

PRELIMINARY CIVIL/SITE DESIGN PLANS FOR:  
Chart Lifecycle, Inc.  
1725 N. Graham Road  
Franklin, Indiana



STORMWATER POLLUTION PREVENTION PLAN INDEX

A	CONSTRUCTION PLAN ELEMENTS	LOCATION
1	INDEX	C0.0
2	11"x17" PLAT / LAYOUT	PROVIDED SEPARATELY
3	PROJECT NARRATIVE	C4.2
4	VICINITY MAP	C0.0
5	LEGAL DESCRIPTION OF PROJECT SITE - INCLUDING LATITUDE AND LONGITUDE	C4.2
6	LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS	C2.0
7	HYDROLOGIC UNIT CODE (14 DIGIT)	C4.2
8	NOTATION OF ANY STATE OR FEDERAL WATER QUALITY PERMITS	C4.2
9	LOCATIONS OF STORMWATER DISCHARGE POINTS FROM SITE	C1.0
10	NAMES AND LOCATIONS OF WETLANDS, LAKES AND WATER COURSES	C4.2
11	IDENTIFICATION OF ALL RECEIVING WATERS	C4.2
12	IDENTIFICATION OF POTENTIAL DISCHARGES TO GROUNDWATER	C4.2
13	100 YEAR FLOODPLAINS, FLOODWAYS AND FLOODWAY FRINGES	C4.2
14	ESTIMATES OF PRE AND POST CONSTRUCTION PEAK DISCHARGES	C4.2
15	ADJACENT LAND USE, INCLUDING UPSTREAM WATERSHED	C4.2
16	LOCATIONS AND BOUNDARIES OF ALL DISTURBED AREAS (CONSTRUCTION LIMITS)	C4.0
17	IDENTIFICATION OF EXISTING VEGETATIVE COVER	C1.0
18	SOILS MAP INCLUDING SOIL DESCRIPTIONS AND LIMITATIONS	C4.2
19	LOCATIONS, SIZES AND DIMENSIONS OF PROPOSED STORMWATER SYSTEMS	N/A
20	PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES	N/A
21	LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL AREAS	C4.0
22	EXISTING SITE TOPOGRAPHY AND DRAINAGE PATTERNS	C1.0
23	PROPOSED FINAL TOPOGRAPHY AND DRAINAGE PATTERNS	C2.0

B	STORMWATER POLLUTION PREVENTION PLAN - CONSTRUCTION COMPONENT	LOCATION
1	POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES	C4.2
2	SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION	C4.2
3	CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS	C4.2
4	SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS	C4.2
5	SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS	C4.2
6	STORMWATER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS	C4.2
7	RUNOFF CONTROL MEASURES	C4.2
8	STORMWATER OUTLET PROTECTION SPECIFICATIONS	C4.2
9	GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS	C4.2
10	LOCATION, DIMENSIONS, SPECIFICATIONS AND DETAILS OF EACH MEASURE	C4.2
11	TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON	C4.2
12	PERMANENT SURFACE STABILIZATION SPECIFICATIONS	C4.2
13	MATERIAL HANDLING AND SPILL PREVENTION PLAN	C4.2
14	MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED MEASURE	C4.2
15	EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS	N/A

C	STORMWATER POLLUTION PREVENTION PLAN - POST CONSTRUCTION COMPONENT	LOCATION
1	POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH PROPOSED LAND USE	C4.2
2	SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION	C4.2
3	DESCRIPTION OF PROPOSED POST CONSTRUCTION STORMWATER QUALITY MEASURES	C4.2
4	LOCATION, DIMENSIONS, SPECIFICATIONS AND DETAILS OF EACH MEASURE	C4.2
5	DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST CONSTRUCTION MEASURES	C4.2

CONSTRUCTION PLAN INDEX

SHEET	DESCRIPTION
C0.0	TITLE SHEET
C1.0	TOPOGRAPHIC SURVEY
C1.1	POND AS-BUILT DATA
C1.2	DEMOLITION PLAN
C1.3	OVERALL LOT
C2.0	SITE/GRADING PLAN
C4.0	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
C4.1	STORMWATER POLLUTION PREVENTION PLAN DETAILS
C4.2	STORMWATER POLLUTION PREVENTION PLAN NOTES
C4.3	STORMWATER POLLUTION PREVENTION PLAN SPECIFICATIONS
C4.4	STORMWATER POLLUTION PREVENTION PLAN NOTES
C8.0	LANDSCAPING PLAN

