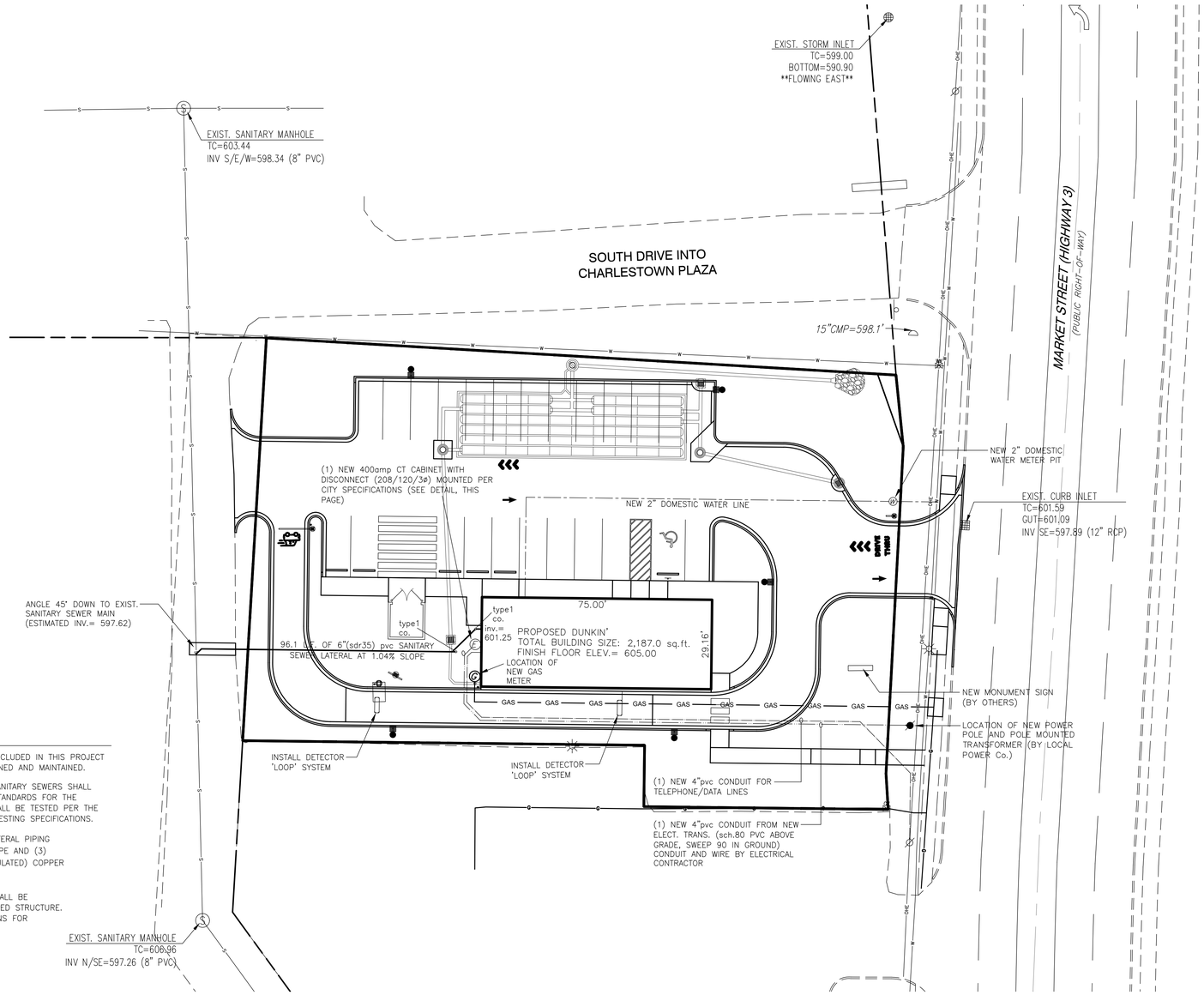
PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES. CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, AND SANITARY SEWER. ANY CONFLICTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND THE APPROPRIATE AUTHORITIES.

WATER SERVICE NOTE:

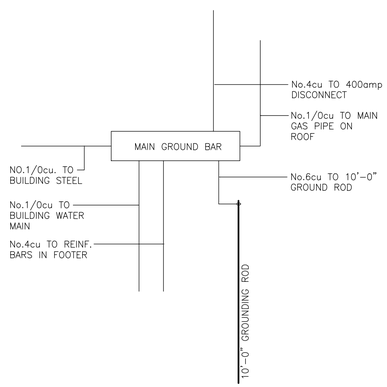
1. ALL WATER LINES INCLUDED IN THIS PROJECT SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. ALL NEWLY INSTALLED WATER LINES SHALL MEET OR EXCEED THE STANDARDS FOR PUBLIC UTILITIES AND SHALL BE TESTED PER THE CITY OF CHARLESTOWN TESTING SPECIFICATIONS.
3. ALL NEWLY INSTALLED WATER METERS SHALL BE OBTAINED FROM THE LOCAL WATER COMPANY.
4. ALL WATER SERVICE PIPING SHALL HAVE WARNING TAPE AND (3) STRANDS OF 10ga. (INSULATED) COPPER LOCATOR WIRE (typical)

SANITARY SEWER NOTES:

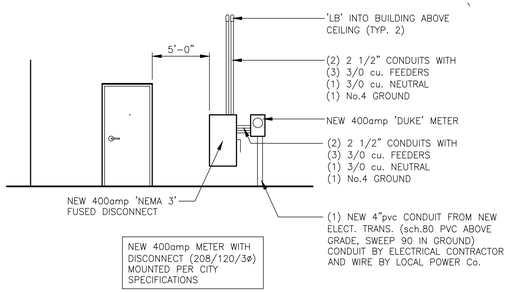
1. ALL SANITARY SEWERS INCLUDED IN THIS PROJECT SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. ALL NEWLY INSTALLED SANITARY SEWERS SHALL MEET OR EXCEED THE STANDARDS FOR THE PUBLIC SEWERS AND SHALL BE TESTED PER THE CITY OF CHARLESTOWN TESTING SPECIFICATIONS.
3. ALL SANITARY SEWER LATERAL PIPING SHALL HAVE WARNING TAPE AND (3) STRANDS OF 10ga. (INSULATED) COPPER LOCATOR WIRE (typical)
4. GREASE INTERCEPTOR SHALL BE LOCATED IN THE PROPOSED STRUCTURE. SEE ARCHITECTURAL PLANS FOR LOCATION AND SIZE.



SITE UTILITY PLAN
SCALE: 1"= 20.0'



GROUNDING RISER
scale: n.t.s.



NEW 400amp METER WITH DISCONNECT (208/120/3ø) MOUNTED PER CITY SPECIFICATIONS

ELECTRICAL RISER DIAGRAM
scale: n.t.s.

LEGEND:

- EXISTING WATER MAIN LINE
- EXISTING SANITARY SEWER MAIN LINE
- EXISTING OVERHEAD UTILITY LINE
- EXISTING GAS MAIN LINE
- EXISTING STORM SEWER LINE
- EXISTING STORM SEWER CURB INLET
- PROPOSED WATER SERVICE LINE
- PROPOSED SANITARY SEWER SERVICE LINE
- SCREW TOP SANITARY SEWER CLEANOUTS
- type 1 co. (PER SITEWORK DETAILS)
- type 2 co. (PER SITEWORK DETAILS)
- PROPOSED UNDERGROUND ELECTRICAL LINE
- PROPOSED ELECTRICAL METER
- PROPOSED UNDERGROUND COMMUNICATION LINES
- PROPOSED GAS LINES
- PROPOSED GAS METERS
- PROPOSED STORM SEWER PIPES
- PROPOSED STORM SEWER MANHOLES AND INLETS

NOTE:
ALL DUNKIN' SIGNS, HEIGHT BARS, MENU BOARDS, SPEAKER POST, ETC. AND ANYTHING ELSE CONCERNING THE DRIVE-THRU ELECTRICAL REQUIREMENTS SHALL BE BY OTHERS

SERVICE UTILITY NOTE:

FOR ALL INFORMATION CONCERNING ANY EXISTING AND/OR PROPOSED STORM WATER UTILITIES SEE THE SITE GRADING PLAN, SHEET No.C400 AND C410.

ELECTRICAL NOTE:

TOP OF ALL NEW ELECTRICAL SERVICE CONDUITS SHALL BE INSTALLED AT A MINIMUM OF 36" BELOW FINISH GRADE.

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REVISION

09/24/2025	revised entry drive, front grading, and sidewalk to public sidewalk
09/24/2025	revised electrical layout per duke
10/10/2025	revised per INDOT comments
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Trent A Baxter
CERTIFIED BY:

Dunkin'
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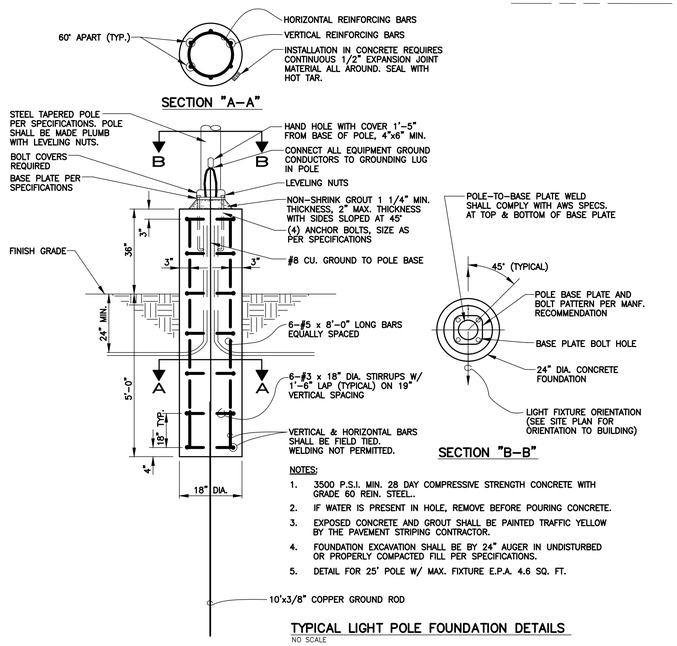
Charlestown, Indiana 47111

Site Utility Plan

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: 1"= 20.0'	

CAD FILE: G:\25002\c300 site utility plan.dwg

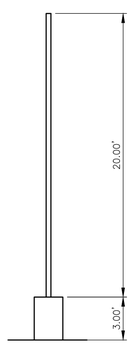
SHEET TITLE:
C300



NOTES:

1. 3500 P.S.I. MIN. 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REIN. STEEL..
2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
3. EXPOSED CONCRETE AND GROUT SHALL BE PAINTED TRAFFIC YELLOW BY THE PAVEMENT STRIPING CONTRACTOR.
4. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
5. DETAIL FOR 25' POLE W/ MAX. FIXTURE E.P.A. 4.6 SQ. FT.

TYPICAL LIGHT POLE FOUNDATION DETAILS
NO SCALE



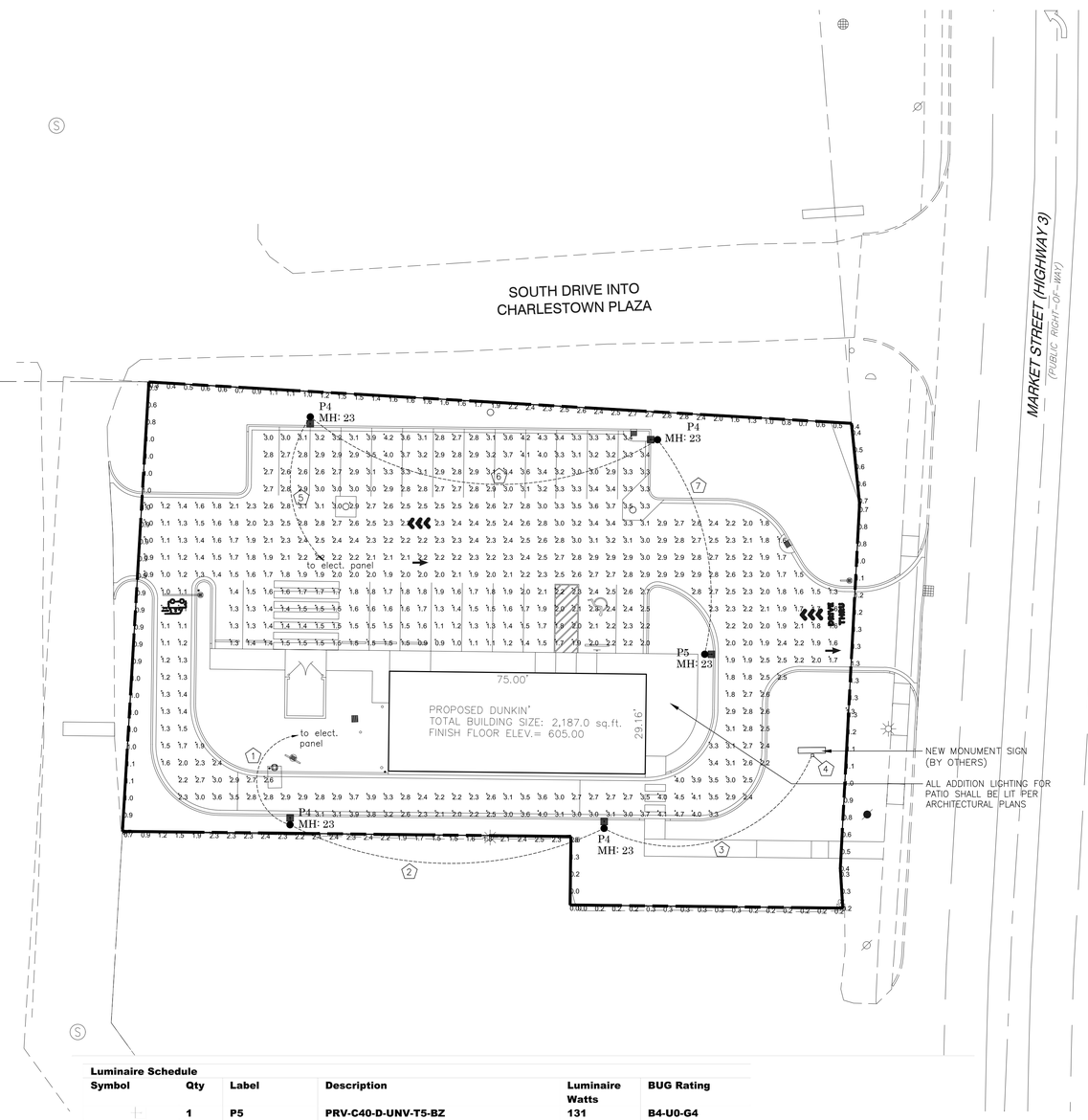
TYPICAL SITE LIGHT POLES ELEVATION
NO SCALE

SITE LIGHTING NOTE:

1. ALL ADDITION LIGHTING FOR PATIO SHALL BE LIT PER ARCHITECTURAL PLANS
2. SEE ARCHITECTURAL PLANS FOR EXACT PLACEMENT OF ALL WALL MOUNTED LIGHTING FIXTURES.

SITE LIGHTING WIRING INFORMATION:

1. (1) 1"pvc CONDUIT WITH (2) No.8 FEEDERS (1) No.8 NEUTRAL (1) No.10 GROUND
2. (1) 1"pvc CONDUIT WITH (2) No.10 FEEDERS (1) No.10 NEUTRAL (1) No.10 GROUND
3. (1) 1"pvc CONDUIT WITH (2) No.12 FEEDERS (1) No.12 NEUTRAL (1) No.12 GROUND
4. (1) 6"x 6"x 6"pvc JUNCTION BOX
5. (1) 1"pvc CONDUIT WITH (2) No.8 FEEDERS (1) No.10 GROUND
6. (1) 1"pvc CONDUIT WITH (2) No.10 FEEDERS (1) No.10 GROUND
7. (1) 1"pvc CONDUIT WITH (2) No.12 FEEDERS (1) No.12 GROUND



SITE PHOTOMETRIC PLAN
SCALE: 1"= 20.0'

Luminaire Schedule					
Symbol	Qty	Label	Description	Luminaire Watts	BUG Rating
	1	P5	PRV-C40-D-UNV-T5-BZ	131	B4-U0-G4
	4	P4	PRV-C40-D-UNV-T4-BZ-HSS	131	B2-U0-G4

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking Lot	Illuminance	Fc	2.37	4.7	0.9	2.63	5.22
Property Line	Illuminance	Fc	1.19	2.8	0.0	N.A.	N.A.

Luminaires & Lamps Furnished By Villa Lighting Inc. St Louis, MO. 63103
(800)325-0963
www.villalighting.com

The electrical contractor shall be responsible for receiving, storage, installation and wiring of light fixtures.

The electrical contractor shall report any damaged light fixtures or missing parts to Villa Lighting within 48 hours of receipt of light fixture package.

Design is based on current information provided at the time of request. Any changes in mounting height, mounting location, lamp wattage, lamp type, and existing field conditions that effect any of the previously mentioned will void the current layout and require a change request and recalculation. Calculations are based upon a computer simulation and actual field calculations may vary.

Fixtures mounted on 20' pole & 3' base
Light level calculated on the ground

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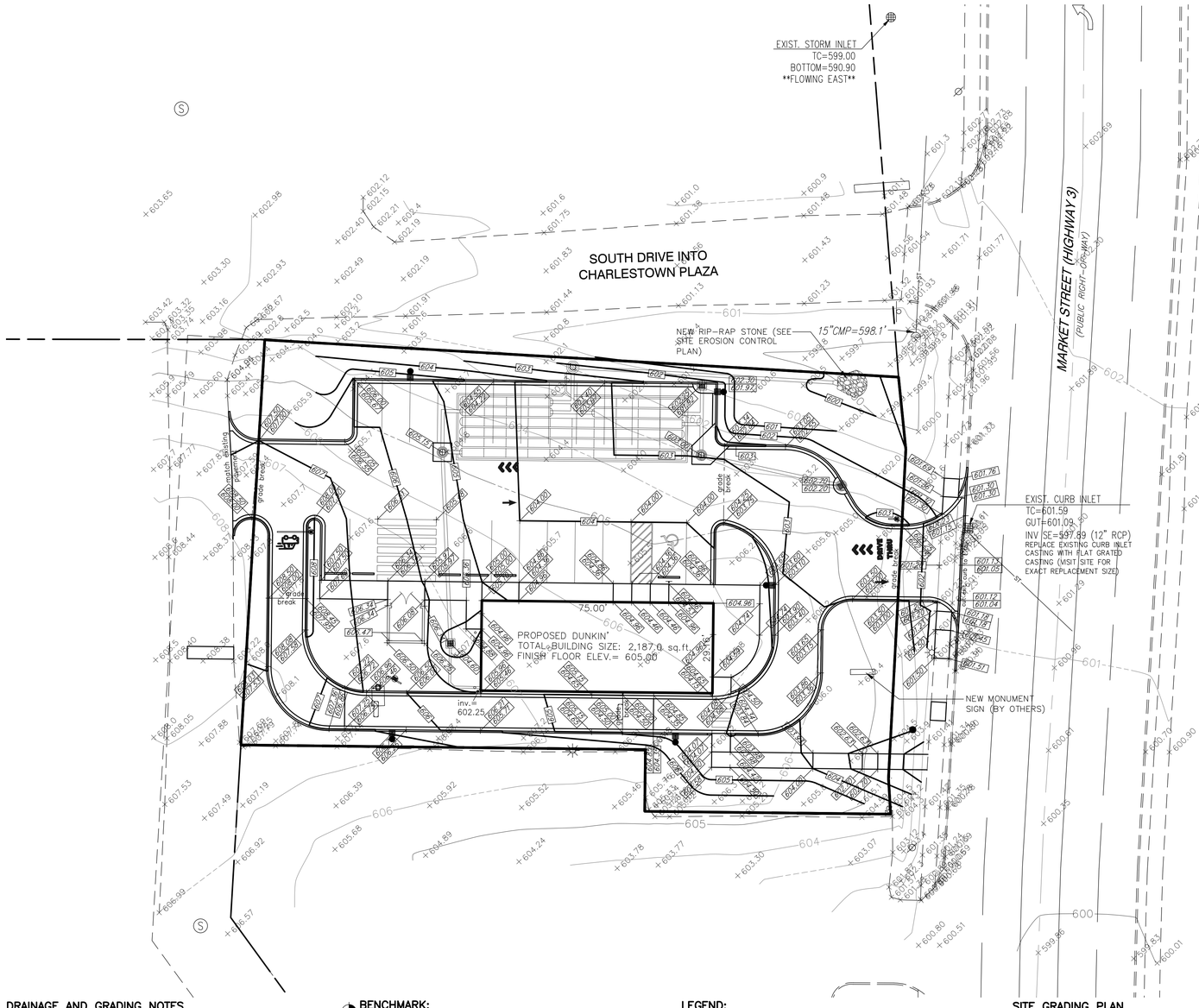
Site Photometric Plan

Job No.	Date Stamped
25002	05/02/2025
Drawn By: cow	Checked By: tab
Scale: 1"= 20.0'	

CAD FILE:
G:\25002\c310 site photometric plan.dwg

SHEET TITLE:
C310



SITE GRADING PLAN
SCALE: 1"= 20.0'

STORM DRAINAGE AND GRADING NOTES

1. ALL NECESSARY PERMITS AND APPROVALS FROM AGENCIES GOVERNING THIS WORK SHALL BE SECURED PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS AND REPLACE ALL PINS ELIMINATED OR DAMAGED DURING CONSTRUCTION.
3. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
4. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OF CENTERLINE OF STURCTURE.
5. GRADES SHOWN ARE FINISHED GRADES. FOR BUILDING SUBGRADE ELEVATIONS REFER TO ARCHITECTURAL PLANS.
6. ALL DIMENSIONS OR COORDINATES SHOWN TO BUILDING ARE TO OUTSIDE
7. EXISTING UTILITY LINES SHOWN ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LINE LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY DEVIATIONS FROM THE DESIGN LOCATIONS SHALL BE REPORTED TO THE OWNER OR ENGINEER
8. THE SITE WORK CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL UNDERGROUND UTILITIES WITH HIS WORK. ALL UNDERGROUND UTILITIES (WATER, SANITARY SEWER, STORM SEWER, ELECTRICAL CONDUIT, IRRIGATION SLEEVES, AND ANY OTHER MISCELLANEOUS), SHALL BE IN-PLACE PRIOR TO THE PLACEMENT OF BASE COURSE
9. ALL FILL AREAS TO BE COMPACTED CLAY ROLLED IN WITH A SHEEPS FOOT ROLLER IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR. VERIFICATION OF THE COMPACTION SHALL BE DONE BY AN INDEPENDENT SOILS TESTING COMPANY AND ALL TEST RESULTS SUBMITTED TO THE ENGINEER.