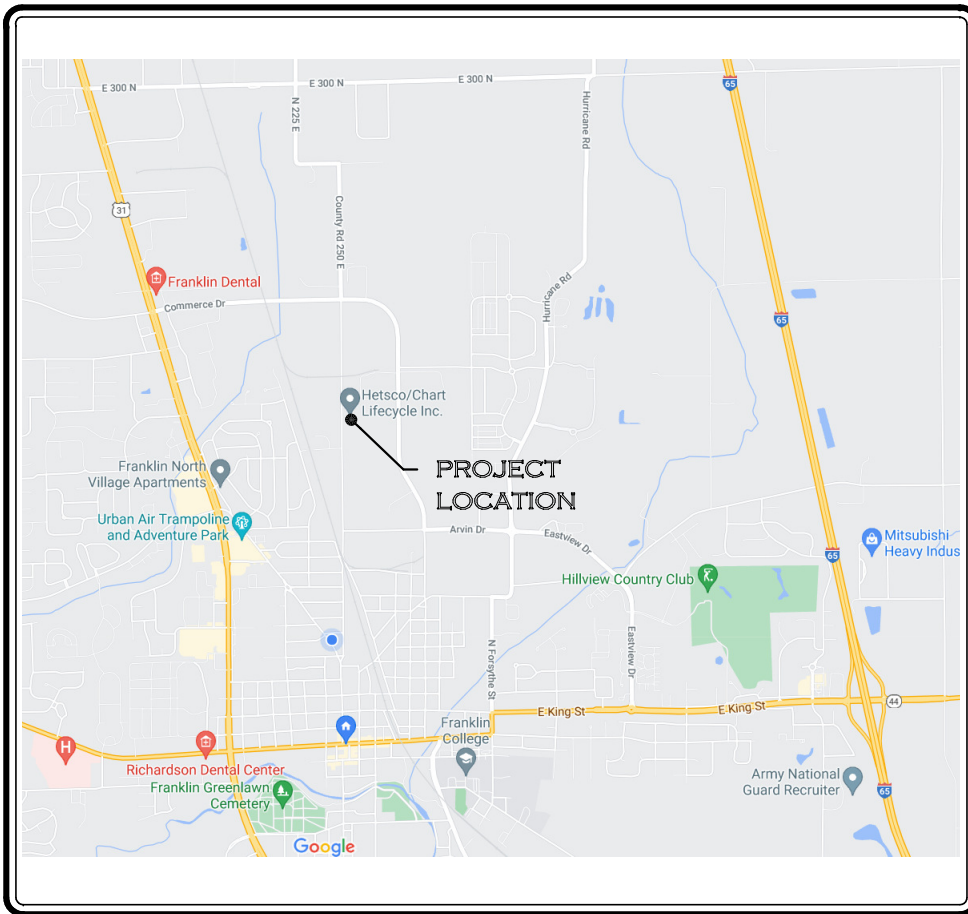
REVISION RECORD

DATE	DESCRIPTION	SHEET(S)
04.27.2021	ADD OVERALL LOT & LANDSCAPING PLAN	C1.3 & C8.0
.	.	.
.	.	.
.	.	.

LEGAL DESCRIPTION

Limited Warranty Deed to  
BROOKSIDE INDUSTRIAL PARK LIMITED LIABILITY COMPANY  
Instrument 2019-024906

Lot Numbered 1 in Franklin Business Park, an addition to the City of Franklin as  
recorded in Plat Cabinet E, page 117 in the Office of the Recorder of Johnson  
County, Indiana.



VICINITY MAP  
NOT TO SCALE



SITE DATA

LOT AREA = 11.199± ACRES GROSS  
= 11.199± ACRES NET OF R/W

GROSS EXISTING BUILDING AREA = 51,340 SF

ZONING DESIGNATIONS

SITE IG - INDUSTRIAL, GENERAL  
NORTH IG - INDUSTRIAL, GENERAL  
SOUTH IG - INDUSTRIAL, GENERAL  
EAST IG - INDUSTRIAL, GENERAL  
WEST IN - INSTITUTIONAL  
WEST RSN - RESIDENTIAL SUBURBAN NEIGHBORHOOD

PROPOSED USE: EXPAND OUTSIDE STORAGE CAPACITY ON  
TOTAL OF 73,150 SF (1.68± AC) GRAVEL STORAGE AREA WITH  
GEOGRID REINFORCEMENT MATERIAL.

PROPOSED COVENANTS: NONE

FLOOD ZONE DESIGNATION: X (SHADED)

PROPOSED START DATE JULY 1, 2021  
PROPOSED END DATE DECEMBER 31, 2021



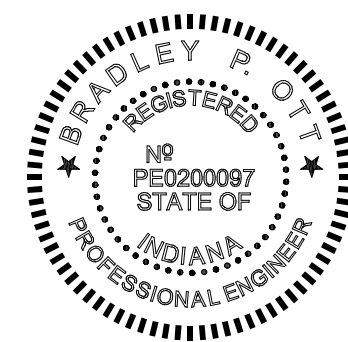
Know what's below.  
Call before you dig.

ENGINEER:

Main Street Consulting Company  
675 North Main Street  
Franklin, IN 46131-1345  
Contact: Bradley P. Ott, P.L.S., P.E.  
Telephone: 317-459-4763  
ott@mainstreetconsulting.com

PROJECT CONTACT:

Eric B Wiseman | Sr. Project Manager  
Chart Lifecycle, Inc.  
1725 Graham Rd. | Franklin, IN | 46131 | USA  
Direct: 317-836-5778 | Mobile: 317-499-4853 |  
eric.wiseman@ChartLifecycle.com | www.chartlifecycle.com



Bradley P. Ott  
Date: 04.27.2021

PROJECT NUMBER

21-002

DESIGN PHASE

PRELIMINARY

SHEET NO.:

C.O.O



**BENCHMARKS:**

FRANKLIN 1920 NO 1 1974 = 730.55 (NAVD 1988)

REFERENCE MARK 1 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 1 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTHWEST CORNER OF THE CONCRETE BASE OF RAILROAD CROSSING LIGHT , 24 FEET NORTH OF THE CENTERLINE OF MADISON STREET AND 16 FEET EAST OF THE EAST RAIL OF THE RAILROAD BETWEEN CROWELL AND DEPOT STREETS.

**BTM#1 = 749.82**  
REBAR WITH RED CAP MARKED MAURER RLS 880006 AT THE SOUTHEAST CORNER OF LOT 1.

**BTM#2 = 747.99**  
REBAR WITH NO CAP AT THE SOUTHWEST CORNER OF LOT 1.

**UTILITY STATEMENT:**

The underground utilities shown have been located from field survey information 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 surveyor 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.

**EXISTING LEGEND:**

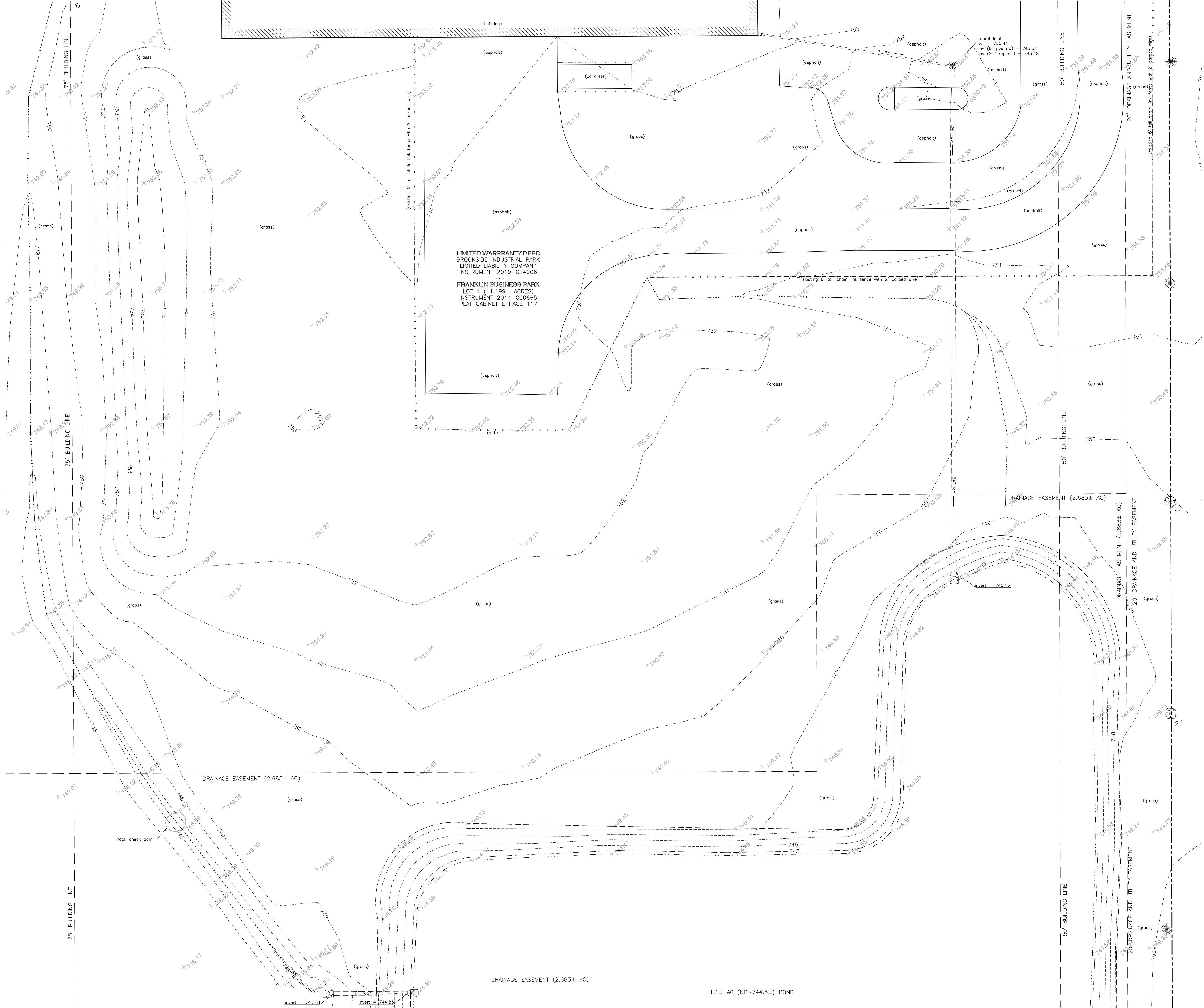
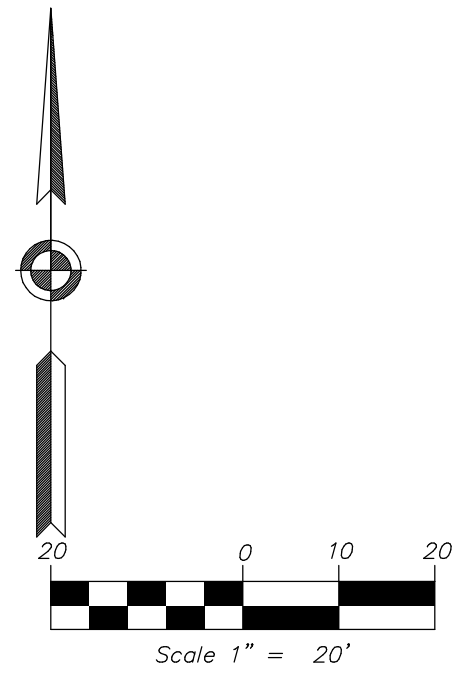
DESCRIPTION:	DESCRIPTION:
EXISTING ASPHALT	TRAFFIC POLE
EXISTING STONE	TRAFFIC MANHOLE
EXISTING CONCRETE	SANITARY MANHOLE
TEMPORARY BENCH MARK	CLEAN OUT
SECTION CORNER	CURB INLET
REBAR FOUND	INLET
REBAR SET	DRAINAGE MANHOLE
POWER POLE	GAS METER
GUY WIRE	GAS VALVE
ELECTRIC TRANSFORMER	GAS MARKER
ELECTRIC CROSS BOX	BUSH
AIR CONDITIONER	DECIDUOUS TREE
ELECTRIC METER BOX	CONIFEROUS TREE
LIGHT POLE	FARM FIELD FENCE
GUARD POST	CHAIN LINK FENCE
TELEPHONE PEDESTAL	FLOWLINE
SOIL BORING	OVERHEAD ELECTRIC LINE
MAIL BOX	UNDERGROUND ELECTRIC
SIGN	UNDERGROUND TELEPHONE
WATER VALVE	FIBER OPTIC LINE
FIRE HYDRANT	WATER LINE
WATER METER	GAS LINE