BENCHMARK:

ORIGINATING BENCHMARK:
1"x1" SQUARE BOLT FOUND AT THE EAST CORNER OF SURVEY GRANT 136 PER CLARK COUNTY SURVEYOR REFERENCES LOCATED IN THE INTERSECTION OF MONROE STREET AND THE SCHOOL ENTRANCE TO THE CHARLESTOWN HIGH SCHOOL.
ELEVATION= 605.46 (NAVD88)

TEMPORARY ON-SITE BENCHMARK:

TOP OF CASTING OF A SANITARY MANHOLE LOCATED IN A DRIVE ON THE WEST SIDE OF THE SUBJECT TRACT, APPROXIMATELY 60 FEET SOUTH OF THE SOUTHWEST CORNER.
ELEVATION= 606.96 (NAVD88)

FLOOD PLANE INFORMATION:

THIS LOT LIES ENTIRELY IN FLOOD HAZARD ZONE "X" AS SCALED FROM THE F.E.M.A NATIONAL FLOOD HAZARD PANELS FOR CLARK COUNTY, INDIANA, CITY OF CHARLESTOWN, MAP NUMBER 18019C0183E, DATED APRIL 16, 2014.

EROSION CONTROL INFORMATION:

SEE SITE EROSION CONTROL PLAN FOR LOCATIONS AND INSTALLATION OF ALL EROSION CONTROL MEASURES REQUIRED ON THIS SITE.

LEGEND:

- +607.6 — EXISTING SPOT ELEVATION
- 604 — EXISTING CONTOURS LINES
- ST — EXISTING STORM SEWER PIPES
- EXISTING STORM SEWER STRUCTURES
- 608.00 top of curb / 607.50 pavement — PROPOSED SPOT ELEVATION
- 606 — PROPOSED CONTOURS LINES
- PROPOSED STORM SEWER PIPES
- PROPOSED STORM SEWER MANHOLES AND INLETS

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CERTIFIED BY:

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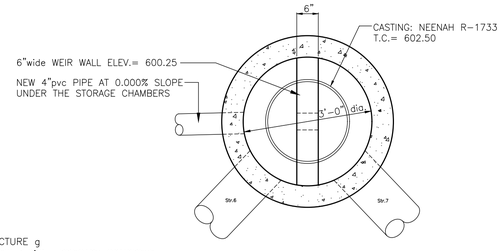
Site Grading Plan

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: 1"= 20.0'	

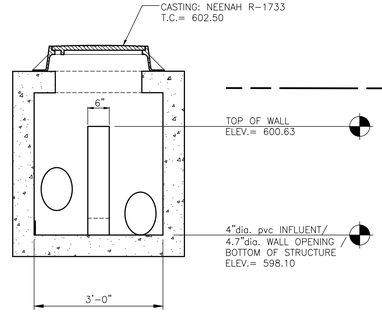
CAD FILE:
G:\25002\c400 site grading plan.dwg

SHEET TITLE:
C400

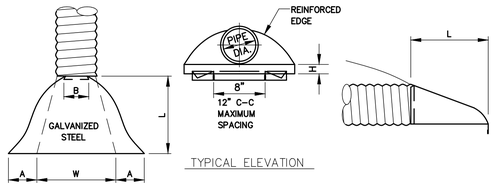


● STRUCTURE g
NEW 3.0'dia. PRECAST CONCRETE STORM STRICTURE
(CASTING: NEENAH R-1733)
WITH 6"wide WEIR WALL ELEV.= 600.25
AND (1) *.*"dia. OPENING INV. ELEV.= 598.10
T.C.= 602.50
INV. IN NW 4"pvc (PERFORATED)= 598.10
INV. IN N 12"hp= 598.67
INV. OUT SE 12"hp= 598.10

STRUCTURE g (PLAN VIEW)
SCALE: no scale



STRUCTURE g (SECTION VIEW)
SCALE: no scale



TYPICAL ELEVATION

TYPICAL CROSS SECTION
PIPE OR PIPE ARCH

TYPICAL PLAN

PIPE DIA. IN INCHES	METAL THICKNESS IN INCHES	DIMENSIONS IN INCHES					APPROX. SLOPE	BODY
		A ± 1"	B (MAX.)	H ± 1"	L ±1 1/2"	W ± 2"		
12	.064	6	6	6	21	24	2 1/2'	1 PC.
15	.064	7	8	6	26	30	2 1/2'	1 PC.
18	.064	8	10	6	31	36	2 1/2'	1 PC.
21	.064	9	12	6	36	42	2 1/2'	1 PC.
24	.064	10	13	6	41	48	2 1/2'	1 PC.
30	.079	12	16	8	51	60	2 1/2'	1 PC.
36	.079	14	19	9	60	72	2 1/2'	2 PC.
42	.109	16	22	11	69	84	2 1/2'	2 PC.

TYPICAL METAL END SECTION DETAILS
NO SCALE

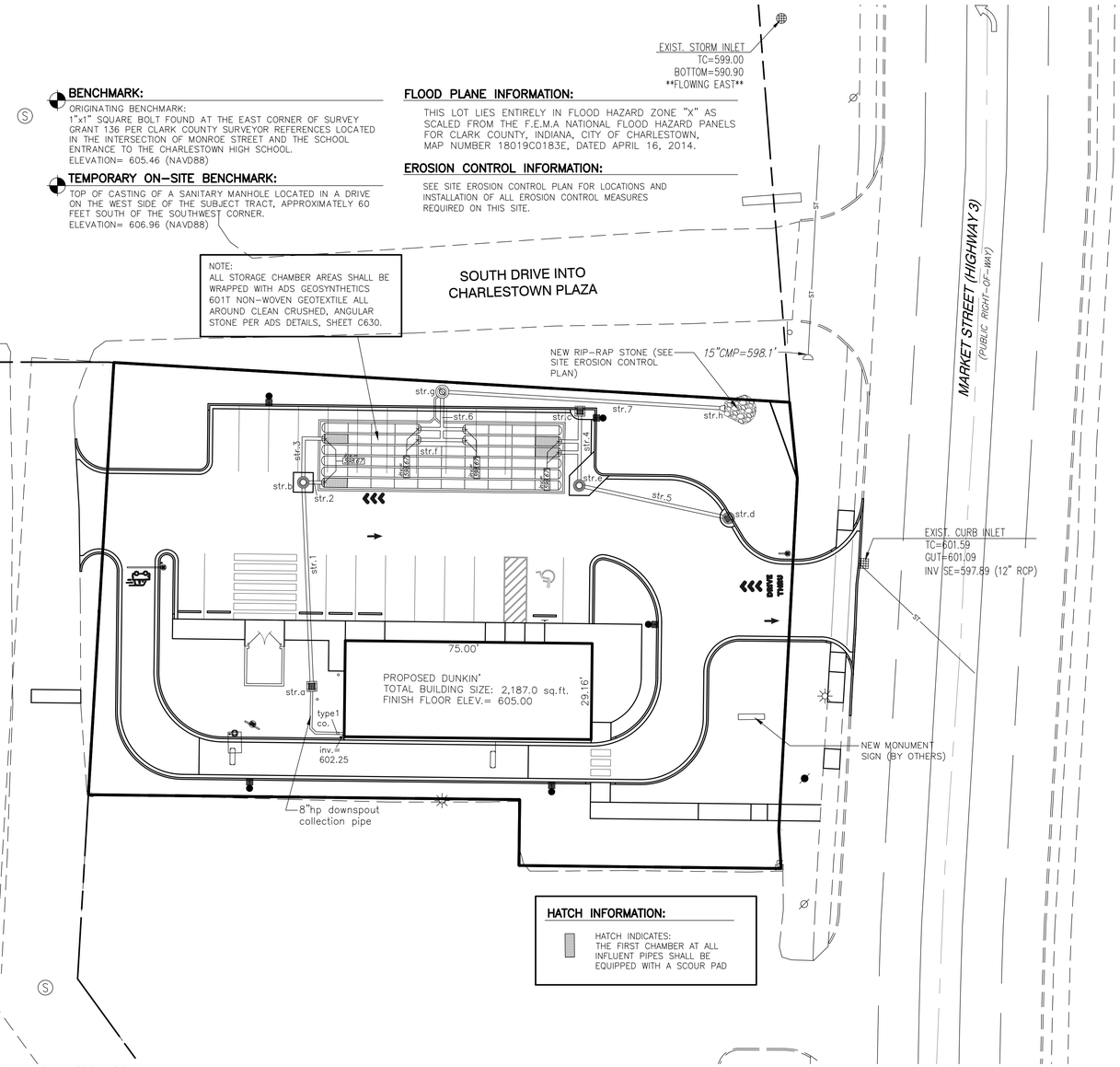
BENCHMARK:
ORIGINATING BENCHMARK:
1"x1" SQUARE BOLT FOUND AT THE EAST CORNER OF SURVEY GRANT 136 PER CLARK COUNTY SURVEYOR REFERENCES LOCATED IN THE INTERSECTION OF MONROE STREET AND THE SCHOOL ENTRANCE TO THE CHARLESTOWN HIGH SCHOOL.
ELEVATION= 605.46 (NAVD88)

TEMPORARY ON-SITE BENCHMARK:
TOP OF CASTING OF A SANITARY MANHOLE LOCATED IN A DRIVE ON THE WEST SIDE OF THE SUBJECT TRACT, APPROXIMATELY 60 FEET SOUTH OF THE SOUTHWEST CORNER.
ELEVATION= 606.96 (NAVD88)

FLOOD PLANE INFORMATION:
THIS LOT LIES ENTIRELY IN FLOOD HAZARD ZONE "X" AS SCALED FROM THE F.E.M.A NATIONAL FLOOD HAZARD PANELS FOR CLARK COUNTY, INDIANA, CITY OF CHARLESTOWN, MAP NUMBER 18019C0183E, DATED APRIL 16, 2014.

EROSION CONTROL INFORMATION:
SEE SITE EROSION CONTROL PLAN FOR LOCATIONS AND INSTALLATION OF ALL EROSION CONTROL MEASURES REQUIRED ON THIS SITE.

NOTE:
ALL STORAGE CHAMBER AREAS SHALL BE WRAPPED WITH ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL AROUND CLEAN CRUSHED, ANGULAR STONE PER ADS DETAILS, SHEET C630.



HATCH INFORMATION:
HATCH INDICATES:
THE FIRST CHAMBER AT ALL INFLUENT PIPES SHALL BE EQUIPPED WITH A SCOUR PAD

SITE STORM SEWER PIPING PLAN
SCALE: 1"= 20.0'

STORM DRAINAGE AND GRADING NOTES
1. ALL NECESSARY PERMITS AND APPROVALS FROM AGENCIES GOVERNING THIS WORK SHALL BE SECURED PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS AND REPLACE ALL PINS ELIMINATED OR DAMAGED DURING CONSTRUCTION.
3. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
4. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OF CENTERLINE OF STURCTURE.
5. GRADES SHOWN ARE FINISHED GRADES. FOR BUILDING SUBGRADE ELEVATIONS REFER TO ARCHITECTURAL PLANS.
6. ALL DIMENSIONS OR COORDINATES SHOWN TO BUILDING ARE TO OUTSIDE
7. EXISTING UTILITY LINES SHOWN ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LINE LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY DEVIATIONS FROM THE DESIGN LOCATIONS SHALL BE REPORTED TO THE OWNER OR ENGINEER
8. THE SITE WORK CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL UNDERGROUND UTILITIES WITH HIS WORK. ALL UNDERGROUND UTILITIES (WATER, SANITARY SEWER, STORM SEWER, ELECTRICAL CONDUIT, IRRIGATION SLEEVES, AND ANY OTHER MISCELLANEOUS), SHALL BE IN-PLACE PRIOR TO THE PLACEMENT OF BASE COURSE
9. ALL FILL AREAS TO BE COMPACTED CLAY ROLLED IN WITH A SHEEPS FOOT ROLLER IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR. VERIFICATION OF THE COMPACTION SHALL BE DONE BY AN INDEPENDENT SOILS TESTING COMPANY AND ALL TEST RESULTS SUBMITTED TO THE ENGINEER.

SITE INFRASTRUCTURE SUMMARY INFORMATION:

INLET/MANHOLE STRUCTURES

● NEW STRUCTURE a
NEW 24"sq. PRECAST CONCRETE STORM INLET
(CASTING: NEENAH R-2560-E1 WITH NEENAH R-1733 FRAME)
T.C.= 604.60
INV. IN S 8"hp pipe= 602.00
INV. OUT N 12"hp pipe= 601.50

● NEW STRUCTURE b
NEW 30"dia. PRECAST CONCRETE STORM MANHOLE
(CASTING: NEENAH R-1733)
T.C.= 605.15
INV. IN S 12"hp pipe= 601.30
INV. OUT E 12"hp pipe= 598.70
INV. OUT N 12"hp pipe= 598.70

● NEW STRUCTURE c
NEW 24"sq. PRECAST CONCRETE STORM INLET
(CASTING: NEENAH R-3234-B1)
T.C.= 601.92
INV. OUT S 12"hp pipe= 598.67

● NEW STRUCTURE d
NEW 30"dia. PRECAST CONCRETE STORM INLET
(CASTING: NEENAH R-3234-B1)
T.C.= 602.20
INV. OUT W 12"hp pipe= 599.45

● NEW STRUCTURE e
NEW 30"dia. PRECAST CONCRETE STORM MANHOLE
(CASTING: NEENAH R-1733)
T.C.= 603.00
INV. IN E 12"hp pipe= 599.30
INV. OUT N 12"hp pipe= 598.67

● STRUCTURE No.f
(56) NEW "SC-310" 'STORMTECH' STORAGE CHAMBERS ARRANGED PER PLAN
(2) INV. IN W 12"hp INFLUENT PIPES INV.= 598.67
(2) INV. IN E 12"hp INFLUENT PIPES INV.= 598.67
(4) INV. OUT E AND W 12"hp EFFLUENT PIPES INV.= 598.67
BOTTOM OF TANK / TOP OF 6" STONE BASE= 598.60
BOTTOM 6" STONE / 4"pvc (PERFORATED) PIPE= 598.10

● STRUCTURE g
NEW 3.0'dia. PRECAST CONCRETE STORM STRICTURE
(CASTING: NEENAH R-1733)
WITH 6"wide WEIR WALL ELEV.= 600.63
AND (1) 4.7"dia. OPENING INV. ELEV.= 598.10
T.C.= 602.50
INV. IN NW 4"pvc (PERFORATED)= 598.10
INV. IN N 12"hp= 598.67
INV. OUT SE 12"hp= 598.10
(SEE DETAILS, THIS PAGE)

● NEW STRUCTURE h
NEW METAL END SECTION
INV. OUT E 12"hp pipe= 598.10

PIPE STRUCTURES:

● NEW STRUCTURE 1
62.0 L.F. OF NEW 12"hp PIPE AT 0.323% SLOPE

● NEW STRUCTURE 2
6.3 L.F. OF NEW 12"hp PIPE AT 0.476% SLOPE

● NEW STRUCTURE 3
19.8 L.F. OF NEW 12"hp PIPE AT 0.152% SLOPE

● NEW STRUCTURE 4
35.6 L.F. OF NEW 12"hp PIPE AT 0.000% SLOPE
(2) INV. 12"hp IN (EAST) STORAGE CHAMBERS (SEE ABOVE FOR INVERTS)

● NEW STRUCTURE 5
46.4 L.F. OF NEW 12"hp PIPE AT 0.323% SLOPE

● NEW STRUCTURE 6
43.20 L.F. OF NEW 12"hp AT 0.000% SLOPE WITH (4) 12"hp OUT (EAST AND WEST) OF STORAGE CHAMBERS (SEE ABOVE FOR INVERTS)

● NEW STRUCTURE 7
84.4 L.F. OF NEW 12"hp PIPE AT 0.000% SLOPE

Indiana 811
Know what's below. Call before you dig.

UTILITY DISCLAIMER
EXISTING UNDERGROUND INSTALLATIONS SUCH AS WATER MAINS, GAS MAINS, SEWERS, TELEPHONE LINES, AND BURIED STRUCTURES IN THE VICINITY OF THE WORK TO BE DONE HEREUNDER ARE INDICATED ON THE DRAWINGS ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE SURVEYOR IN PREPARING THIS DRAWING. THERE IS NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION, AND ALL RESPONSIBILITY FOR ACCURACY AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED.