**FLOOD ZONE NOTE:**

The accuracy of any flood hazard data shown on this survey is subject to map scale uncertainty and to any other uncertainty in location or elevation on the referenced Flood Insurance Rate Map. The property described on this Survey is located in Zone X (shaded 0.2% annual chance flood hazard) and is NOT located in Zone A (Areas of 100 year flood) as sold tract plots by scale on Community Panel No. 18081 C 0231 E of the Flood Insurance Rate Maps for Johnson County, Indiana dated January 29, 2021.

**TOPO NOTE:**

THIS TOPOGRAPHIC SURVEY MAP WAS PREPARED IN ACCORDANCE WITH 865 IAC 1-12-12. THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT AND IS BASED ON THE RECORD PLAT.



**MAIN STREET CONSULTING COMPANY**  
PH: 317.458.4765  
Franklin, IN 46131  
ot@mainstreetconsulting.com  
www.mainstreetconsulting.com

**BRADLEY R. O'NEILL**  
REGISTERED  
No. 9800012  
STATE OF INDIANA  
LAND SURVEYOR  
*Bradley R. O'Neill*

REVISIONS

**TOPOGRAPHIC SURVEY**

**Chart Lifecycle, Inc.**  
1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C1.0-TOPO.DWG  
DATE: 04.18.2023  
PROJ. NO.: 2302  
DRAIN BY: B.O.T.  
SURVEYED BY: B.O.T.  
SCALE: 1"=20'