N

REVISION
09/24/2025 revised entry drive, front grading, and sidewalk to public sidewalk
10/10/2025 revised per INDOT comments
12/03/2025 revised stormwater per INDOT comments

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER
Trent A Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

Site Storm Sewer Piping Plan

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: 1"= 20.0'	

CAD FILE:
G:\25002\c410 site storm sewer piping plan.dwg

SHEET TITLE:
C410

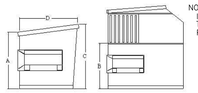
Standard Features

Heavy duty 7 GA fork sleeves	Debris shedding fork sleeve top gussets
7 GA fork entry guides	7 GA fork sleeve backup plates with integral extended bumpers
3" x 4" full length bottom reinforcements	12 GA side walls
Rugged and light plastic lids	1-1/2" PVC drain plug
Rust resistant primer inside and out	Two coats high gloss enamel finish

Options

10 GA side walls
7 GA floor
Casters: 2 rigid, 2 swivel, for two through four cubic yard containers

Dimensions



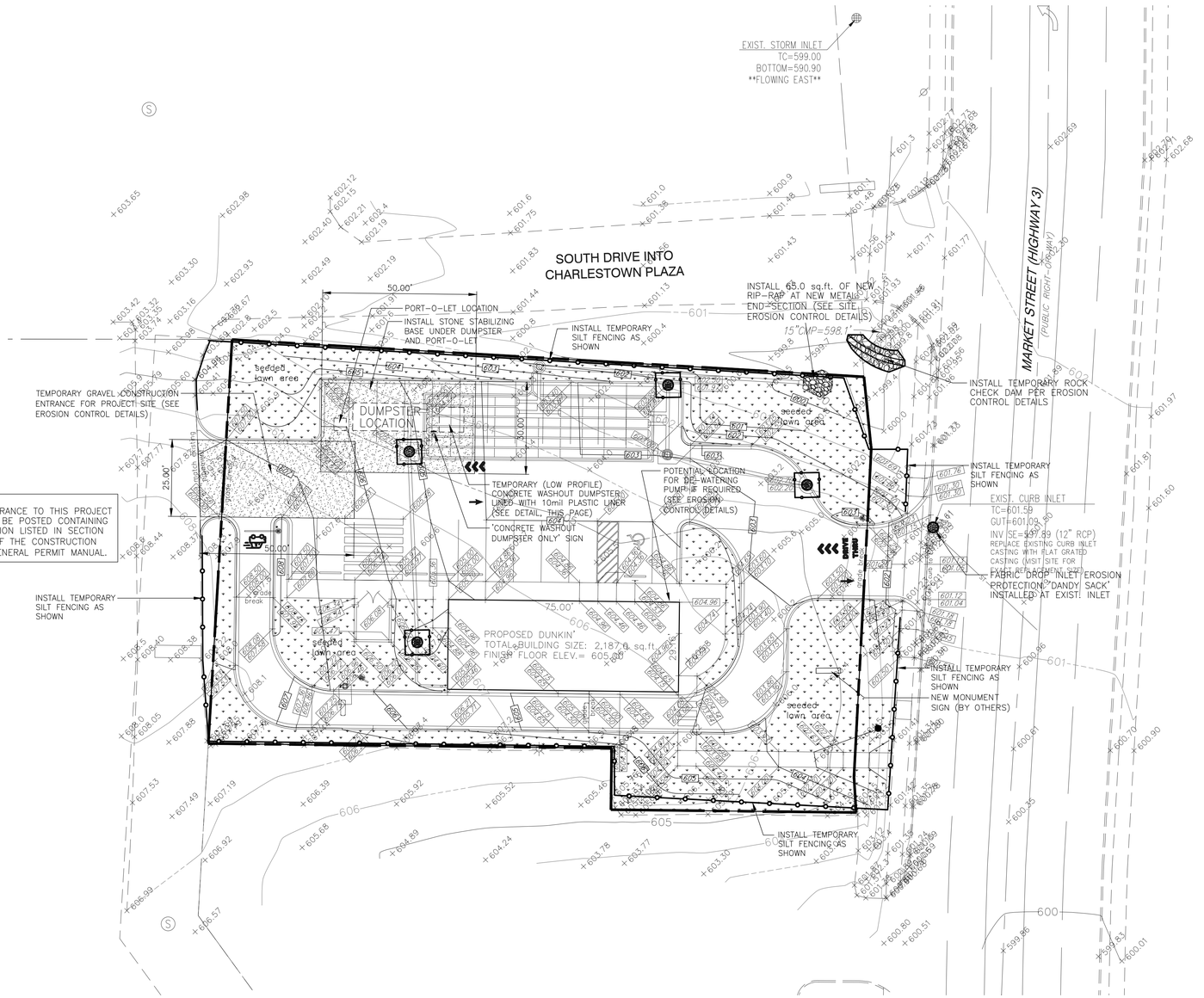
NOTE:
INTERIOR OF DUMPSTER TO BE LINED WITH 10mil. PLASTIC LINER.

Model	FL2	FL3	FL4	FL6-LP	FL6	FL6-SL	FL8-LP	FL8	FL8-SL	FL10	FL10-SL
Capacity cu yds	2	3	4	6	6	6	8	8	8	10	10
(A) Loading height	39	48	51	37	63	51	51	72	51	82	51
(B) Side loading height	-	-	-	-	31	-	-	44	-	45	-
(C) Interior height	41	51	60	45	64	60	59	76	72	80	80
(D) Interior depth	36	42	53	96	66	72	96	72	80	75	88
Interior width	72	72	72	72	72	72	72	72	72	72	72
Lid size (2 each)	36x41	36x47	36x58	36x58	36x58	36x58	36x58	36x58	36x58	36x58	36x58
Side door W x H	-	-	-	30x30*	30x30	-	30x30*	30x30	-	30x30	-

All dimensions are in inches

* Available with two side doors or two 36x47 rear lids
-LP = low profile
-SL = slant

CONCRETE WASHOUT DUMPSTER DETAIL



NOTE:
AT THE SITE ENTRANCE TO THIS PROJECT A NOTICE SHALL BE POSTED CONTAINING ALL DOCUMENTATION LISTED IN SECTION 3.3 (a)(13)(A) OF THE CONSTRUCTION STORMWATER/ GENERAL PERMIT MANUAL.

SEEDING INFO:
1. ALL DISTURBED AREAS SHALL BE PERMINATELY SEEDED PER EROSION CONTROL DETAILS.
(AT NO POINT DURING CONSTRUCTION SHALL ANY PART OF THE SITE REMAIN UNDISTURBED FOR MORE THAN TWO MONTHS THEREFORE NO TEMPORARY SEEDING SHALL BE REQUIRED)

NOTE:
NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED STORM WATER PERMIT.

STORM SEWER PIPING INFORMATION:
SEE SHEET No.C400 FOR ALL INFORMATION CONCERNING THE STORM SEWER INLETS, MANHOLES, AND PIPING.

BENCHMARK:
ORIGINATING BENCHMARK:
1"x1" SQUARE BOLT FOUND AT THE EAST CORNER OF SURVEY GRANT 136 PER CLARK COUNTY SURVEYOR REFERENCES LOCATED IN THE INTERSECTION OF MONROE STREET AND THE SCHOOL ENTRANCE TO THE CHARLESTOWN HIGH SCHOOL.
ELEVATION= 605.46 (NAVD88)

TEMPORARY ON-SITE BENCHMARK:
TOP OF CASTING OF A SANITARY MANHOLE LOCATED IN A DRIVE ON THE WEST SIDE OF THE SUBJECT TRACT, APPROXIMATELY 60 FEET SOUTH OF THE SOUTHWEST CORNER.
ELEVATION= 606.96 (NAVD88)

FLOOD PLANE INFORMATION:
THIS LOT LIES ENTIRELY IN FLOOD HAZARD ZONE "X" AS SCALED FROM THE F.E.M.A NATIONAL FLOOD HAZARD PANELS FOR CLARK COUNTY, INDIANA, CITY OF CHARLESTOWN, MAP NUMBER 18019C0183E, DATED APRIL 16, 2014.

EROSION CONTROL LEGEND:

TEMPORARY SILT FENCING (SEE EROSION CONTROL DETAILS PAGE)

FABRIC DROP INLET EROSION PROTECTION – ONCE PAVEMENT IS PLACED CHANGE TO 'DANDY SACK' PROTECTION (SEE EROSION CONTROL DETAILS PAGE)

FABRIC DROP INLET EROSION PROTECTION – 'DANDY SACK' (SEE EROSION CONTROL DETAILS PAGE)

HATCH INDICATES:
AREAS OF LAWN (SEEDED), LANDSCAPE STONE, AND LANDSCAPING ON THIS PROJECT (SEE LANDSCAPING PLAN)

SITE EROSION CONTROL PLAN
SCALE: 1"= 20.0'

UTILITY DISCLAIMER

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Indiana811 Know what's below. Call before you dig.

N

REVISION

09/24/2025	revised entry drive, front grading, and sidewalk to public sidewalk
10/10/2025	revised per INDOT comments
12/03/2025	revised stormwater per INDOT comments

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New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

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Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER

Trent A Baxter

CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

Site Erosion Control Plan

Job No.	Date Stamped
25002	05/02/2025

Drawn By	Checked By	Scale:
caw	tab	1"= 20.0'

CAD FILE:
G:\25002\c500 site erosion control plan.dwg

SHEET TITLE:

C500

EROSION CONTROL RESPONSIBILITY:

INSTALLATION RESPONSIBILITY:

Versatile Construction Group, LLC
Project Supervisor: Sam Allen
570 E. Tracy Road, Suite 610
New Whiteland, Indiana
46184
Phone: (317) 535-3579

CURRENT LAND OWNER:

om Charlestown realty llc
200 S. Frontage Road, Suite 310
Buff Ridge, IL 60527

PROJECT ADDRESS:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

EROSION CONTROL CONTRACTOR RESPONSIBILITY:

RESPONSIBILITIES OF CONTRACTOR REGARDING THE CONSTRUCTION GENERAL PERMIT: The Contractor shall manage the discharge of storm water from the site in accordance with the NPDES Construction General Permit for Construction Activities conditions and the following provisions of this section of the specifications. The Contractor shall be responsible for conducting the storm water management practices in accordance with the permit. The Contractor shall be responsible for providing qualified inspectors to conduct the inspections required by the SWPPP. The Contractor shall be responsible for any enforcement action taken or imposed by federal, state, or local agencies, including the cost of fines, construction delays, and remedial actions resulting from the Contractor's failure to comply with the permit provisions. It shall be the responsibility of the Contractor to make any changes to the SWPPP necessary when the Contractor or any of his subcontractors elects to use borrow or fill or material storage sites, either contiguous to or remote from the construction site, when such sites are used solely for this construction site. Such sites are considered to be part of the construction site covered by the permit and this SWPPP. Off-site borrow, fill, or material storage sites which are used for multiple construction projects are not subject to this requirement, unless specifically required by state or local jurisdictional entity regulations. The Contractor should consider this requirement in negotiating with earthwork subcontractors, since the choice of an off-site borrow, fill, or material storage site may impact their duty to implement, make changes to, and perform inspections required by the SWPPP for the site.

SWPPP LEDGER: Two (2) copies of the SWPPP Ledger, in three (3) ring binders shall be provided by the Operator's Engineer. One (1) copy shall be provided to the Construction Site Superintendent and one (1) copy shall be provided to the Operator's Project Manager.

1. Table of Contents
2. A copy of the Stormwater Polution Prevention Plan, Details, and Notes. (Sheets C500, C510, C520, and C530)
3. Construction Site Notice (Form A-1)
4. Modification Report (Form C-1)
5. Reportable Quantity Release Form (Form E-1)
6. Construction Site Inspection and Maintenance Log

The Operator's Project Manager must review and evaluate for compliance the SWPPP Ledger at each Project Review.

STORM WATER POLLUTION PREVENTION PROGRAM LOCATION REQUIREMENTS: The SWPPP Ledger is meant to be a working document that shall be maintained at the site of the Construction Activities at all times throughout the project, shall be readily available upon request by the Operator's personnel or IDEM or any other agency with regulatory authority over storm water issues, and shall be kept on-site until the site complies with the Final Stabilization section of this document. A sign or other notice must be posted near the main entrance of the construction site which contains the location of the SWPPP and the name and phone number of a contact person responsible for scheduling SWPPP viewing times, and any other State Of Indiana specific requirements. The Notice of Coverage (NOC) or other form notifying the applicant that coverage under the applicable permit has been obtained must also be posted, once received.

SWPPP MODIFICATIONS: The inspection report should also identify if any revisions to the SWPPP are warranted due to unexpected conditions. The SWPPP is meant to be a dynamic working guide that is to be kept current and amended whenever:

1. There is a change in design, construction, operation, or maintenance at the construction site that has or could have a significant effect on the discharge of pollutants to the waters of the United States that has not been previously addressed in the SWPPP. In addition to modifying the SWPPP, the site map may also require an amendment.
2. Inspections or investigations by site staff, or by local, state or federal officials, determine that the discharges the SWPPP is ineffective in eliminating or significantly minimizing pollutants in storm water discharges from the construction site.
3. Based on the results of an inspection, it must be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP must be completed within seven (7) calendar days following the inspection.
4. There is a release containing a hazardous substance or oil in an amount equal or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117 or 40 CFR Part 302 occurs during a 24 hour period. Revisions to the SWPPP must be completed within seven (7) calendar days of knowledge of the release.
5. There is an off-site borrow or fill area that is used solely for the Dunkin' Donuts construction project. The modification will include, at a minimum, a revision to the SWPPP and site maps and may impact the Contractor's duty to implement and conduct inspections.

Any such changes to the SWPPP must be made in writing on the Requested Changes to the SWPPP (Form C-1) within 7 days of the date such modification or amendment is made. The Contractor's failure to modify the SWPPP to include off-site borrow or fill areas used solely for the project or to monitor or report deficiencies to the Operator will result in the Contractor being liable for fines and construction delays resulting from any federal, state, or local agency enforcement action.

Report to IDEM within 24 hours any noncompliance with the SWPPP that will endanger public health or the environment. Follow up with a written report within 5 days of the noncompliance event. The following events require 24 hour reporting: a) any unanticipated bypass which exceeds any effluent limitation in the permit, b) any upset which exceeds any effluent limitation in the permit, and c) a violation of a maximum daily discharge limitation for any of the pollutants listed by the EPA in the permit to be reported within 24 hours. The written submission must contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance.

Record-Keeping Requirements

The Contractor shall keep the following records related to construction activities at the site:

- Dates when major grading activities occur and the areas which were graded
- Dates and details concerning the installation of structural controls
- Dates when construction activities cease in an area
- Dates when an areas is stabilized, either temporarily or permanently
- Dates of rainfall and the amount of rainfall
- Dates and descriptions of the character and amount of any spills of hazardous materials
- Records of reports filed with regulatory agencies if reportable quantities of hazardous materials spilled

CONTROL OF NON-STORM WATER DISCHARGES

Certain types of discharges are allowable under the IDEM General Permit for Construction Activity, and it is the intent of this SWPPP to allow such discharges. These types of discharges will be allowed under the conditions that no pollutants will be allowed to come in contact with the water prior to or after its discharge. The control measures which have been outlined previously in this SWPPP will be strictly followed to ensure that no contamination of these non-storm water discharges takes place. Furthermore, Indiana may prohibit any non-storm water discharges, allow a limited number of types of non-storm water discharges and/or will require coverage for non-storm water discharges under a separate permit. The following non-storm water discharges are allowed by the IDEM and may occur at the job site:
Possible non-storm water discharges that must be diverted to the sanitary system: discharges from fire fighting activities, fire hydrant flushing, potable water sources such as water line flushings, routine exterior building wash-down (with detergents presents). Contractor shall neutralize any super-chlorinated water from water distribution pipes before releasing it into the environment.

Possible non-storm water discharges where detergents are not used should be diverted to the storm sewer system: discharges from waters used to wash vehicles or control dust in order to minimize offsite sediment tracking, pavement wash waters where spills or leaks of hazardous materials have not occurred or detergents have not been used, irrigation drainage from watering vegetation ,springs or other uncontaminated groundwater, including dewatering groundwater infiltration.

SPILL RESPONSE FOR CONTRACTOR

Spill Prevention and Response Procedures

The Contractor will train all personnel in the proper handling and cleanup of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the job site superintendent to properly train all personnel in spill prevention and clean up procedures.

A. In order to minimize the potential for a spill of hazardous materials to come into contact with storm water, the following steps will be implemented:
   1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location, with their lids on, preferably under cover, when not in use.
   2. The minimum practical quantity of all such materials will be kept on the job site.
   3. A spill control and containment kit (containing, for example, absorbent materials, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.
   4. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

B. In the event of a spill, the following procedures should be followed
   1. All spills will be cleaned up immediately after discovery.
   2. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substances.
   3. The project manager and the Engineer of Record will be notified immediately.
      Spills of toxic or hazardous materials will be reported to the appropriate federal, state, and/or local government agency, regardless of the size of the spill. Spills of amounts that exceed Reportable Quantities of certain substances specifically mentioned in federal regulations (40 CFR 110, 40 CFR 117, and 40 CFR 302) must be immediately reported to the EPA National Response Center, telephone 1-800-424-8802, IDEM, telephone (317) 233-7745, and the Charlestown City Hall 1-812-256-3422, and the Charlestown Fire Department 1-812-256-6202.
   4. If the spill exceeds a Reportable Quantity, the SWPPP must be modified within seven (7) calendar days of knowledge of the discharge to provide a description of the release, the circumstances leading to the release, and the date of the release. The plans must identify measures to prevent the recurrence of such releases and to respond to such releases. Form E-1 must be completed in accordance with this

C. The job site superintendent will be the spill prevention and response coordinator. He will designate the individuals who will receive spill prevention and response training. These individuals will each become responsible for a particular phase of prevention and response. The names of these personnel will be posted in the material storage area and in the

Releases of hazardous substances or oil in excess of reportable quantities (as established under 40 CFR 110, 40 CFR 117 or 40 CFR 302) must be reported. Form E-1 provides further details on the notification and reporting process.

INSPECTIONS AND MAINTENANCE
Inspections and maintenance shall comply with the INSPECTION AND MAINTENANE DETAILS located on Sheet C530 of these plans. Inspections must be conducted by a "Qualified" Inspector. "Qualified"is defined as a person knowledgeable in the principles and practices of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction

activity.

INSPECTION AND MAINTENANCE PROCEDURES IN ADDITION TO DETAILS

The following inspection and maintenance practices will be used to maintain erosion and sediment controls and stabilization measures in addition to the INSPECTION AND MAINTENANCE DETAILS:

1. All control measures will be inspected as outlined in the INSPECTION GUIDELINES TABLE.
2. All measures will be maintained in good working order; if repairs or other measures are found to be necessary, they will be initiated within 24 hours of report.
3. Temporary and permanent seeding and all other stabilization measures will be inspected for bare spots, washouts, and healthy growth.
4. Gravel shall be added to transit paths as needed to prevent vehicle tracking of sediments.
5. The paved streets adjacent to the site entrance will be inspected daily and swept as necessary to remove any excess mud, dirt, or rock tracked from the site.
6. The job site superintendent will be responsible for selecting and training the individuals who will be responsible for these inspections, maintenance and repair activities,
7. Personnel selected for the inspection and maintenance responsibilities shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls that are used onsite in good working order.
8. Disturbed areas and materials storage areas will be inspected for evidence of or potential for pollutants entering stormwater systems.

EROSION CONTROL INSTALLATION AND CONSTRUCTION SEQUENCING

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows:

A. Conduct an Erosion and Sediment control pre-construction meeting with the City of Charlestown.
B. Install temporary site construction entrance.
C. Install silt fence perimeter control and silt inlet protection.
D. Install dumpster protection and concrete wash out stone pad.
E. Commence site grading and building pad construction.
F. Any disturbed areas of the site where construction activity has ceased, stabilization must be initiated by the end of the seventh day the area is left idle and stabilization shall be completed within 14 days after initiation per the requirements of the Construction stormwater general permit.
G. Install all storm sewers pipes and structures.
H. Install protection at the locations of all inlets and ends of exposed storm sewer pipes.
I. Begin construction of building.
J. Finalize pavement sub-grade preparation.
K. Install base material as required for asphaltic pavement.
L. Construct all curbs and sidewalks.
M. Construct asphaltic parking pavement.
N. Change temporary inlet protection to "Dandy Sacks".
O. Carry out final seeding and planting.
P. Remove silt fencing and "Dandy Sacks" only after all paving is complete and exposed surfaces are stabilized.

EROSION CONTROL INSTALLATION DETAILS

TREE PRESERVATION

TREE PROTECTION

Protect trees from equipment damage. (Wounds provide entry for insects and disease and reduce transport of sap.)

If trees are damaged, repair immediately. (Repair of wounded areas allows trees to heal quickly, thus reducing insect and disease problems.)

MATERIALS

1. Fencing (orange safety fencing for increased visibility), snow fence and support posts.
2. Signage.
3. Wood mulch, chips, etc.
4. Specialized equipment (brush cutter, rotary axe, hand tools).

APPLICATION

1. Install fencing around a specimen tree(s) as far out as its crown to keep equipment off the rooting area.
2. If a fence cannot be erected, cushion the rooting area with six inches of wood chips, wood, or brick paths.
3. Protect trees from equipment damage by creating some type of barrier, fencing them off, or wrapping individual trees with snow fencing.
4. Prune low-hanging limbs that could otherwise be broken off by equipment.

TEMPORARY CONSTRUCTION ENTRANCE

DIMENSION

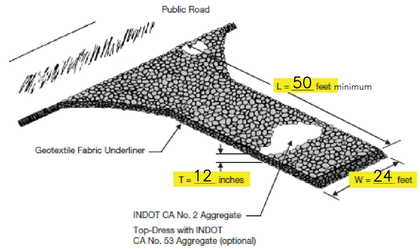
1. Width – 12 feet minimum or full width of entrance/exit drive, whichever is greater.
2. Length – 50 feet minimum or full length of drive, whichever is greater.
3. Thickness – six inches minimum.

MATERIALS

1. One to two and one-half inch diameter washed aggregate [INDOT CA No. 2.
2. One-half to one and one-half inch washed aggregate [INDOT CA No. 53 optional, used primarily where the purpose of the pad is to keep soil from adhering to vehicle tires].
3. Geotextile fabric underlayment (used as a separation layer to prevent intermixing of aggregate and the underlying soil material and to provide greater bearing strength when encountering wet conditions or soils with a seasonal high water table limitation).

INSTALLATION

1. Remove all vegetation and other objectionable material from the foundation area.
2. Grade the foundation and crown for positive drainage.
3. Install a culvert pipe under the pad if needed to maintain proper public road drainage.
4. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
5. Place aggregate (INDOT CA No. 2) to the dimensions and grade shown in the construction plans, leaving the surface smooth and sloped for drainage.
6. Top-dress the drive with washed aggregate (INDOT CA No.53).
7. Where possible, divert all storm water runoff and drainage from the temporary construction ingress/egress pad to a sediment trap or basin.



L = Ingress/Egress Pad Length
W = Ingress/Egress Pad Width
T = Aggregate Thickness

TOPSOIL SALVAGE AND UTILIZATION

SOIL STOCKPILE AREA

1. Free of stumps, rock, and construction debris.
2. Stockpile covered with vegetation or a tarp.
3. Surrounded by a sediment barrier or sediment filter.

APPLICATION

1. Prior to stripping topsoil, install any site-specific down slope measures needed to control storm water runoff and sedimentation.
2. Remove soil material no deeper than the surface soil (e.g., A or Ap horizon).
3. Stockpiled soil should be temporarily seeded or covered with a tarp and/or surrounded by a sediment control measure.
4. Prior to applying topsoil, grade the subsoil and roughen the top three to four inches by disking. (This helps the topsoil bond with the subsoil. If the topsoil and existing soil surface are not properly bonded, water will not infiltrate evenly and it will be difficult to establish vegetation.)
5. Apply topsoil evenly to a depth of at least four inches, then compact slightly to improve contact with the subsoil.
   a. Depths of four inches or greater are recommended if the underlying material is bedrock, fine-textured clayey soils, loose sand, rock fragments, aggregate, or other unsuitable soil material.
   b. Do not apply topsoil when the site is wet, muddy, or frozen because it makes spreading difficult, inhibits bonding, can cause compaction problems, and forms a cloddy seedbed. Whenever possible avoid applying topsoil to the existing soil surface if the two layers have contrasting textures. Clayey topsoil over sandy subsoil is a particularly poor combination, as water creeps along the junction between the two soil layers and may cause the topsoil to slough.
   c. Applying topsoil on slopes with a ratio of 2:1 or greater may result in soil slippage and may require additional measures to provide good bonding of the soil material.
6. After spreading the topsoil, grade and stabilize the site.

EROSION CONTROL INSTALLATION DETAILS (CONT.)

TEMPORARY SEEDING

MATERIALS

1. Soil Amendments – Select materials and rates as determined by a soil test (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services) or 400 to 600 pounds of 12-0-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorous levels in the soil profile.
2. Seed – Select appropriate plant species seed or seed mixtures on the basis of quick germination, growth, and time of year to be seeded (see Table 1).
3. Mulch –
   a. Straw, hay, wood fiber, etc. (to protect seedbed, retain moisture, and encourage plant growth).
   b. Anchored to prevent removal by wind or water or covered with manufactured erosion control blankets.

Table 1. Temporary Seeding Specifications

Seed Species[1]	Rate per Acre	Planting Depth	Optimum Dates[2]
Wheat or Rye	150 lbs.	1 to 1½ inches	Sept. 15 – Oct. 30
Spring Oats	100 lbs.	1 inch	March 1 – April 15
Annual Ryegrass	40 lbs.	¼ inch	March 1 – May 1 Aug. 1 – Sept. 1
German Millet	40 lbs.	1 to 2 inches	May 1 – June 1
Sudangrass	35 lbs.	1 to 2 inches	May 1 – July 30
Buckwheat	60 lbs.	1 to 2 inches	April 15 – June 1
Corn (broadcast)	300 lbs.	1 to 2 inches	May 11 – Aug. 10
Sorghum	35 lbs.	1 to 2 inches	May 1 – July 15

[1] Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than one year (see Permanent Seeding Sheet C510-C520.
[2] Seeding done outside the optimum seeding dates increases the chances of seeding failure. Dates may be extended or shortened based on the location of the project site within the state.

Notes:
Mulch alone is an acceptable temporary cover and may be used in lieu of temporary seeding, provided that it is appropriately anchored.
A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

SEEDBED PREPARATION

1. Test soil to determine pH and nutrient levels.
2. Apply soil amendments as recommended by the soil test. If testing is not done, apply 400 to 600 pounds per acre of 12-0-12 analysis fertilizer, or equivalent.
3. Work the soil amendments into the upper two to four inches of the soil with a disk or rake operated across the slope.

SEEDING

1. Select a seed species or an appropriate seed mixture and application rate from Table 1.
2. Apply seed uniformly with a drill or cultipacker seeder or by broadcasting. Plant or cover seed to the depth shown in Table 1.

Notes:
1. If drilling or broadcasting the seed, ensure good seed-to-soil contact by firming the seedbed with a roller or cultipacker after completing seeding operations.
2. Daily seeding when the soil is moist is usually most effective.
3. If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.

3. Apply mulch (Mulching Sheet C520) and anchor it in place.

TEMPORARY SEEDING DATES

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WHEAT OR RYE												
OATS												
ANNU. RYEGRASS												

IRRIGATION NEEDED THIS PERIOD. TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREA USE MULCH

PERMANENT SEEDING

MATERIALS

1. Soil Amendments – (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services) or 400 to 600 pounds of 12-0-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorous levels in the soil profile.
2. Seed – Select appropriate plant species seed or seed mixtures on the basis of quick germination, growth, and time of year to be seeded (see Table 1).
3. Mulch –
   a. Straw, hay, wood fiber, etc. (to protect seedbed, retain moisture, and encourage plant growth).
   b. Anchored to prevent removal by wind or water or covered with manufactured erosion control blankets.

SITE PREPARATION

1. Grade the site to achieve positive drainage.
2. Add topsoil (see Topsoil Salvage and Utilization Sheet C510) or mulch (see Mulching Sheet C520) to achieve needed depth for establishment of vegetation. (Compost material may be added to improve soil moisture holding capacity, soil friability, and nutrient availability.)

SEEDBED PREPARATION

1. Test soil to determine pH and nutrient levels.
2. Apply soil amendments as recommended by the soil test and work into the upper two to four inches of soil. If testing is not done, apply 400 to 600 pounds per acre of 12-0-12 analysis fertilizer, or equivalent.
3. Till the soil to obtain a uniform seedbed. Use a disk or rake, operated across the slope, to work the soil amendments into the upper two to four inches of the soil.
3. Mulch all seeded areas (see Mulching Sheet C520)

SEEDING

Optimum seeding dates are March 1 to May 10 and August 10 to September 30. Permanent seeding done between May 10 and August 10 may need to be irrigated. Seeding outside or beyond optimum seeding dates is still possible with the understanding that reseeding or overseeding may be required if adequate surface cover is not achieved. Reseeding or overseeding can be easily accomplished if the soil surface remains well protected with mulch.

1. Select a seeding mixture and rate from Table 1. Select seed mixture based on site conditions, soil pH, intended land use, and expected level of maintenance.
2. Apply seed uniformly with a drill or cultipacker seeder or by broadcasting. Plant or cover the seed to a depth of one-fourth to one-half inch. If drilling or broadcasting the seed, ensure good seed-to-soil contact by firming the seedbed with a roller or cultipacker after completing seeding operations. (If seeding is done with a hydroseeder fertilizer and mulch can be applied with the seed in a slurry mixture.) and use appropriate methods to anchor the mulch in place. Consider using erosion control blankets on sloping areas and conveyance channels (see Erosion Control Blanket Sheet 520).

REVISION
10/10/2025 revised per INDOT comments

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER

Trent A Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

Site Erosion Control Details

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale:	

CAD FILE:
G:\25002\c510 site erosion control details.dwg

SHEET TITLE:

C510

EROSION CONTROL INSTALLATION DETAILS (CONT.)

PERMANENT SEEDING (CONT.)

Table 1. Permanent Seeding Recommendations
This table provides several seed mixture options. Additional seed mixtures are available commercially. When selecting a mixture, consider intended land use and site conditions, including soil properties (e.g., soil pH and drainage), slope aspect, and the tolerance of each species to shade and drought.

Open Low-Maintenance Areas (remaining idle more than six months)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white clover[1]	70 lbs. 2 lbs.	5.6 to 7.0
2. Perennial ryegrass - tall fescue[2]	70 lbs. 50 lbs.	5.6 to 7.0
3. Tall fescue[2] - white clover[1]	70 lbs. 2 lbs.	5.5 to 7.5

Steep Banks and Cuts, Low-Maintenance Areas (not mowed)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Smooth brome grass - red clover[1]	35 lbs. 20 lbs.	5.5 to 7.0
2. Tall fescue[2] - white clover[1]	50 lbs. 2 lbs.	5.5 to 7.5
3. Tall fescue[2] - red clover[1]	50 lbs. 20 lbs.	5.5 to 7.5
4. Orchard grass - red clover[1] - white clover[1]	30 lbs. 20 lbs. 2 lbs.	5.6 to 7.0
5. Crownvetch[1] - tall fescue[2]	12 lbs. 30 lbs.	5.6 to 7.0

Lawns and High-Maintenance Areas

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Bluegrass	140 lbs.	5.5 to 7.0
2. Perennial ryegrass (turf type)	60 lbs. 90 lbs.	5.6 to 7.0
3. Tall fescue (turf type)[2] - bluegrass	170 lbs. 30 lbs.	5.6 to 7.5

Channels and Areas of Concentrated Flow

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white[1]	150 lbs. 2 lbs.	5.5 to 7.0
2. Kentucky bluegrass - smooth bromegrass - switchgrass - timothy - perennial ryegrass - white clover[2]	20 lbs. 10 lbs. 3 lbs. 4 lbs. 10 lbs. 2 lbs.	5.5 to 7.5
3. Tall fescue[1] - white clover[2]	150 lbs. 2 lbs.	5.5 to 7.5
4. Tall fescue[2] - perennial ryegrass - Kentucky bluegrass	150 lbs. 20 lbs. 20 lbs.	5.5 to 7.5

Notes:
1. An oat or wheat companion or nurse crop may be used with any of the above permanent seeding mixtures, at the following rates:
   (a) spring oats – one-fourth to three-fourths bushel per acre
   (b) wheat – no more than one-half bushel per acre
2. A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

PERMANENT SEEDING DATES

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Non-irrigated(1)												
Irrigated												
Dormant(2)												

IRRIGATION NEEDED THIS PERIOD. TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREA USE MULCH

(1) LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED
(2) INCREASE SEEDING APPLICATION BY 50%

MULCHING

MATERIALS

Table 1. Mulch Specifications

Material[1]	Rate per Acre	Comments
Straw or hay	2 tons	Should be dry, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see *Table 2*).
Wood fiber or cellulose	1 ton	Apply with a hydraulic mulch machine and use with tacking agent.

[1] Mulching is not recommended in concentrated flows. Consider erosion control blankets or other stabilization methods.

MULCHING (CONT.)

Table 2. Mulch Anchoring Methods

Anchoring Method[1]	How to Apply
Mulch anchoring tool or farm disk (dull, serrated, and blades set straight)	Crimp or punch the straw or hay two to four inches into the soil. Operate machinery on the contour of the slope.
Cleating with dozer tracks	Operate dozer up and down slope to prevent formation of rills by dozer cleats.
Wood hydromulch fibers	Apply according to manufacturer's recommendations.
Synthetic tackifiers, binders, or soil stabilizers	Apply according to manufacturer's recommendations.
Netting (synthetic or biodegradable material)	Install netting immediately after applying mulch. Anchor netting with staples. Edges of netting strips should overlap with each up-slope strip overlapping four to six inches over the adjacent down-slope strip. Best suited to slope applications. In most instances, installation details are site specific, so manufacturer's recommendations should be followed.

[1] All forms of mulch must be anchored to prevent displacement by wind and/or water.

APPLICATION

1. Apply mulch at the recommended rate shown in Table 1.
2. Spread the mulch material uniformly by hand, hayfork, mulch blower, or hydraulic mulch machine. After spreading, no more than 25 percent of the ground should be visible.
3. Anchor straw or hay mulch immediately after application. The mulch can be anchored using one of the methods listed below:
   a. Crimp with a mulch anchoring tool, a weighted farm disk with dull serrated blades set straight, or track cleats of a bulldozer,
   b. Apply hydraulic mulch with short cellulose fibers,
   c. Apply a liquid tackifier, or
   d. Cover with netting secured by staples.

EROSION CONTROL BLANKET

MATERIALS

1. Organic (straw, excelsior, woven paper, coconut fiber, etc.) or synthetic mulch incorporated with a polypropylene, natural fiber or similar netting material (The netting may be biodegradable, photodegradable or permanent.)
2. Six to 12-inch staples, pins, or stakes.

INSTALLATION

1. Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
2. Prepare the seedbed, add soil amendments, and permanently seed (see Permanent Seeding Sheet C510, C520) the area immediately following seedbed preparation.
3. Lay erosion control blankets on the seeded area so that they are in continuous contact with the soil with each up-slope or up-stream blanket overlapping the down-slope or down-stream blanket by at least eight inches, or follow manufacturer's recommendations
4. Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with soil and tamp down. In certain applications, the manufacturer may require additional check slots at specific locations down slope from the uppermost edge of the upper blankets.
5. Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.

TURF REINFORCEMENT MAT

MATERIALS

1. Anchoring
   Staples, pins, or stakes used to prevent movement or displacement of mat. (Follow manufacturer's recommendations for specific applications.)
2. Turf reinforcement mat (typically consists of a three-dimensional matrix of polypropylene, nylon, or other material).
3. Six to 12-inch staples, pins, or stakes.

INSTALLATION

1. Select a turf reinforcement mat appropriate for the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
2. Grade and prepare the soil foundation for mat installation.
3. Install the mat according to the manufacturer's instructions, including burying the edges in check slots or slit trenches.
4. Anchor the mat in place by driving staples, pins, or stakes through the mat and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.
5. Backfill the mat with topsoil, filling to the top of the mat.
6. Seed the area after the mat has been installed and backfilled with soil.
7. Install erosion control blankets over the seeded turf reinforcement mat to stabilize the surface.

ROCK CHECK DAM

MATERIALS

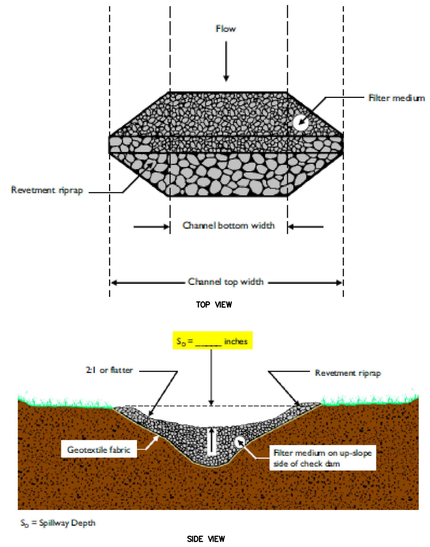
1. Geotextile fabric (8 ounce or heavier; nonwoven).
2. Indiana Department of Transportation Revetment riprap for dam.
3. INDOT CA No. 5 aggregate for use as filter medium (Aggregate must be well-graded).
   Note: INDOT CA No. 8 aggregate is acceptable if No. 5 aggregate is not available. The use of No. 8 aggregate may result in more frequent overtopping of the structure and will increase the frequency of structure maintenance.

INSTALLATION

1. Lay out the location of the check dam.
2. Excavate a cutoff trench into the channel bottom and ditch banks, extending it a minimum of 18 inches beyond the top of the ditch bank.
3. Install and anchor filter fabric in the channel and cutoff trench.
4. Place riprap in the cutoff trench and channel to the lines and dimensions shown in the construction plans. The center of each dam must be at least nine inches lower than the uppermost points of contact between the riprap dam and channel banks.
5. Extend the riprap at least 18 inches beyond the top of the channel banks to keep overflow water from eroding areas adjacent to the channel banks before it re-enters the channel.

ROCK CHECK DAM (CONT.)

6. Place filter medium (INDOT CA No. 5 aggregate) on the up-slope side of the dam. Place filter medium over the entire face of the dam up to the base of the overflow weir notch.
7. Stabilize the channel above the uppermost dam.
8. Install an erosion-resistant lining in the channel below the lowermost dam. The lining should extend a minimum distance of six feet below the dam.
9. Additional sediment storage can be provided by excavating a small sediment trap on the upstream side of the check dam.



GEOTEXTILE FABRIC DROP INLET PROTECTION

MATERIALS

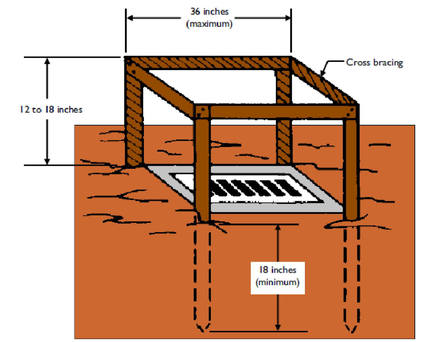
1. Support posts
2. 2 x 2 inch or 2 x 4 inch hardwood posts.
3. Three feet length, minimum.
4. 1 x 2 inch or 1 x 3 inch hardwood cross bracing lumber.
5. Lathe.
6. Staples or nails.
7. Geotextile fabric

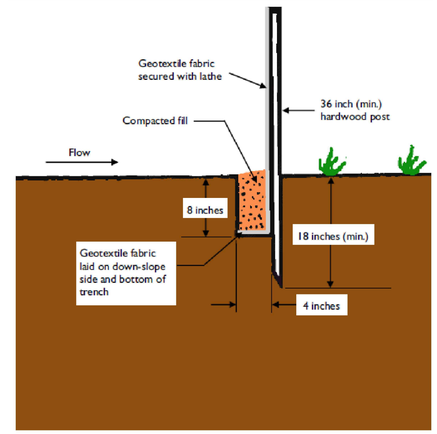
Table 1. Geotextile Fabric Specifications

Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (Inhibitors and stabilizers to ensure six month minimum life at temperatures of 0° to 120° F)	70%	85%
Tensile Strength at 20% Elongation:		
Standard Strength	30 lbs./linear inch	50 lbs./linear inch
Extra Strength	50 lbs./linear inch	70 lbs./linear inch
Slurry Flow Rate	0.3 gal./min./sq. ft.	4.5 gal./min./sq. ft.
Water Flow Rate	15 gal./min./sq. ft.	220 gal./min./sq. ft.