**TOPO**

SHEET NO.:  
**C1.0**

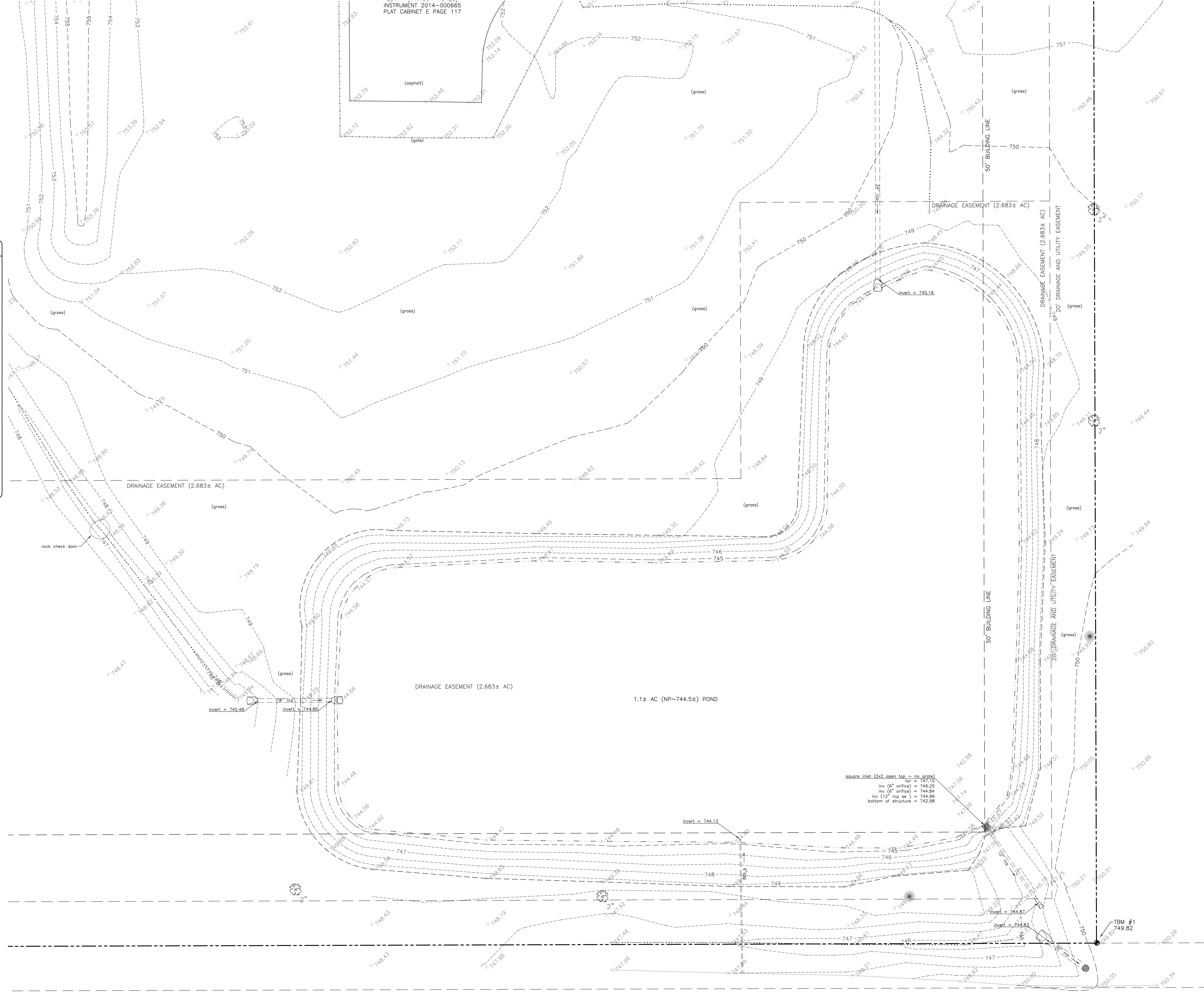
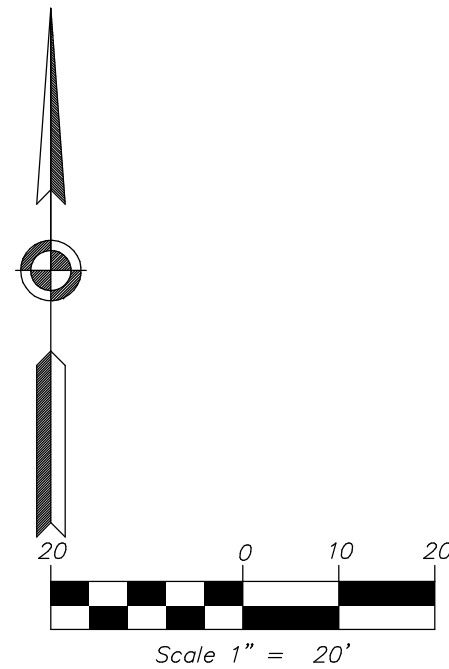
**BENCHMARKS:**  
FRANKLIN 1920 NO 1 1974 = 730.55 (NAVD 1988)  
REFERENCE MARK 1 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 1 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTHWEST CORNER OF THE CONCRETE BASE OF RAILROAD CROSSING LIGHT , 24 FEET NORTH OF THE CENTERLINE OF MADISON STREET AND 16 FEET EAST OF THE EAST RAIL OF THE RAILROAD BETWEEN CROWELL AND DEPOT STREETS.  
TBM#1 = 749.82  
REBAR WITH RED CAP MARKED MAURER RLS 880006 AT THE SOUTHEAST CORNER OF LOT 1.  
TBM#2 = 747.99  
REBAR WITH NO CAP AT THE SOUTHWEST CORNER OF LOT 1.

**UTILITY STATEMENT:**  
The underground utilities shown have been located from field survey information 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 surveyor 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.

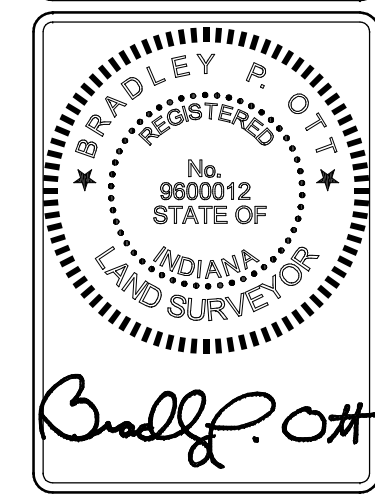
EXISTING LEGEND:	
DESCRIPTION:	DESCRIPTION:
EXISTING ASPHALT	TRAFFIC POLE
EXISTING STONE	TRAFFIC MANHOLE
EXISTING CONCRETE	SANITARY MANHOLE
TEMPORARY BENCH MARK	CLEAN OUT
SECTION CORNER	CURB INLET
REBAR FOUND	INLET
REBAR SET	DRAINAGE MANHOLE
POWER POLE	GAS METER
GUY WIRE	GAS VALVE
ELECTRIC TRANSFORMER	GAS MARKER
ELECTRIC CROSS BOX	BUSH
AIR CONDITIONER	DECIDUOUS TREE
ELECTRIC METER BOX	CONIFEROUS TREE
LIGHT POLE	FARM FIELD FENCE
GUARD POST	CHAIN LINK FENCE
TELEPHONE PEDESTAL	FLOWLINE
SOIL BORING	OVERHEAD ELECTRIC LINE
MAIL BOX	UNDERGROUND ELECTRIC
SIGN	UNDERGROUND TELEPHONE
WATER VALVE	FIBER OPTIC LINE
FIRE HYDRANT	WATER LINE
WATER METER	GAS LINE

**FLOOD ZONE NOTE:**  
The accuracy of any flood hazard data shown on this survey is subject to map scale uncertainty and to any other uncertainty in location or elevation on the referenced Flood Insurance Rate Map. The property described on this Survey is located in Zone X (shaded 0.2% annual chance flood hazard) and is NOT located in Zone A (Areas of 100 year flood) as sold tract plots by scale on Community Panel No. 18081 C 0231 E of the Flood Insurance Rate Maps for Johnson County, Indiana dated January 29, 2021.

**TOPO NOTE:**  
THIS TOPOGRAPHIC SURVEY MAP WAS PREPARED IN ACCORDANCE WITH 865 IAC 1-12-12. THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT AND IS BASED ON THE RECORD PLAT.



**MAIN STREET CONSULTING COMPANY**  
PH: 317.459.4765  
Franklin, IN 46131  
ot@mainstreetconsulting.com  
www.mainstreetconsulting.com



REVISIONS

**POND AS-BUILT DATA**  
**Chart Lifecycle, Inc.**  
1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C1.1-POND.DWG  
DATE: 04/25/2023  
PROJ. NO.: 2023-002  
DRAIN BT: BOTT  
SURVEYED BT: BOTT  
SCALE: 1"=20'  
**POND**  
SHEET NO.:  
**C1.1**



**BENCHMARKS:**

FRANKLIN 1920 NO 1 1974 = 730.55 (NAVD 1988)

REFERENCE MARK 1 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 1 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTHWEST CORNER OF THE CONCRETE BASE OF RAILROAD CROSSING LIGHT , 24 FEET NORTH OF THE CENTERLINE OF MADISON STREET AND 16 FEET EAST OF THE EAST RAIL OF THE RAILROAD BETWEEN CROWELL AND DEPOT STREETS.

TBM#1 = 749.82  
REBAR WITH RED CAP MARKED MAURER RLS 880006 AT THE SOUTHEAST CORNER OF LOT 1.

TBM#2 = 747.99  
REBAR WITH NO CAP AT THE SOUTHWEST CORNER OF LOT 1.

**UTILITY STATEMENT:**

The underground utilities shown have been located from field survey information 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 surveyor 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.

EXISTING LEGEND:	
DESCRIPTION:	DESCRIPTION:
EXISTING ASPHALT	TRAFFIC POLE
EXISTING STONE	TRAFFIC MANHOLE
EXISTING CONCRETE	SANITARY MANHOLE
TEMPORARY BENCH MARK	CLEAN OUT
SECTION CORNER	CURB INLET
REBAR FOUND	INLET
REBAR SET	DRAINAGE MANHOLE
POWER POLE	GAS METER
GUY WIRE	GAS VALVE
ELECTRIC TRANSFORMER	GAS MARKER
ELECTRIC CROSS BOX	BUSH
AIR CONDITIONER	DECIDUOUS TREE
ELECTRIC METER BOX	CONIFEROUS TREE
LIGHT POLE	FARM FIELD FENCE
GUARD POST	CHAIN LINK FENCE
TELEPHONE PEDESTAL	FLOWLINE
SOIL BORING	OVERHEAD ELECTRIC LINE
MAIL BOX	UNDERGROUND ELECTRIC
SIGN	UNDERGROUND TELEPHONE
WATER VALVE	FIBER OPTIC LINE
FIRE HYDRANT	WATER LINE
WATER METER	GAS LINE

**FLOOD ZONE NOTE:**

The accuracy of any flood hazard data shown on this survey is subject to map scale uncertainty and to any other uncertainty in location or elevation on the referenced Flood Insurance Rate Map. The property described on this Survey is located in Zone X (shaded 0.2% annual chance flood hazard) and is NOT located in Zone A (Areas of 100 year flood) as said tract plots by scale on Community Panel No. 18081 C 0231 E of the Flood Insurance Rate Maps for Johnson County, Indiana dated January 29, 2021.