INSTALLATION

1. Dig an eight-inch deep, four-inch wide trench around the perimeter of the inlet.
2. If using pre-assembled geotextile fabric and posts, drive the posts into the soil, tightly stretching the geotextile fabric between posts as each is driven. (Posts must be placed on the inlet side of the anchor trench with the geotextile fabric on the side of the trench farthest from the inlet.)
   Note: If assembling the geotextile fabric and posts on-site, drive the posts into the soil and then secure the geotextile fabric to the posts by placing a piece of lathe over the fabric and fastening it to the post (stretching the fabric between posts as it is fastened).
3. Use the wrap join method when joining posts (see Silt Fence on sheet C520, C530).
4. Place the bottom 12 inches of geotextile fabric into the eight-inch deep trench, laying the remaining four inches in the bottom of the trench and extending away from the inlet.
5. Backfill the trench with soil material and compact it in place.
6. Brace the posts by nailing braces into each corner post or utilize rigid panels to support fabric.
   Note: In situations where storm water may bypass the structure, either:
   1. Set the top of the geotextile fabric filter at least six inches lower than the ground elevation on the down-slope side of the storm drain inlet,
   2. Build a temporary dike, compacted to six inches higher than the fabric, on the down-slope side of the storm drain inlet, AND/OR





SILT FENCE

MATERIALS

1. Fabric – woven or non-woven geotextile fabric meeting specified minimums outlined in Table 2.
   a. Height – a minimum of 18 inches above ground level (30 inches maximum).
   b. Reinforcement – fabric securely fastened to posts with wood lathe.
2. Support Posts
   a. 2 x 2 inch hardwood posts. Steel fence posts may be substituted for hardwood posts (steel posts should have projections for fastening fabric).
   b. Spacing – Eight feet maximum if fence is supported by wire mesh fencing. Six feet maximum for extra-strength fabric without wire backing.

Table 1. Slope Steepness Restrictions

Percent Slope		Maximum Distance
< 2%	< 50:1	100 feet
2% – 5%	50:1 to 20:1	75 feet
5% – 10%[1]	20:1 to 10:1	50 feet
10% – 20%[1]	10:1 to 5:1	25 feet
> 20%[1]	> 5:1	15 feet

[1] Consider other alternatives.

Note: Multiple rows of silt fence are not recommended on the same slope.

Table 2. Geotextile Fabric Specifications for Silt Fence (minimum)

Physical Property	Woven Geotextile Fabric	Non-Woven Geotextile Fabric
Filtering efficiency	85%	85%
Textile strength at 20% elongation Standard strength Extra strength	30 lbs. per linear inch 50 lbs. per linear inch	50 lbs. per linear inch 70 lbs. per linear inch
Slurry flow rate	0.3 gal./min./square feet	4.5 gal./min./square feet
Water flow rate	15 gal./min./square feet	220 gal./min./square feet
UV resistance	70%	85%
Post spacing	7 feet	5 feet

Note: Silt fences can be purchased commercially.

REVISION

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER

Trent A Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

Site Erosion Control Details

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale:	

CAD FILE: G:\25002\c520 site erosion control details.dwg

SHEET TITLE:

C520

SILT FENCE (CONT.)

INSTALLATION

Prefabricated silt fence (see Exhibits 1, 2, and 3)

1. Lay out the location of the fence so that it is parallel to the contour of the slope and at least 10 feet beyond the toe of the slope to provide a sediment storage area. Turn the ends of the fence up slope such that the point of contact between the ground and the bottom of the fence end terminates at a higher elevation than the top of the fence at its lowest point (see Exhibit 1).
2. Excavate an eight–inch deep by four–inch wide trench along the entire length of the fence line (see Exhibit 2). Installation by plowing is also acceptable.
3. Install the silt fence with the filter fabric located on the up–slope side of the excavated trench and the support posts on the down–slope side of the trench.
4. Drive the support posts at least 18 inches into the ground, tightly stretching the fabric between the posts as each is driven into the soil. A minimum of 12 inches of the filter fabric should extend into the trench. (If it is necessary to join the ends of two fences, use the wrap joint method shown in Exhibit 3.)
5. Lay the lower four inches of filter fabric on the bottom of the trench and extend it toward the up–slope side of the trench.
6. Backfill the trench with soil material and compact it in place.

Note: If the silt fence is being constructed on–site, attach the filter fabric to the support posts (refer to Tables 1 and 2 for spacing and geotextile specifications) and attach wooden lathe to secure the fabric to the posts. Allow for at least 12 inches of fabric below ground level. Complete the silt fence installation, following steps 1 through 6 above.

Exhibit 1

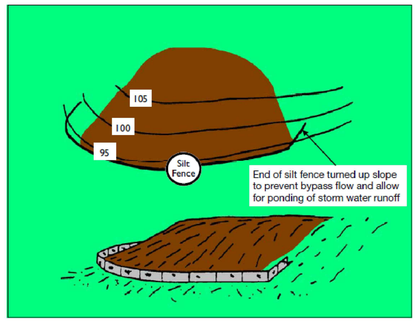


Exhibit 2

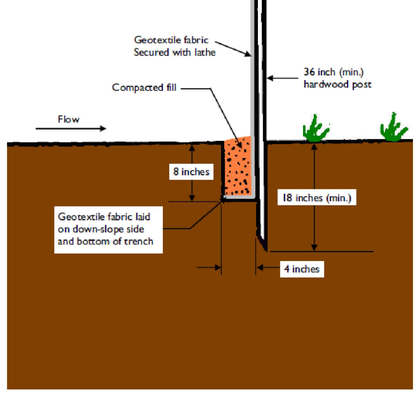
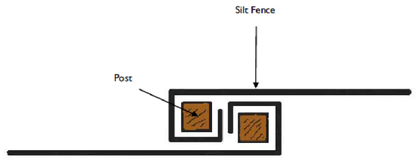
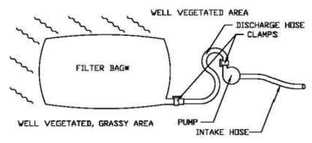


Exhibit 3

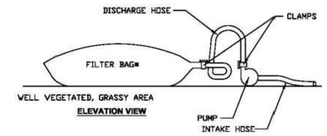


DE–WATERING SYSTEM

DETAIL 37 – PUMPED WATER FILTER BAG



PLAN VIEW



ELEVATION VIEW

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE E – 29 – 3	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

PREFRABRICATED CONCRETE WASHOUT SYSTEM/CONTAINER

MATERIALS

1. Self–contained sturdy containment systems that are delivered to a site
2. Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining
3. Signage.

SURFACE ROUGHENING

Roughening Slopes (To Be Mowed)

1. Make slopes to be mowed no steeper than 3:1.
2. Use a tiller, disk, harrow, or culti–packer to roughen the slopes, creating shallow grooves no more than ten inches apart, one inch deep, and that run parallel to the slope contour.

Roughening Areas with Tracked Machinery

1. Limit roughening with tracked machinery to sandy or relatively dry, finertextured soils to avoid undue surface compaction. (This roughening method is generally not as effective as other roughening methods).
2. Operate the tracked machinery up and down the slope so as to leave horizontal depressions in the soil.
   Note: Do not back–blade during the final grading operation.

Seeding, Fertilizing, and Mulching Roughened Areas

1. Immediately seed, fertilize, and mulch surface–roughened areas while soil is loose and moist to aid seed germination and vegetative growth (see Temporary Seeding Sheet C510; Permanent Seeding Sheet C510, C520; Mulching Sheet C520
2. If roughening with tracked machinery, consider seeding, fertilizing, and mulching first, letting the cleats of the tracks incorporate the seed and fertilizer into the soil and anchor the mulch. This is especially well suited for temporary seeding when timeliness is critical and equipment is unavailable for planting operations.

DANDY SACKS (PAVED INLET DROP PROTECTION)

MATERIALS

THE DANDY SACK™ WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

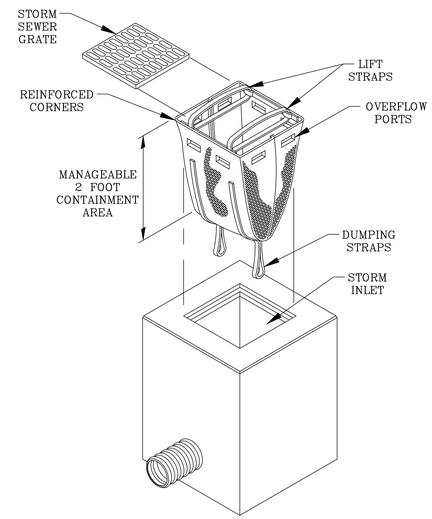
REGULAR FLOW DANDY SACK™ (BLACK)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	15 x 15
Puncture Strength	ASTM D 4833	kN (lbs)	0.67 (150)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5506 (800)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.67 (150) x 0.73 (165)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	2852 (70)
Permittivity	ASTM D 4491	Sec⁻¹	0.90

HI–FLOW DANDY SACK™ (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) x 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	5907 (145)
Permittivity	ASTM D 4491	Sec⁻¹	2.1

DANDY SACKS (PAVED INLET DROP PROTECTION) (CONT.)



EROSION CONTROL INSPECTION AND MAINTENANCE GUIDELINES

EROSION CONTROL INSPECTION GUIDELINES TABLE

EROSION CONTROL MEASURE	EROSION CONTROL MEASURE INSPECTION FREQUENCY			
	DAILY	WEEKLY	AFTER RAIN EVENT	AS NEEDED
TREE PRESERVATION		X		X
CONSTRUCTION ENTANCE	X			X
TOP SOIL STOCKPILE	X			X
TEMPORARY SEEDING		X	X	X
PERMANENT SEEDING		X	X	X
MULCHING		X	X	X
CONTROL BLANKET		X	X	X
TURF REINFOR. MAT		X	X	X
ROCK CHECK DAM		X	X	X
FABRIC INLET	X		X	X
SILT FENCE		X	X	X
CONCRETE WASHOUT	X		X	X
SURFACE ROUGHENING				X
DANDY SACKS		X	X	X
DUST CONTROL				X

EROSION CONTROL MAINTENANCE GUIDELINES

TREE PRESERVATION

1. Inspect at least once every seven calendar days.
2. Repair perimeter barriers if damaged.
3. Inspect for damage from construction equipment, etc. Repair wounds simply by removing damaged bark and wood tissue. Do not use tree paint.
4. Cable and brace any trunk splits, weak forks, and large limbs.
5. Properly prune all damaged limbs. Avoid leaving stubs.
6. Aerate soil where compaction has been excessive.
7. Fertilize to improve tree growth, vigor, and appearance.
8. Water during dry periods to help offset soil compaction and root damage.

TEMPORARAY CONSTRUCTION ENTRANCE

1. Inspect daily.
2. Reshape pad as needed for drainage and runoff control.
3. Top–dress with clean aggregate as needed.
4. Immediately remove mud and sediment tracked or washed onto public roads.
5. Flushing should only be used if the water from the construction drive can be conveyed into a sediment trap or basin.

TOPSOIL SALVAGE AND UTILIZATION

1. Inspect daily.
2. Check for damage to perimeter barrier; repair immediately.
3. Check for erosion or damage to newly spread topsoil; repair immediately and revegetate.

TEMPORARY SEEDING

1. Inspect within 24 hours of each rain event and at least once every seven calendar days.
2. Check for erosion or movement of mulch and repair immediately.
3. Monitor for erosion damage and adequate cover (80 percent density); reseed, fertilize, and apply mulch where necessary.
4. If nitrogen deficiency is apparent, top–dress fall seeded wheat or rye seeding with 50 pounds per acre of nitrogen in February or March.

PERMANENT SEEDING

1. Inspect within 24 hours of each rain event and at least once every seven calendar days until the vegetation is successfully established.
2. Characteristics of a successful stand include vigorous dark green or bluishgreen seedlings with a uniform vegetative cover density of 90 percent or more.
3. Check for erosion or movement of mulch.
4. Repair damaged, bare, gullied, or sparsely vegetated areas and then fertilize, reseed, and apply and anchor mulch.
5. If plant cover is sparse or patchy, evaluate the plant materials chosen, soil fertility, moisture condition, and mulch application; repair affected areas either by overseeding or preparing a new seedbed and reseeding. Apply and anchor mulch on the newly seeded areas.
6. If vegetation fails to grow, consider soil testing to determine soil pH or nutrient deficiency problems. (Contact your soil and water conservation district or cooperative extension office for assistance.)
7. If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.

EROSION CONTROL INSPECTION AND MAINTENANCE GUIDELINES (CONT.)

EROSION CONTROL MAINTENANCE GUIDELINES (CONT.)

PERMANENT SEEDING (CONT.)

8. Add fertilizer the following growing season. Fertilize according to soil test recommendations.
9. Fertilize turf areas annually. Apply fertilizer in a split application. For cool–season grasses, apply one–half of the fertilizer in late spring and onehalf in early fall. For warm–season grasses, apply one–third in early spring, one–third in late spring, and the remaining one–third in middle summer.

MULCHING

1. Inspect within 24 hours of each rain event and at least once every seven calendar days.
2. Check for erosion or movement of mulch; repair damaged areas, reseed, apply new mulch and anchor the mulch in place.
3. Continue inspections until vegetation is firmly established.
4. If erosion is severe or recurring, use erosion control blankets or other more substantial stabilization methods to protect the area.

EROSION CONTROL BLANKET

1. Inspect within 24 hours of each rain event and at least once every seven calendar days.
2. Check for erosion or displacement of the blanket.
3. If any area shows erosion, pull back that portion of the blanket covering the eroded area, add soil and tamp, reseed the area, replace and staple the blanket.

TURF REINFORCEMENT MAT

1. Inspect within 24 hours of each rain event and at least once every seven calendar days.
2. Check for erosion or displacement/exposure of the mat.
3. If a specific area shows erosion, add soil and restabilize.

ROCK CHECK DAM

1. Inspect within 24 hours of each rain event and at least once every seven calendar days.
2. If significant erosion occurs between dams, install an erosion–resistant liner in that portion of the channel.
3. Remove accumulated sediment when it reaches one–half the height of the dam to maintain channel capacity, allow drainage through the dam, and prevent large flow from displacing sediment.
4. Add riprap and aggregate as needed to maintain design height and cross section of the dams.
5. When dams are no longer needed, remove the riprap and aggregate and stabilize the channel, using an erosion–resistant lining if necessary. (Riprap and aggregate from the dam may be removed or utilized to stabilize the channel.)

GEOTEXTILE FABRIC DROP INLET PROTECTION

1. Inspect daily.
2. Inspect geotextile fabric and make needed repairs immediately.
3. Remove sediment from pool area to provide storage for the next storm event. Avoid damaging or undercutting fabric during sediment removal.
4. When contributing drainage area has been stabilized, remove sediment, properly dispose of all construction material, grade area to the elevation of the storm drain inlet top, then stabilize immediately.

SILT FENCE

1. Inspect within 24 hours of a rain event and at least once every seven calendar days.
2. If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately. Note: All repairs should meet specifications as outlined within this measure.
3. Remove deposited sediment when it is causing the filter fabric to bulge or when it reaches one–half the height of the fence at its lowest point. When contributing drainage area has been stabilized, remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize.

PREFRABRICATED CONCRETE WASHOUT SYSTEM/CONTAINER

1. Inspect daily and after each storm event.
2. Inspect the integrity of the overall structure including, where applicable, the containment system.
3. Inspect the system for leaks, spills, and tracking of soil by equipment.
4. Inspect the polyethylene lining for failure, including tears and punctures.
5. Once concrete wastes harden, remove and dispose of the material.
6. Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.
7. Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
8. Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.
9. The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.
10. Concrete washout systems are designed to promote evaporation. Prefabricated units are often pumped and the company supplying the unit provides this service.
11. Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate action.

DUST CONTROL

Minimizing wind erosion and controlling dust will be accomplished by one or more of the following methods:

1. Covering 30% or more of the soil with a non–erodible material
2. Roughening the soil to produces ridges (at least 6 inches) perpendicular to the prevailing wind.
3. Frequent watering of excavation and fill ares
4. Providing gravel or paving at entrance/exit drives, parking areas, and transit paths

REVISION

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile–llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317–535–3579
Cell: 317–509–4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER

Trent A Baxter

CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

Site Erosion Control Details

Job No. 25002	Date Stamped 05/02/2025	
Drawn By caw	Checked By tab	Scale:

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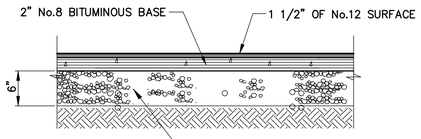
SHEET TITLE:

C530



TYPICAL NORMAL DUTY ASPHALT PAVEMENT DETAIL
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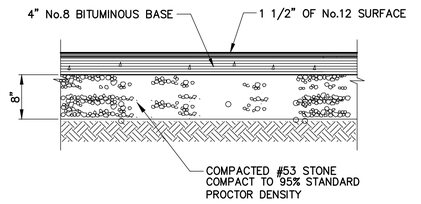

TYPICAL HEAVY DUTY ASPHALT PAVEMENT DETAIL
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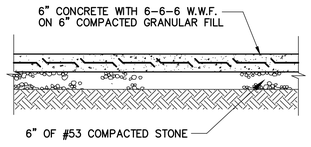

TYPICAL CONCRETE PAVEMENT
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TYPICAL DUMPSTER ENCLOSURE PAVEMENT
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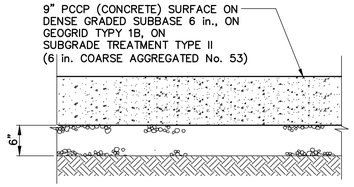

TYPICAL CONCRETE RIGHT-OF-WAY PAVEMENT
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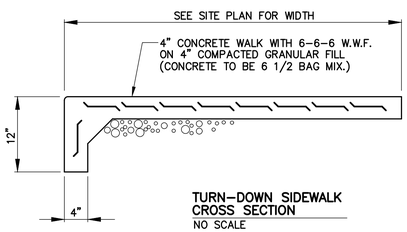

TURN-DOWN SIDEWALK
CROSS SECTION
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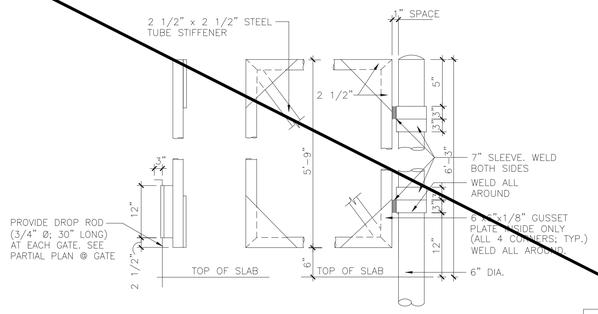
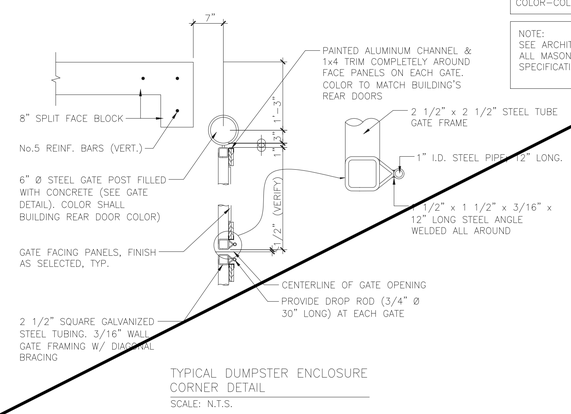


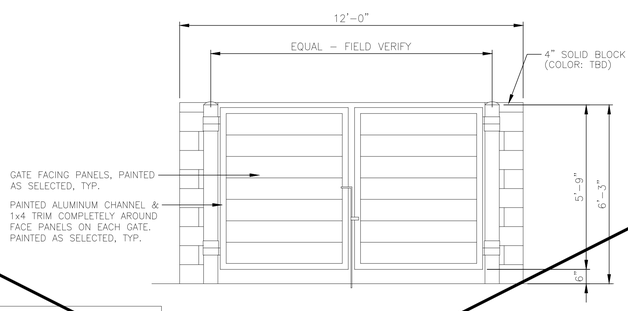
TYPICAL DUMPSTER ENCLOSURE
GATE DETAILS
SCALE: N.T.S.

NOTE:
ALL DUMPSTER ENCLOSURE BLOCK WALLS SHALL BE 8" SPLIT FACE 'DRY' BLOCK UNLESS OTHERWISE NOTED (PAINT BLOCK WALLS INSIDE AND OUTSIDE WITH (1) COAT BLOCK FILLER AND (1) COAT OF FINAL COLOR-COLOR: TBD)

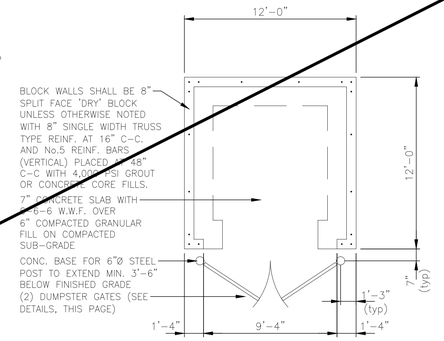
NOTE:
SEE ARCHITECTURAL PLANS FOR ALL MASONRY AND MORTAR SPECIFICATIONS



TYPICAL DUMPSTER ENCLOSURE
CORNER DETAIL
SCALE: N.T.S.