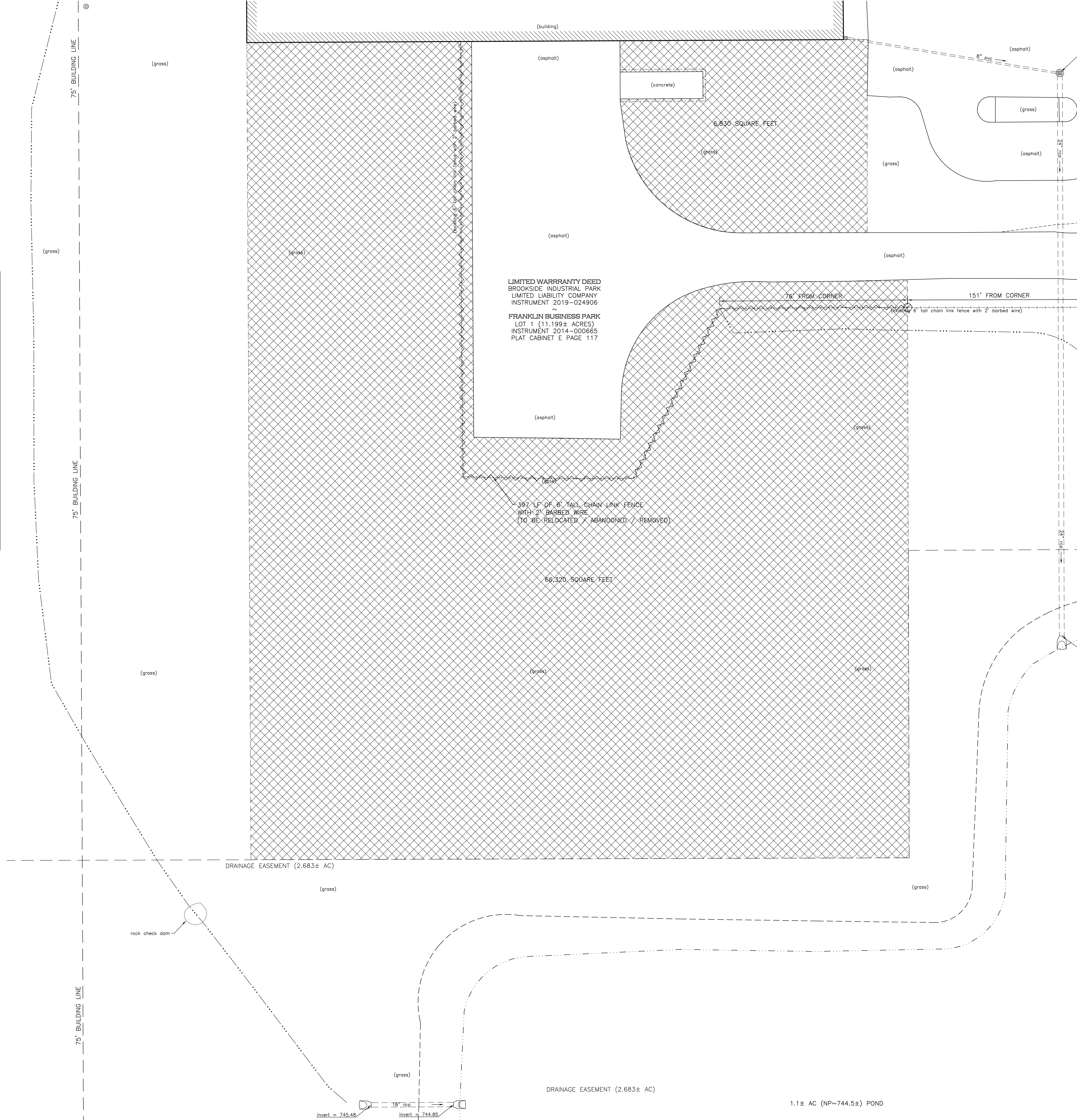
**TOPO NOTE:**

THIS TOPOGRAPHIC SURVEY MAP WAS PREPARED IN ACCORDANCE WITH 865 IAC 1-12-12. THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT AND IS BASED ON THE RECORD PLAT.

811

Know what's below.  
Call before you dig.

Scale 1" = 20'



- DEMOLITION NOTES**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OFF-SITE OF ALL ITEMS SHOWN ON THE DEMOLITION PLAN INCLUDING ITEMS ENCOUNTERED DURING EXCAVATION OF BUILDING FOUNDATIONS AND UTILITY PLACEMENT.
  - PRIOR TO STARTING DEMOLITION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY LOCAL GOVERNMENTAL AGENCIES.
  - THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR THE DISCONNECTION AND REMOVAL OF SERVICES TO EXISTING STRUCTURES.
  - ITEMS SHOWN ON THE DEMOLITION PLAN TO BE SALVAGED SHALL BE TRANSPORTED TO A LOCATION SPECIFIED BY THE OWNER OR HIS\HER REPRESENTATIVE.
  - ITEMS OF SALVAGEABLE VALUE TO THE CONTRACTOR MAY BE REMOVED WITH THE PERMISSION OF THE OWNER OR HIS\HER REPRESENTATIVE. THE CONTRACTOR SHALL NOT STORE THESE ITEMS ON SITE.
  - THE CONTRACTOR SHALL NOT USE EXPLOSIVES OR BURN DEBRIS.
  - CONDUCT DEMOLITION OPERATIONS TO ENSURE MINIMAL INTERFERENCE WITH ROADS, SIDEWALKS AND ANY OTHER ADJACENT OCCUPIED FACILITIES.
  - DO NOT CLOSE OR OBSTRUCT ROADS, SIDEWALKS, OR ANY OTHER OCCUPIED FACILITIES WITHOUT PERMISSION FROM THE LOCAL AUTHORITY HAVING JURISDICTION AND/OR PROPERTY OWNERS.
  - THE CONTRACTOR SHALL ENSURE SAFE PASSAGE OF PERSONS TRAVERSING THROUGH OR AROUND THE CONSTRUCTION SITE.
  - THE CONTRACTOR SHALL PROTECT SURROUNDING STRUCTURES, UTILITIES, AND OTHER FACILITIES FROM DAMAGE DURING DEMOLITION AND REMOVAL OPERATIONS.
  - BUILDING STRUCTURES INCLUDING FOUNDATIONS AND BASEMENTS, SHALL BE REMOVED AND BACKFILLED WITH APPROVED BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING EIGHT INCHES IN THICKNESS. EACH LIFT SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, OR IF SUCH REPORT IS UNAVAILABLE, TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557, MODIFIED PROCTOR METHOD +/- 3% OF OPTIMUM MOISTURE CONTENT.
  - UTILITIES SHALL BE REMOVED AND THE TRENCHES BACKFILLED WITH APPROVED BACKFILL MATERIAL. BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM EIGHT INCH LIFTS AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT OR TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557, MODIFIED PROCTOR METHOD +/- 3% OF OPTIMUM MOISTURE CONTENT.
  - TRANSPORT DEMOLITION MATERIAL TO AN INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT PERMITTED LANDFILL.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE CONSTRUCTION SITE AND SURROUNDING AREAS ARE FREE OF ACCUMULATED DEBRIS.