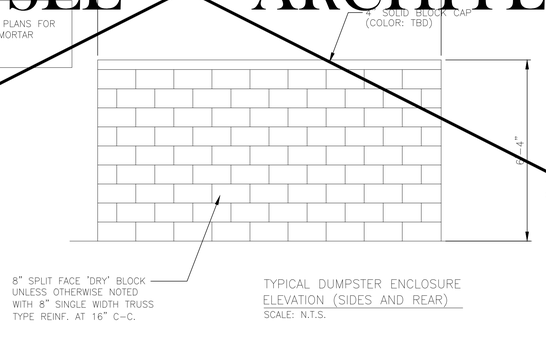


TYPICAL DUMPSTER ENCLOSURE
GATE ELEVATION (FRONT)
SCALE: N.T.S.

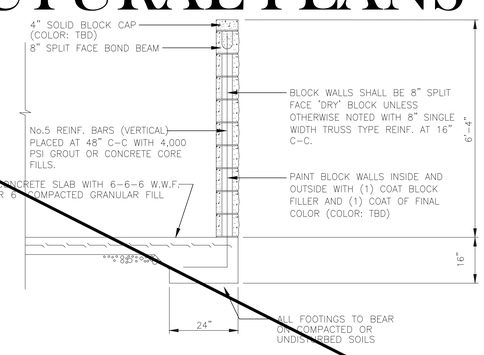


DUMPSTER ENCLOSURE PLAN
SCALE: 1" = 1'-0"

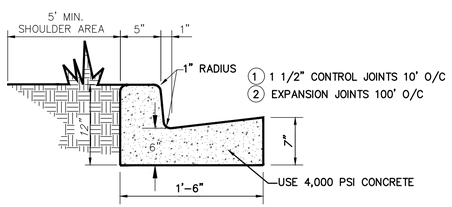
SEE ARCHITECTURAL PLANS



TYPICAL DUMPSTER ENCLOSURE
ELEVATION (SIDES AND REAR)
SCALE: N.T.S.



TYPICAL DUMPSTER ENCLOSURE WALL SECTION
SCALE: 1/2"= 1'-0"



CURB "A" 18" CONCRETE CURB & GUTTER DETAIL
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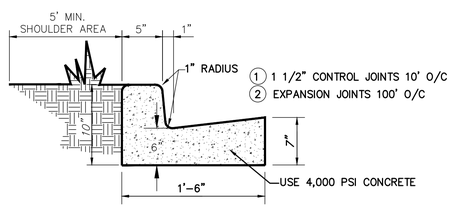

CURB "C" 18" CONCRETE CURB & GUTTER DETAIL
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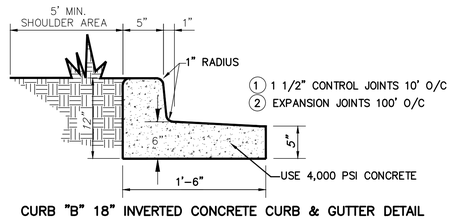

CURB "B" 18" INVERTED CONCRETE CURB & GUTTER DETAIL
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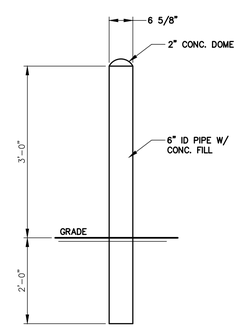
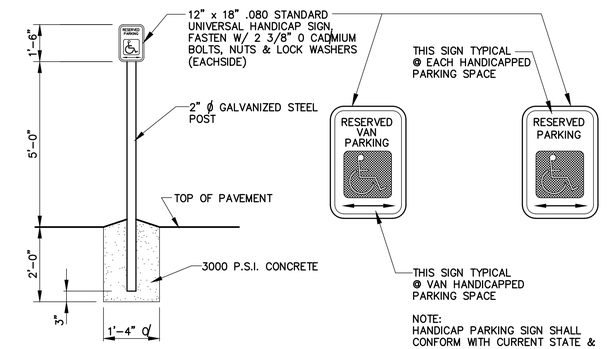


TYPE 6"dia. PIPE BOLLARD DETAIL
SCALE: NO SCALE



HANDICAP PARKING SIGNS
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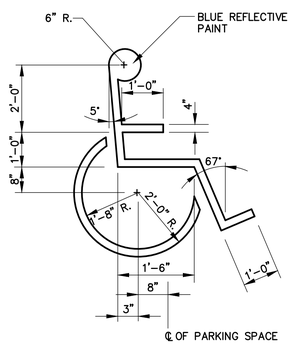

INTERNATIONAL
HANDICAP DETAIL
NO SCALE

REVISION

VERSATILE
CONSTRUCTION
GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER
REGISTERED
No. 19700309
STATE OF INDIANA
PROFESSIONAL ENGINEER

Trent A Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

General Sitework Details

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: as noted	

CAD FILE:
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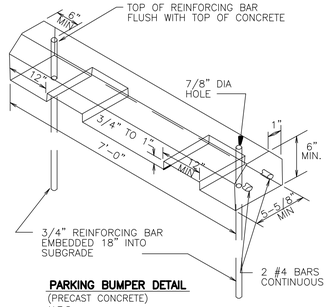
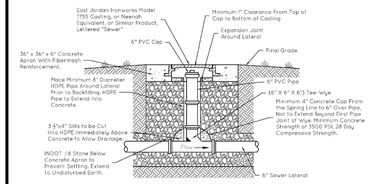
SHEET TITLE:

C600



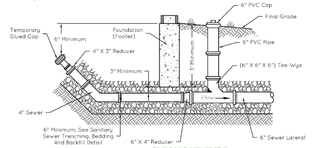
PARKING BUMPER DETAIL
(PRECAST CONCRETE)
N.T.S.



CLEANOUT TYPE 2
(Hardscape Surfaces and All Other Installations Beyond Three Feet of Building)

Note:
All slab and crawl space connections must be a minimum of 3" below the footer and exit the building at the front of the structure to provide the shortest, most direct route from the building to the existing lateral stub.

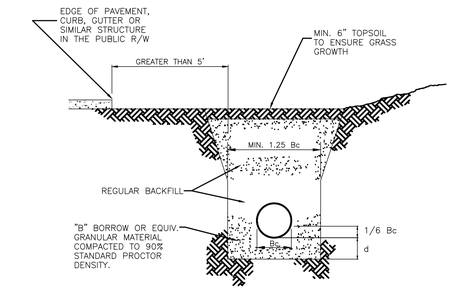
Note:
Lateral contractor to install in top of cleanout cap a 1-1/2" x 1/4" Mag Nail as manufactured by CHRISNUK, Inc. of Cincinnati, Ohio and sealed with exterior clear silicone sealant.



CLEANOUT TYPE 1
(Only Landscaped Surfaces Within Three Feet of Building)

Notes:
1) Top of casting or cleanout cap shall extend 0.20 feet minimum above finished grade unless constructed within pedestrian or vehicular traffic way. Unless approved by Engineer, sanitary sewer castings or cleanouts must not be within one (1) foot horizontal distance of any paved or concrete surfaces.
2) All cleanout pipes and fittings to be PVC Schedule 40 or SDR 35 when shallower than twelve (12) feet. At depths greater than twelve (12) feet, material of construction will be determined by Engineer.

TYPICAL CLEANOUTS
Not to Scale



GREATER THAN 5' FROM EDGE OF PAVEMENT

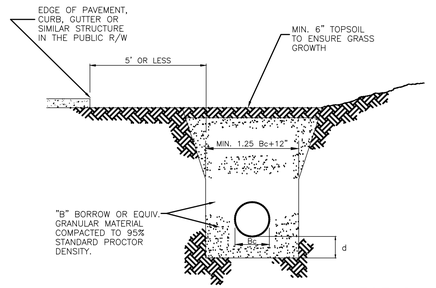
DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	(d) MIN.
27" & SMALLER	4"
30" TO 60"	4"
66" & LARGER	6"

NOTE:
ALL BEDDING AND INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.

A MINIMUM 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.

LEGEND
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

REINFORCED CONCRETE PIPE (RCP) TRENCH DETAIL
GREATER THAN 5' FROM EDGE OF PAVEMENT



WITHIN 5' OF EDGE OF PAVEMENT

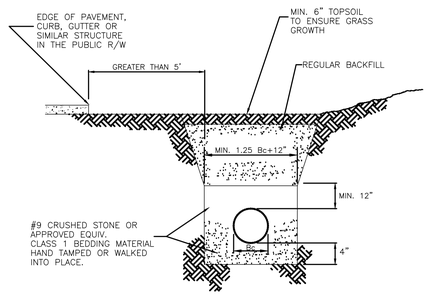
DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	(d) MIN.
27" & SMALLER	4"
30" TO 60"	4"
66" & LARGER	6"

NOTE:
ALL BEDDING AND INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.

A MINIMUM 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.

LEGEND
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

REINFORCED CONCRETE PIPE (RCP) TRENCH DETAIL
WITHIN 5' OF EDGE OF PAVEMENT



GREATER THAN 5' FROM EDGE OF PAVEMENT

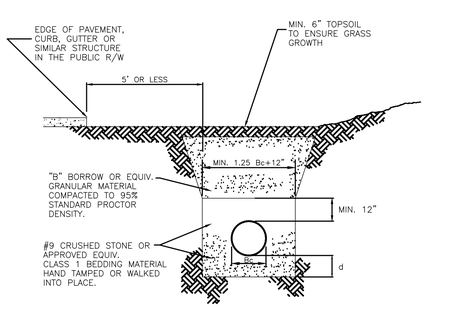
DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	(d) MIN.
27" & SMALLER	4"
30" TO 60"	4"
66" & LARGER	6"

NOTE:
ALL BEDDING AND INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.

A MINIMUM 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.

LEGEND
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

PLASTIC PIPE (PVC & HDPE) TRENCH DETAIL
GREATER THAN 5' FROM EDGE OF PAVEMENT



WITHIN 5' OF EDGE OF PAVEMENT

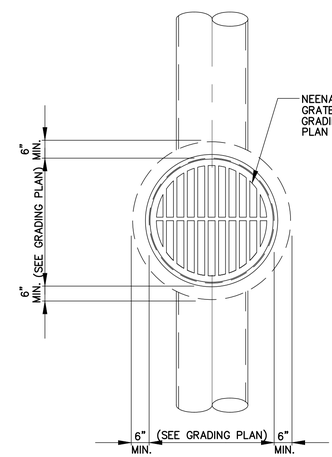
DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	(d) MIN.
27" & SMALLER	4"
30" TO 60"	4"
66" & LARGER	6"

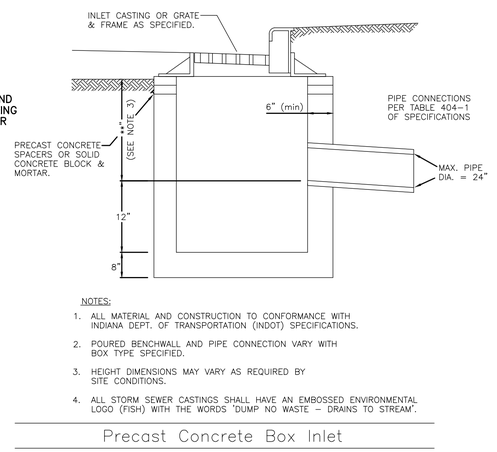
NOTE:
ALL BEDDING AND INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.

A MINIMUM 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.

LEGEND
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

PLASTIC PIPE (PVC & HDPE) TRENCH DETAIL
WITHIN 5' OF EDGE OF PAVEMENT

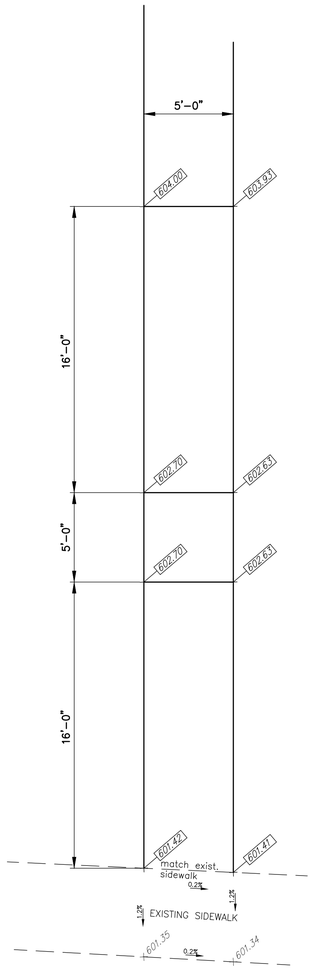




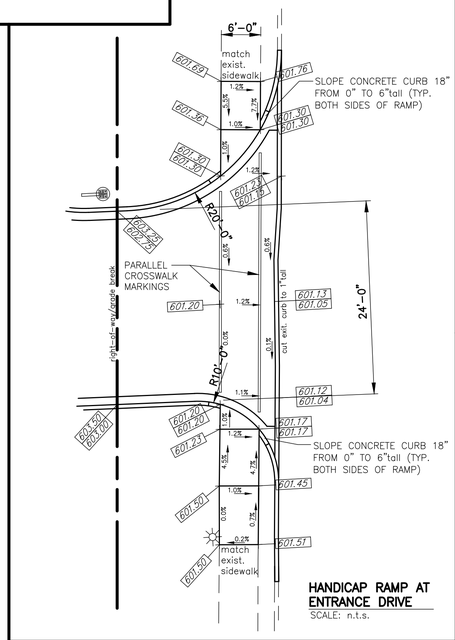
NOTES:
1. ALL MATERIAL AND CONSTRUCTION TO CONFORMANCE WITH INDIANA DEPT. OF TRANSPORTATION (INDOT) SPECIFICATIONS.
2. POURED BENCHWALL AND PIPE CONNECTION VARY WITH BOX TYPE SPECIFIED.
3. HEIGHT DIMENSIONS MAY VARY AS REQUIRED BY SITE CONDITIONS.
4. ALL STORM SEWER CASTINGS SHALL HAVE AN EMBOSSED ENVIRONMENTAL LOGO (FISH) WITH THE WORDS 'DUMP NO WASTE – DRAINS TO STREAM'.

Precast Concrete Box Inlet

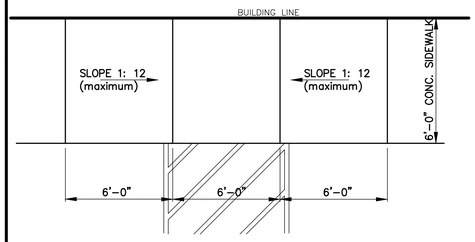
NOTE: ALL MANHOLES AND INLETS SHALL BE PLACED ON NO LESS THAN 6 INCHES OF STONE.



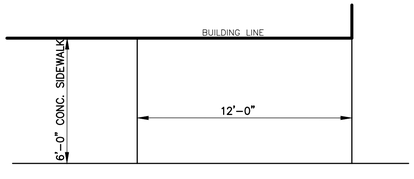
HANDICAP RAMPS AT SOUTHEAST SIDE OF PATIO DETAIL
SCALE: n.t.s.



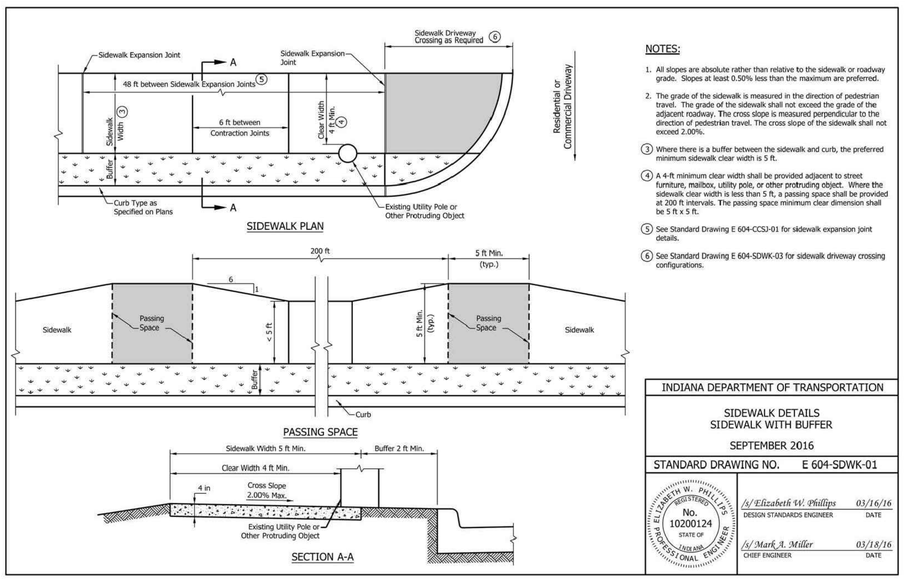
HANDICAP RAMP AT ENTRANCE DRIVE
SCALE: n.t.s.



HANDICAP RAMP AT HDCP PARKING DETAIL
SCALE: n.t.s.



HANDICAP RAMP AT NORTHWEST CORNER OF BUILDING DETAIL
SCALE: n.t.s.



NOTES:

1. All slopes are absolute rather than relative to the sidewalk or roadway grade. Slopes at least 0.50% less than the maximum are preferred.
2. The grade of the sidewalk is measured in the direction of pedestrian travel. The grade of the sidewalk shall not exceed the grade of the adjacent roadway. The cross slope is measured perpendicular to the direction of pedestrian travel. The cross slope of the sidewalk shall not exceed 2.00%.
3. Where there is a buffer between the sidewalk and curb, the preferred minimum sidewalk clear width is 5 ft.
4. A 4-ft minimum clear width shall be provided adjacent to street furniture, mailbox, utility pole, or other protruding object. Where the sidewalk clear width is less than 5 ft, a passing space shall be provided at 200 ft intervals. The passing space minimum clear dimension shall be 5 ft x 5 ft.
5. See Standard Drawing E 604-CCSJ-01 for sidewalk expansion joint details.
6. See Standard Drawing E 604-SDWK-03 for sidewalk driveway crossing configurations.

INDIANA DEPARTMENT OF TRANSPORTATION		
SIDEWALK DETAILS SIDEWALK WITH BUFFER SEPTEMBER 2016		
STANDARD DRAWING NO. E 604-SDWK-01		
ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER	*/s/ Elizabeth W. Phillips*	03/16/16
	DESIGN STANDARDS ENGINEER	DATE
	/s/ Mark A. Miller	03/18/16
	CHIEF ENGINEER	DATE

HANDICAP RAMP ON EXISTING SIDEWALK AT THE ENTRANCE DRIVE DETAIL
SCALE: n.t.s.

REVISION

09/16/2025	revised per INDOT comments
09/24/2025	revised entry drive, front grading, and sidewalk to public sidewalk
10/10/2025	revised per INDOT comments

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER

Trent A Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

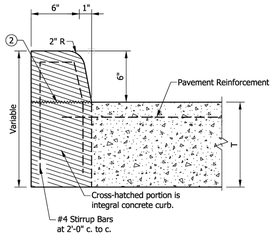
General Sitework Details

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab — Scale: as noted

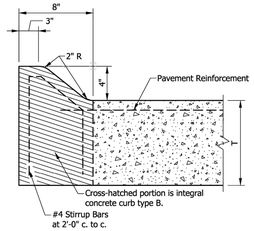
CAD FILE:
G:\25002\c610 general sitework details.dwg

SHEET TITLE:

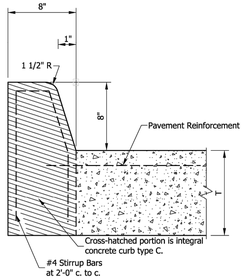
C610



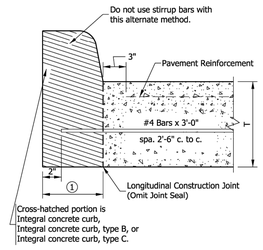
INTEGRAL CONCRETE CURB
(VERTICAL)



INTEGRAL CONCRETE CURB
TYPE B
(SLOPING)



INTEGRAL CONCRETE CURB
TYPE C
(VERTICAL)



ALTERNATE METHOD
OF CONSTRUCTION FOR ALL TYPES
OF INTEGRAL CONCRETE CURB

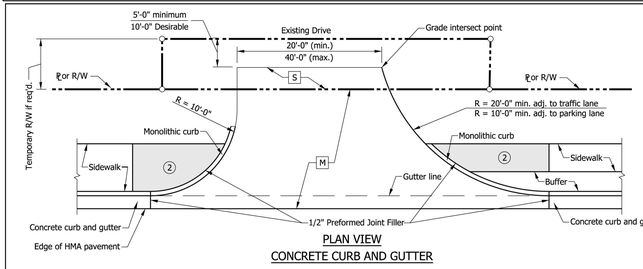
NOTES:

1. 8 in. for integral concrete curb type B or C and 7 in. for integral concrete curb.
2. Concrete below this line may be poured with the pavement.

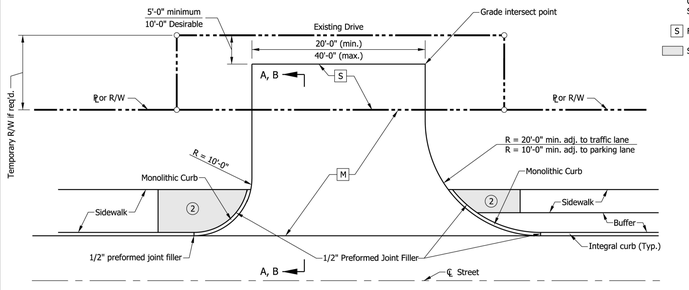
LEGEND:

T = Nominal Pavement Thickness

INDIANA DEPARTMENT OF TRANSPORTATION	
INTEGRAL CONCRETE CURB	
SEPTEMBER 2004	
STANDARD DRAWING NO. E 605-CCIN-01	
RICHARD L. VANCLEAVE REGISTERED No. 9750 STATE OF INDIANA PROFESSIONAL ENGINEER	/s/ Richard L. VanCleave 9-01-04 DESIGN STANDARDS ENGINEER DATE
	/s/ Richard K. Smutzer 9-01-04 CHIEF ENGINEER DATE



PLAN VIEW
CONCRETE CURB AND GUTTER



PLAN VIEW
INTEGRAL CONCRETE CURB

LEGEND

M PCCP for Approaches 9 in., on Dense Graded Subbase, on Geogrid Type 1B, on Subgrade Treatment Type II (6 in. Coarse Aggregate No. 53)

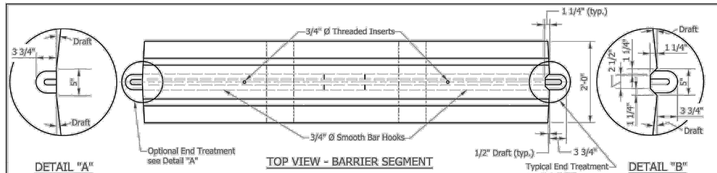
S For type and thickness equivalent to surface in place, see plans.

Sidewalk elevation transitions.

NOTES:

1. See Standard Drawing E 610-DRIV-09 for Section A-A, and Section B-B.
2. See Standard Drawing E 604-SDWK-03 for sidewalk driveway crossing details.
3. See Standard Drawing E 610-DRIV-14 for joint placement, monolithic curb, and concrete curb and gutter details.

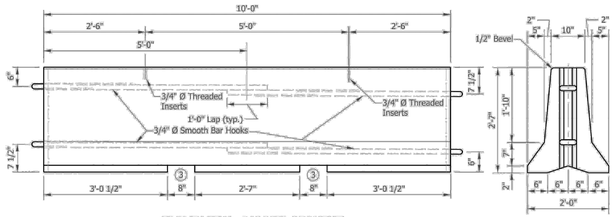
INDIANA DEPARTMENT OF TRANSPORTATION	
CLASS III DRIVE (COMMERCIAL)	
SEPTEMBER 2019	
STANDARD DRAWING NO. E 610-DRIV-04	
ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER	5/1/2019 DESIGN STANDARDS ENGINEER DATE
	6/5/2019 CHIEF ENGINEER DATE



DETAIL "A"

TOP VIEW - BARRIER SEGMENT

DETAIL "B"

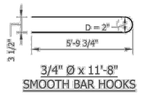


FRONT VIEW - BARRIER SEGMENT

END VIEW

NOTES:

1. For freeways and interstates, the maximum barrier flare rate and construction clear zone distance shall be based on 70 mph for the first run of barrier within the construction zone. For subsequent barrier placement, the barrier flare rates and construction clear zone distance shall be based on 70 mph unless otherwise shown on the plans.
2. The barrier taper flare rate and construction clear zone distance are shown in Table No. 1. Construction clear zone distance is measured from the through travel lane. The barrier taper flare rate shall be as shown or flatter.
3. The dimensions of the lifting slots are subject to adjustment as necessary to accommodate handling equipment.
4. For additional connection details see Standard Drawing E 801-TCCB-03.

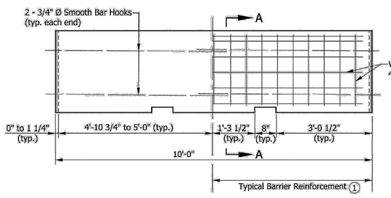


3/4" Ø x 11'-8"
SMOOTH BAR HOOKS

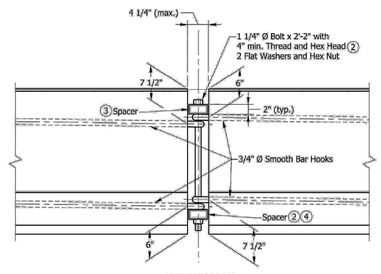
TABLE NO. 1

Construction Zone Design Speed	Barrier Taper Flare Rate	Construction Clear Zone Distance
70 mph	20:1	30
60 mph	18:1	30
55 mph	16:1	23
50 mph	14:1	16
45 mph	12:1	16
40 mph	10:1	13
≤ 35 mph	10:1	13

INDIANA DEPARTMENT OF TRANSPORTATION	
TEMPORARY CONCRETE BARRIER DIMENSIONS AND FLARE RATES	
SEPTEMBER 2024	
STANDARD DRAWING NO. E 801-TCCB-02	
ELIZABETH P. MOUSER REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER	04/09/2024 DESIGN STANDARDS ENGINEER DATE
	04/17/2024 CHIEF ENGINEER DATE

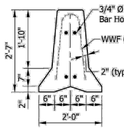


REINFORCEMENT DETAILS

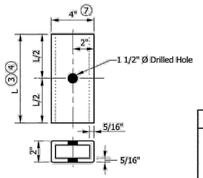


FRONT VIEW

CONNECTION DETAIL



SECTION A-A 1

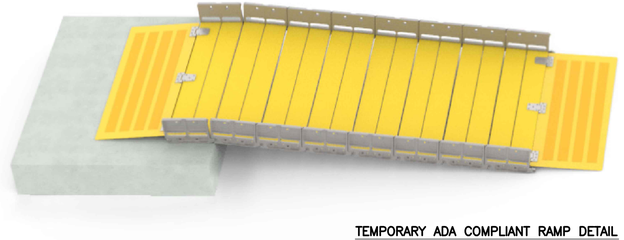


SPACER DETAIL

NOTES:

1. Section A-A shows reinforcement with welded wire fabric. The WWF may be bent to the shape of the wall.
2. Hex nut may be tack welded to bottom spacer to facilitate installation and removal. Bolts shall be torqued only to tight condition. Clearance between the spacer and the ends of the barrier shall allow angular deflection at the joints to allow flare rate 11:1 or flatter.
3. Top spacer TS 4" x 2" x 5/16" x 10" long.
4. Bottom spacer TS 4" x 2" x 5/16" x 1'-4" long.
5. Where necessary to meet short radius curving alignment, the shorter top spacer (10") may be substituted for the standard bottom spacer (16").
6. For additional connection details see Standard Drawing E 801-TCCB-02.
7. Where very short radius curving alignment is encountered, spacers may be TS 3" x 2" x 1/4" x the appropriate length as shown above.
8. In lieu of the connection detail shown, the J-J Hook temporary barrier connection of Easi-Set Industries as described in FHWA eligibility letter B-52 of March 26, 1999 may be used.

INDIANA DEPARTMENT OF TRANSPORTATION	
TEMPORARY CONCRETE BARRIER DETAILS	
SEPTEMBER 2019	
STANDARD DRAWING NO. E 801-TCCB-03	
ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER	5/2/2019 DESIGN STANDARDS ENGINEER DATE
	6/5/2019 CHIEF ENGINEER DATE



TEMPORARY ADA COMPLIANT RAMP DETAIL
SCALE: no scale

REVISION
10/20/2025 revised per INDOT comments

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER
Trent A. Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

General Sitework Details

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: as noted	

CAD FILE:
G:\25002\c620 general sitework details.dwg

SHEET TITLE:
C620

Advanced Drainage Systems, Inc.

SiteAssist™
FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR APP

SC-310 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-310.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 325 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

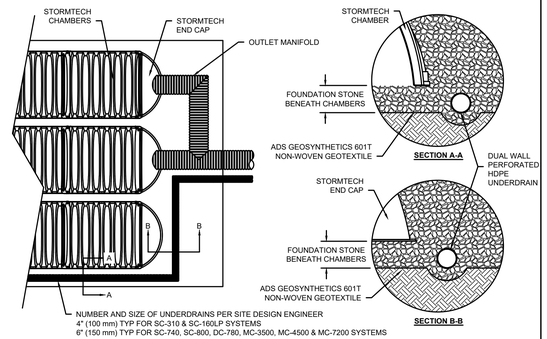
1. STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE SC-310/DC-780/SC-800".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 3" (75 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE SC-310/DC-780/SC-800".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE SC-310/DC-780/SC-800".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH INSTALLATION GUIDE SC-310/DC-780/SC-800".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

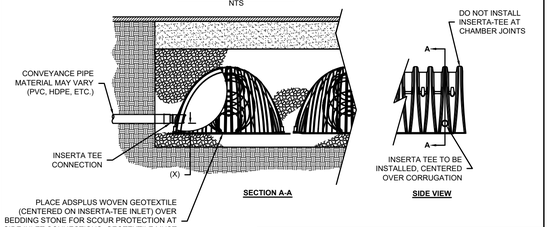
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



5 UNDERDRAIN DETAIL

INSERTA TEE DETAIL
NTS

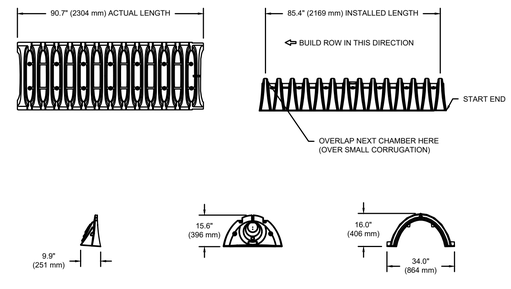


CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-800	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

NOTES:
- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
- CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

6 INSERTA-TEE SIDE INLET DETAIL

SC-310 TECHNICAL SPECIFICATION
NTS

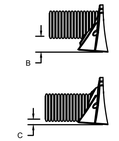


NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	29.34 CUBIC FEET	(0.83 m³)
WEIGHT	35.0 lbs.	(16.8 kg)

*ASSUMES 6" (150 mm) ABOVE AND BELOW CHAMBER; 3" (75 mm) BETWEEN CHAMBERS

PART #	STUB	B	C
SC310EPE06TPC	6" (150 mm)	5.8" (147 mm)	---
SC310EPE06BPC		---	0.5" (13 mm)
SC310EPE08TPC	8" (200 mm)	3.5" (89 mm)	---
SC310EPE08BPC		---	0.6" (15 mm)
SC310EPE10TPC	10" (250 mm)	1.4" (36 mm)	---
SC310EPE10BPC		---	0.7" (18 mm)
SC310ECEZ*	12" (300 mm)	---	0.9" (23 mm)

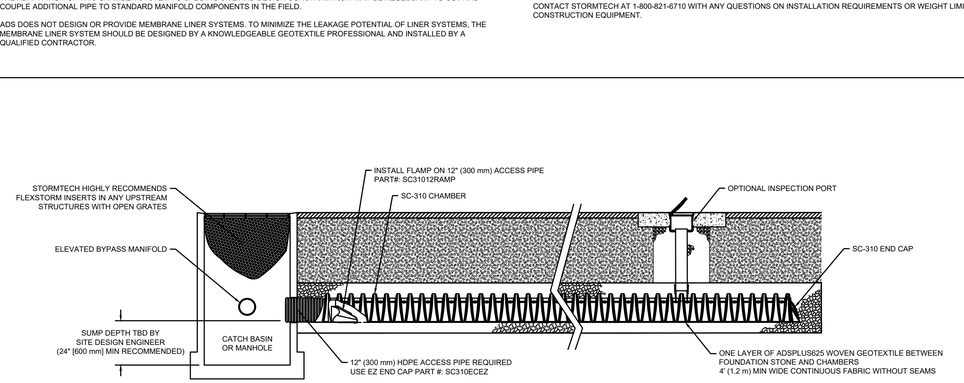


ALL STUBS, EXCEPT FOR THE SC310ECEZ ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC310ECEZ THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

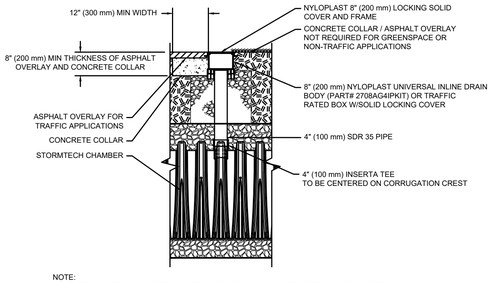
NOTE: ALL DIMENSIONS ARE NOMINAL; PRE-CORED END CAPS END WITH "PC"

2 SC-310 TECHNICAL SPECIFICATIONS



SC-310 ISOLATOR ROW PLUS DETAIL
NTS

3 SC-310 ISOLATOR ROW PLUS DETAIL



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

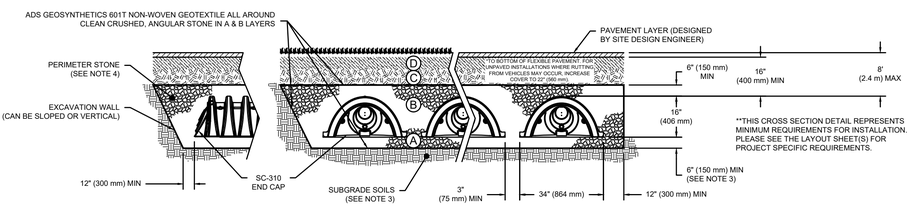
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

4 4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	3.25	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 16" (400 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2" (50 mm).
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 325 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 SC-310 CROSS SECTION DETAIL

REVISION
12/03/2025 revised stormwater per INDOT comments

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER
Trent A Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

General Sitework Details

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: as noted	

CAD FILE:
G:\25002\c630 general sitework details.dwg

SHEET TITLE:
C630

GENERAL: WHEREVER A CONFLICT OR DEFICIENCY OCCURS BETWEEN THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THIS IMMEDIATE PROJECT AND THE CONSTRUCTION STANDARDS AND SPECIFICATIONS ADOPTED BY THE LOCAL GOVERN AGENCIES, THE HIGHER OR MORE RESTRICTIVE STANDARD OR SPECIFICATION SHALL APPLY.

A. STANDARD CONDITIONS

1. The Contractor shall be responsible for obtaining or verifying that all permits and approals are obtained from the respective city, county and state agencies prior in starting construction.
2. It shall be the responsibility of each utility, contractor and/or sub-contractor to obtain all permits and approvals to open cut any road from the appropriate department.
3. It shall be the Contractor's responsibility to determine the exact location of all existing utilities in the vicinity of the construction area prior to starting construction.
4. It shall be the Contractor's responsibility for notification and coordination of all construction with the respective utility companies.
5. 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.
6. It is essential that the work 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, county, state or govern agency that construction was done in compliance with these plans and specifications.

B. CLEARING AND GRUBBING

1. Clearing and grubbing shall consist of cutting removal and satisfactory disposal of all trees, down timber, brush, projecting roots, stumps, rubbish, boulders, broken concrete, fencing (as designated) and other material on the project site and within the boundary as shown on the construction documents and/or as designed by "construction limits".
2. Special instructions shall be taken to insure that trees to be left remaining in the project area shall not receive limb, bark or root injuries. hen 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 asphaltum base tree paint.
3. All "unsuitable material" from clearing operations stated in items B-1 shall be remove to disposal area(s) off of the project site; unless a "bury pit" shall be utilized in an area where it shall not be beneath building areas and/or pavement areas and shall not be located in an area where storm drainage structures shall be located or where impoundment of surface drainage may occur.
4. Material shall not be disposed of by burying unless approved by the local and state fire marshal.

C. TREE REMOVAL AND PROTECTION

1. Trees should only be cleared only where the area is to be occupied by road and surfaced areas in accordance with specifications of the city, county, state or govern agency.
2. Trees shall be removed from the project site or buried within the project as directed by the Developer and only in the areas designated.
3. Trees shall be removed from the project where they interfere directly with the placement of storm or sanitary sewers and that such excavation is or will be fatal to such adjacent trees.
4. The Contractor shall endeavor to save and protect trees of value and work 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.
5. The contractor shall be responsible for determining the method for protection of tops, trunks and roots of existing trees on the project site subject to error. Existing trees subject to construction damage shall be boxed, fenced or otherwise protected before any adjacent work is started. Earth or material or 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 shall be covered with tree paint.

D. STRIPPING OF TOPSOIL

1. The contractor shall verify that all topsoil has been removed in the areas to be occupied by roads, 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 to fill under pavement and/or building areas.
   Operations. Excess topsoil shall be spoiled on the site as directed by Owner or Engineer.
3. Topsoil placed on the lot shall be reasonably free from subsoil debris and stones.

E. GRADING

1. The contractor shall perform all grading operations to bring subgrades, after final compaction, to the required grades and sections of site improvements.
2. Subgrade shall be proofrolled with suitable equipment and all spongy and otherwise unsuitable material shall be removed and replaced with suitable material.
3. Subgrade shall be prepared in compliance with I.N.D.O.T. Standard Specifications, latest Edition , Section 207, as revised, with the city, state or govern agencies approving the subgrade before paving.
4. All fill materials 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 the soils Engineer for his approval.
5. 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 0. areas for building and pavement construction shall not have unsuitable material placed in the location and fill shall be compacted to 95% Standard Proctor. These areas shall be determined by the Developer's representative.

F. SANITARY SEWERS

1. GENERAL
   a. Current City of Charleston sanitary notes, general notes, and sewer details shall prevail as to materials and methods of construction.
   b. The contractor shall be responsible for obtaining or verifying all permits for all of portions of this project prior to starting construction.
   c. Sanitary sewers shall be installed in accordance with the Indiana Department of Environmental Management (Division of Water Management).
   d. None of the sanitary sewers are to be constructed until a letter of approval from the Department of Environmental Management has been received by the Engineer. The Engineer will then contact the Developer or Contractor of the said approval.
2. GRAVITY SANITARY SEWERS
   a. The Department of public works currently allows the use of the following pipe materials meeting or exceeding the minimum requirements/specifications set forth herein for the construction of gravity sanitary sewers:

      – Polyvinyl Chloride Pipe (PVC)
      – Ductile Iron Pipe (DIP)

      Vitrified Clay Pipe (VCP) is NOT an approved material for the construction of sanitary sewers.

F. (CONTINUED)

   b. In general, all gravity sanitary sewer pipe shall be the bell and spigot type with elastomeric seal joints and smooth interior walls meeting or exceeding all requirements set forth in the latest ASTM standard reference herein.
   c. THE DEPARTMENT DOES NOT ALLOW THE USE OF SOLVENT CEMENT JOINT FOR GRAVITY SANITARY SEWERS EIGHT (8) INCHES IN DIAMETER OR LARGER.
   d. Each length of pipe shall be marked per the requirements of the respective ASTM Standards.
3. GRAVITY SANITARY SEWERS MATERIALS
   a. Polyvinyl Chloride Pipe
      1. Pipe: Polyvinyl Chloride (PVC) gravity sanitary sewer pipe shall be the integral wall bell and spigot type with elastomeric seal joints and smooth inner walls meeting or exceeding all the requirements set forth on ASTM F-679 for pipe diameters greater than 15 inches.
      2. For diameters 15 inches or less, the pipe shall have a minimum cell classification of 12454-B or 12454-C and for diameters greater that 15 inches, the pipe shall have a minimum cell classification 12454-C: with all pipe having a minimum tensile strength of 3450 MPA as defined in ASTM D-1784.
      3. PVC sanitary sewer pipe shall have a minimum stiffness of 46 PSI for each diameter when measured at 5% vertical ring deflection and tested in accordance with ASTM D-2412.
      4. Polyvinyl Chloride (PVC) ribbed sewer pipe meeting or exceeding requirements set forth in ASTM F-949-86a or ASTM F-794 is acceptable. The minimum cell classification acceptable shall be 12454-B or 12454-C as defined in ASTM D-1784. PVC ribbed sewer pipe shall have a minimum pipe stiffness of 50 psi when measured in accordance with ASTM D-2412.
      5. Design: The minimum wall thickness for PVC sewer pipe and lateral sewer pipe 15- inches or less in diameter shall conform to SDR-35 Type PSM as specified in ASTM D-3034. The minimum wall thickness for PVC sewer pipe greater than 15- inches in diameter shall conform to T-1 as specified in ASTM F-679.
      6. Marking: the date of manufacture, class of pipe, specification destination, size of pipe, name or trademark of manufacturer, and identification of plant location shall be legible marked on the outside of each pipe section in accordance with the ASTM D-3034.
      7. Certification: the contractor upon request shall furnish the Department with manufacturer's certification stating that the pipe supplied meets or exceeds all requirements of the applicable ASTM standards and these standards.
      a. Joints
         1. Flexible gasketed joints shall be compression type so that when assembled, the gasket inside the bell will be compressed radially on the pipe spigot to form a watertight seal. The assembly of joints shall be in accordance with pipe manufacturer's recommendations and ASTM D-3212. The gasket sealing the joint shall be made of rubber: of special composition having a texture to assure a watertight and permanent seal, and shall be the product of a manufacturer having at least (5) five years experience in the manufacture of rubber gaskets for pipe joints. The gasket shall be a continuous ring of flexible joint rubber of a composition and texture which is resistant to common ingredients of sewage, industrial wastes and groundwater, and which endure permanently under the conditions likely to be imposed by this service. The gasket shall conform the requirements of ASTM F-477.
         2. NO SOLVENT CEMENT JOINTS SHALL BE ALLOWED.
      b. Fittings
         1. Only manufactured fittings made of PVC plastic having a cell classification of 12454-B or 12454-C as defined in ASTM D-1784 shall be used.
         2. Saddle connections shall not be allowed for new construction.
   b. DUCTILE IRON PIPE
      1. Material: Ductile iron pipe in diameters from eight (8) inches through thirty six inches (36) shall be centrifugally cast and shall conform to ANSI Specifications A-21.51 and AWWA C-151 latest revision. Ductile iron pipe shall be class 50, 51, 52 or 54 wall thickness dependent upon site conditions and provided in minimum laying lengths of eighteen (18) feet. Ductile iron pipe larger than thirty six (36) feet in diameter shall be approved on a case by case basis by the department.
      2. Fittings: Fittings shall be standardized for type the pipe of pipe and joint specified and shall comply with ANSI A-21.10, AWWA C-110.
      3. Joints: Mechanical joints, slip or flanged joints shall be provided.
      4. Weights and Marking: Weights of pipe fittings shall conform strictly to requirements of ANSI Specifications. The class designations for the various classes of pipe and fittings shall be cast onto fittings in raised numerals, and cast or stamped on the outside of each joint of pipe. Weights shall be plainly and conspicuously painted in white on the outside of each joint of pipe and each fitting after the exterior coating has hardened.
4. Bedding and Backfill-Sanitary Sewers
   The following section provides the minimum requirements for the bedding of pipe and the backfilling of the trench.
   a. Bedding-Sanitary Sewers
      1. Trenching where the bottom of the trench is of undesirable material, an additional six(6) inches of trench bottom shall be excavated and a stable foundation shall be constructed using compacted No. 2 crushed stone.
      2. All sanitary sewer pipe shall be laid to the lines and grade shown on the approved design plans unless otherwise approved by the department.
      3. Bedding material shall be compacted No. 8 crushed stone or No. 8 fractured face aggregate and shall be placed the trench bottom such that after the pipe has been in placed thereon, imbedded to grade and aligned, there remains a 4-inch minimum depth of material below the pipe barrel and a minimum of 3-inches below the bell.
      4. The bell holes shall be excavated so that the entire pipe barrel rests on the bedding. The following presents the bedding requirements for each pipe classification:
   b. Flexible Pipe: PVC Pipe
      1. No. 8 crushed stone or No. 8 fractured face aggregate shall be placed around the sides of the pipe up to the sides of the pipe to the springline(1/2 the outside diameter). The material shall be shovel sliced or otherwise carefully placed and "walked" or hand tamped in to ensure compaction of the haunch area and complete filling of all voids. From the springtime to twelve(12) inches above the crown of the pipe, bedding shall be added in six(6) lifts "walked" in for compaction. Backfilling of the remainder of the trench shall be as specified in the section
   c. Semi-Rigid Pipe: Ductile Iron Pipe
      1. No. 8 crushed stone or No. 8 fractured face aggregate shall be placed around the sides of the pipe up to the springline (1/2 the outside diameter). This material shall be shovel sliced or otherwise carefully place and "walked" or hand tamped in to ensure compaction of the haunch area and complete filling of all voids.
      2. From springline to six(6) inches, of 1/2 the outside diameter above the top of the pipe, whichever is larger, bedding shall be added in six(6) inch lifts "walked" in for compaction.
      3. Backfilling of the remainder of the trench shall be a specified later in the section.
   d. Backfilling Sanitary Sewers
      1. Backfill Materials
         a. The following materials shall be used to backfill the trenches in accordance with and in the manner indicated by the requirements specified herein:

F. (CONTINUED)

      Class 1 Angular, six(6) to forty(40) millimeters(1/4 to 1 1/2 inch) graded stone such as crushed stone.

      Class 2 Course sands and gravel with maximum particle size forth (40) millimeters (1 1/2 inch), including variously graded sands and gravel containing small percentage of fines, generally granular and non-cohesive, either wet or dry. Soil types GW, GP, SW and SP are included in this class.

      Class 3 Fine sand and clay gravel, including fine sands, sand-clay mixtures and gravel-clay mixtures. Soil types GM, GC, SM and SC are included in this class.

      Class 4 Silt, silty clays and clays, including silts of medium to high plasticity and liquid limits. Soil types MH, ML, CH, and CL are included in this class. These materials are not recommended for bedding.

   b. Backfill Around Pipe (bedding): Bedding and backfill materials shall be agreed upon prior to construction by the Engineer and the Contractor. Sample will be obtained and kept at the Engineer's office. No significant deviation from this material will be permitted for use without authorization by the Engineer and the Department.
   c. The term "select fill" shall mean the use of Class 2 or 3 backfill materials as described above.
   e. Areas Subject to Vehicular Traffic
      1. In areas under proposed or existing paved roads or within five feet of pavement, sidewalks, curbs, gutters or similar structures, granular backfill material complying with the requirements of the Indiana Department of Transportation Standard Specifications, latest Edition, as revised, shall be used.
      2. The material shall be placed in uniform layers not six(6) inches, loose measurement. Within three(3) feet of the sanitary sewer pipe the backfill material shall be thoroughly and uniformly compacted with hand held mechanical tampers. The remaining backfill material shall be compacted with mechanical tampers. A minimum compaction of 95% percent Standard Proctor Density shall be achieved within the backfill material.
      3. Jetting or flooding of the backfill or other alternative compaction methods and materials shall not be used without the approval of the city Department of Sanitation or Indiana Department of Transportation, dependent upon jurisdictional authority.
5. Workmanship
   a. Laying of Pipe in Cold Weather
      1. The Engineer reserves the right to order pipe installation discontinued wherever, in our opinion. There is danger of the quality of work being impaired because of cold weather. The Contractor shall be responsible for heating the pipe jointing material so as to prevent freezing of joints.
      2. Do not lay any pipe on frozen ground. No flexible or semi-rigid pipe shall be laid when the air temperature is less than 32 F unless proper precautions per the manufacturer's recommendations are taken by the Contractor and the method is approved by the Engineer and Department.
      3. When pipes with rubber gaskets or resilient-type are to be laid in cold weather, sufficiently warm the gasket or joint material so as to facilitate making a proper joint.
   b. Abandoned Sewers
      1. Sewers and storm water drains which are to be abandoned shall be bulkheaded with mortar and an eight(8) inch thick brick wall. Sewers, storm water drains, and sewer structures which are to be abandoned in place shall be filled with Sand or Cellular Concrete and plugged, unless otherwise indicated on the Plans.
      2. Service shall be maintained is such sewers and drains until the Department shall order bulkheads placed. No timber bulkheads shall be allowed. All castings on such abandoned structures are the property of the Department and shall be salvaged by the Contractor and delivered as directed. Unless otherwise specified, all abandoned manholes, catch basins, and inlets shall be removed to a depth of three(3) feet below the proposed or established grade or existing street grade, whichever is lower.
   c. Dewatering and Control of Surface Water:
      1. Where groundwater is encountered, the Contractor shall make every effort necessary to secure a dry trench bottom before laying pipe. The Contractor shall provide, install and operate sufficient trenches, sumps, pumps, hose, piping, wellpoints, etc.., necessary to depress and maintain the groundwater level below the base of the excavation. If the Contractor is unable to remove the standing water in the trench, the Contractor shall over-excavate the proposed bottom grade of the sewer bedding,and place not less than three(3) inches of class No. 2 crushed stone (Indiana Department of Transportation aggregate classification) in the over-excavated area.
      2. The Contractor and/or Owner shall be liable for all lawsuits which may arise as a result of the Contractor's dewatering efforts.
      3. The Contractor shall keep the site free of surface water at all times and shall install drainage ditches, dikes, pumps and perform other work necessary to divert or remove rainfall and other accumulation of surface water and/or groundwater shall be performed in a manner which will prevent the accumulation of water within the construction area.
      4. UNDER NO CIRCUMSTANCES SHALL SURFACE WATER AND/OR GROUNDWATER BE DISCHARGED TO, DISPOSED OF OR ALLOWED TO FLOW INTO THE CITY'S SANITARY SEWER SYSTEM.
   d. Trenching
      1. The width of the trench at and below the top of the sanitary sewer shall be only as wide as is necessary for proper installation and backfilling, and consistent with safety requirements. The minimum width of trench for sanitary sewers, including force mains, 42-inches in diameter and less shall be 1.25 times the outside diameter (O.D.) plus 12-inches:

         Minimum Trench Width (inches)= 1.25 (O.D.)+12

      1. The minimum trench width for sanitary sewers larger than 42-inches in diameter shall be determined on a case by case basis by the Engineer and approved by the department.
      2. The design plans and specifications submitted to the Department for review, approval and issuance of a construction permit shall include a detailed trench drawing.
      3. The design of the sewer pipe and structures is predicated upon the width of trench indicated above and, should these limits be exceeded, the Contractor shall be responsible for the provision and installation of such remedial measures as may be required by the Engineer and/or the Department.
      4. Bell holes shall be excavated for bell and spigot pipe mechanical joint pipe, so that the entire barrel of the pipe shall rest on the bedding.
      5. The pipe trench shall not be excavated more than one hundred(100) feet in advance of pipe laying.
      6. Whenever pipe trenches are excavated below the designed bedding bottom, the Contractor shall fill the over-excavated with mechanically compacted No. 8 (1/4) inch to 3/4 inch) crushed stone or No. 8 fractured face aggregate.
      7. All rock, boulders and stones 6-inches in diameter and larger encountered in trenches shall be removed. Boulders or rocks are not to be used for trench backfill.
      8. In cases where material is deposited along open trenches, the material shall be placed so that no damage will result to the work or adjacent property as a result of rain or other surface wash.

F. (CONTINUED)

      9. If the bottom of the trench is of undesirable material, an additional six(6) inches of trench bottom shall be excavated and filled with Class "2" crushed stone and compacted using a hand held mechanical tamper. Where the distance to stable ground is excessive, the Engineer shall order in writing other types of foundation as he deems necessary subject to the approval of the Department.
      10. Remove any rock(s) encountered within six(6) inches below the barrel surface of the pipe, replace with No. 8 crushed stone or No. 8 fractured face aggregate and compact.
   e. Trench Box Pulling and Sheeting
      1. When required by the Occupational Safety and Health Act (OSHA) to protect life, property, or the work, sheet and brace all open cut trenches in accordance with CFR 1926. Upon completion of the work, all temporary forms, shores, and bracing shall be removed. All vacancies or voids by the sheeting while being withdrawn, shall be carefully filled with bedding material.
      2. The Contractor shall employ adequate safeguards to prevent movement of the pipe joint. If any movement should occur, the Contractor shall reinstall the pipe.
      3. Any damage to pavement or other structures due to sheeting , shoring, or bracing shall be repaired by the Contractor at his own expense.
      4. Sheeting and bracing which is to remain place shall be cut off at the elevation of 1.5 feet above the top of the sewer pipe.
   f. Line and Grade
      1. The Contractor shall furnish and set all line and grade stakes (HUB) and stakes for bench marks. The bench marks shall be set in strategic locations of the project in order to facilitate the Contractor's installation of the line and grade stakes (HUB) for each pipeline. Only the laser method shall be used to set the grade of the pipeline. Any other method must first be approved in writing by the Department. The Contractor shall constantly check line and grade of the laser beam and the pipe.
      2. Installation of Sanitary Sewers: Suitable tools and equipment shall be used for the safe and convenient handling and laying of pipe. Great care shall be taken to prevent pipe coating or wrappings from being damaged. Carefully examine all pipe for cracks and other defects.
      3. No pipe or fittings shall be laid which are know to be defective. If pipe or fittings are discovered to be cracked, broken or defective after being laid, they shall be removed and replaced with ground material.
      4. Thoroughly clean all pipe and fittings before installation. All pipe and appurtenances should be kept clean until accepted and completed work.
      5. All field-cutting shall be done in a neat, trim manner using a hand or power saw and the cut end shall be beveled using a file or wheel to produce a smooth bevel of approximately 15 and be a minimum depth of one third the pipe wall thickness. Field cut pipe will only be allowed to be installed at manholes, at prefabricated trees and wyes, and at the connection of new sanitary sewer to existing sanitary sewer.
      6. NOTE: Only smooth exterior pipe shall be used at manhole connections.
   g. Point of Commencement and Direction of Laying
      1. The point of commencement for laying of sewer pipe shall be the lowest point in the proposed sewer line. Lay the pipe with the bell end of bell and spigot pipe or with the receiving groove end of tongue and groove pipe pointing upgrade. Any other procedure shall be followed only with permission of the Department.
      2. Lay each pipe on an even firm bed as specified so that no uneven strain will come to any part of the pipe. Particular care shall be exercised to prevent the pipes from bearing on the sockets. Dig all bell holes for bell and spigot pipe.
      3. Completely shove home all pipe (to the assembly mark.) On pipe of the tongue prove type thirty(30) inches and larger in diameter, pressure must be applied to the center of each pipe as it is laid by a winch and cable or other mechanical means.
      4. All connection fittings shall be sealed with watertight stopper.
      5. The Contractor shall extend the building wye lateral to the right-of-way and shall place a one(1) inch cast ironlocator rod or magnetic locator tape above the end of the pipe to within three(3) feet of the ground surface. The purpose is to provide for case of location of the wye stub.
   h. Construction Bulkheads
      1. Before extending a sanitary sewer, the Contractor shall provide a watertight bulkhead in the existing sewer immediately downstream of the point of connection. This bulkhead shall be left in place until the new sanitary sewer has been cleaned of all accumulated water and debris and accepted by the Department.
      2. During all intermissions in construction of the sanitary sewer pipe, the open face of the last pipe laid shalbe plugged, covered or bulkhead so as to prevent sand, water, earth or other materials from entering the pipe.
      3. Whenever pipe and special castings are required to be cut, the cutting shall be done by skilled workmen inmuch manner as to leave a smooth end at right angles to the axis of the pipe without damage to the pipe casting or cement lining. CUTTING TORCHES SHALL NOT BE USED.
   i. RELATIONSHIP TO WATER MAINS
      1. Horizontal Separation
         a. Sewers shall be laid at least 10 feet (3.0 m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten foot separation, the appropriate reviewing agency may allow deviation on a case-by-case basis, if supported by data from the design engineer such deviation may allow installation of the sewer closest to the water main, provided that the water that the water main is in a separate trench or on an undisturbed earth shelf located on one side of the sewer and at an elevation so the bottom of the water main is at least 18 inches (46 cm) above the top of the sewer.
      2. Crossings
         a. Sewer crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main.
      3. Special Conditions
         a. when it is impossible to obtain proper horizontal and vertical separation is stipulated above, the sewer shall be designed and constructed equal to water pipe, and shall be pressure tested to assure watertightness prior to backfilling.
   j. Testing Gravity Sanitary Sewers
      1. General
         a. The contractor shall bear the complete cost and supply all equipment necessary to preform the test required.
         b. All test shall be conducted under the observation of the Department's Observer. It shall be the Contractor's resonsibility to schedule testing with the Observer.
         c. Certifications: The Contractor upon request shall furnish the department with certified reports stating that inspection and specified test have been made and that the results thereof comply with the applicable ANSI Specifications and these standards for each.

F. (CONTINUED)

      2. Infiltration/Exfiltration Test
         a. Once constructed, all sanitary sewers and manholes watertight and free from leakage. The rate of infiltration into the sanitary sewr system between any two adjacent manholes or the entric system shall not be in excess of 100 gallons per inch of pipe diameter per mile per day (100 gpd/in/mi). The Contractor shall be required to repair all visible leaks to satisfaction of the Department, even if the infiltration requirements are met.
         b. Any leakage found during the infiltration test shall be corrected by the Contractor at his expense. The method of repair shall be per the approval of the Department; however, grouting of the joint or crack to repair the leakage shall not be permitted. If the defective potion of the sanitary sewer cannot be located, the Contractor shall remove and reconstruct as much of the work as is necessary to obtain a system that passes infiltration requirements.
      3. Deflection Test
         a. All gravity sanitary sewers constructed of flexible pipe (PVC) shall be mandrel tested no sooner than thirty (30) days after installation. The deflection limit is 5% of the inside diameter of the pipe. Mandrel must be pulled through by hand with no mechanical device. Any failed section of pipe shall be reinstalled by the Contractor at no cost to the owner.
      4. Low Presure Air Test (Gravity Sewer)
         a. All gravity sanitary sewers shall be tested for infiltration by means of a low pressure air test. A minimum of 5 p.s.i. must be maintained in the pipe for a period of no less than 5 minutes

REVISION

VERSATILE CONSTRUCTION GROUP, LLC.
570 East Tracy Road, Suite 610
New Whiteland, Indiana 46184
Ph: 317.535.3579 Fax: 317.535.3581
email: info@versatile-llc.com

BAXTER ENGINEERING LLC
570 Tracy Road, Suite 610
New Whiteland, IN 46184
Office: 317-535-3579
Cell: 317-509-4142
BaxterEngineeringllc@gmail.com

TRENT A. BAXTER REGISTERED No. 19700309 STATE OF INDIANA PROFESSIONAL ENGINEER
Trent A Baxter
CERTIFIED BY:

Dunkin'
1095 Market Street (Highway 3)
Charlestown, Indiana 47111

General Notes

Job No.	Date Stamped
25002	05/02/2025
Drawn By: caw	Checked By: tab
Scale: 1"= 20.0'	

CAD FILE: G:\25002\c700 general notes.dwg

SHEET TITLE:

C700