DEMOLITION LEGEND:	
DESCRIPTION:	
	CHAIN LINK FNC LINE TO BE RELOCATED
	MISC. ITEM TO BE REMOVED
	TOP SOIL TO BE REMOVED

**MAIN STREET CONSULTING COMPANY**

675 North Main Street  
Franklin, IN 46131  
PH: 317.458.4765  
www.mainstreetconsulting.com

**REGISTERED PROFESSIONAL ENGINEER**

NO. PE0200097  
STATE OF INDIANA

*Bradley P. Ott*

**DEMOLITION PLAN**

*Chart Lifecycle, Inc.*

1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

**DEMOLITION PLAN**

*Chart Lifecycle, Inc.*

1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

**DEMOLITION PLAN**

*Chart Lifecycle, Inc.*

1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA



**BENCHMARKS:**

FRANKLIN 1920 NO 1 1974 = 730.55 (NAVD 1988)  
REFERENCE MARK 1 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 1 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTHWEST CORNER OF THE CONCRETE BASE OF RAILROAD CROSSING LIGHT , 24 FEET NORTH OF THE CENTERLINE OF MADISON STREET AND 16 FEET EAST OF THE EAST RAIL OF THE RAILROAD BETWEEN CROWELL AND DEPOT STREETS.

**TBM#1 = 749.82**  
REBAR WITH RED CAP MARKED MAURER RLS 880006 AT THE SOUTHEAST CORNER OF LOT 1.

**TBM#2 = 747.99**  
REBAR WITH NO CAP AT THE SOUTHWEST CORNER OF LOT 1.

**UTILITY STATEMENT:**

The underground utilities shown have been located from field survey information 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 surveyor 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.

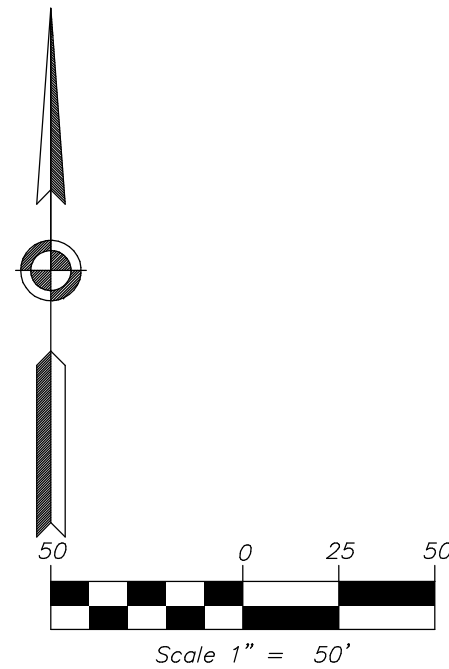
EXISTING LEGEND:	
DESCRIPTION:	DESCRIPTION:
EXISTING ASPHALT	TRAFFIC POLE
EXISTING STONE	TRAFFIC MANHOLE
EXISTING CONCRETE	SANITARY MANHOLE
TEMPORARY BENCH MARK	CLEAN OUT
SECTION CORNER	CURB INLET
REBAR FOUND	INLET
REBAR SET	DRAINAGE MANHOLE
POWER POLE	GAS METER
GUY WIRE	GAS VALVE
ELECTRIC TRANSFORMER	GAS MARKER
ELECTRIC CROSS BOX	BUSH
AIR CONDITIONER	DECIDUOUS TREE
ELECTRIC METER BOX	CONIFEROUS TREE
LIGHT POLE	FARM FIELD FENCE
GUARD POST	CHAIN LINK FENCE
TELEPHONE PEDESTAL	FLOWLINE
SOIL BORING	OVERHEAD ELECTRIC LINE
MAIL BOX	UNDERGROUND ELECTRIC
SIGN	UNDERGROUND TELEPHONE
WATER VALVE	FIBER OPTIC LINE
FIRE HYDRANT	WATER LINE
WATER METER	GAS LINE

**FLOOD ZONE NOTE:**

The accuracy of any flood hazard data shown on this survey is subject to map scale uncertainty and to any other uncertainty in location or elevation on the referenced Flood Insurance Rate Map. The property described on this Survey is located in Zone X (shaded 0.2% annual chance flood hazard) and is NOT located in Zone A (Areas of 100 year flood) as sold tract plots by scale on Community Panel No. 18081 C 0231 E of the Flood Insurance Rate Maps for Johnson County, Indiana dated January 29, 2021.

**TOPO NOTE:**

THIS TOPOGRAPHIC SURVEY MAP WAS PREPARED IN ACCORDANCE WITH 865 IAC 1-12-12. THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT AND IS BASED ON THE RECORD PLAT.



**MAIN STREET CONSULTING COMPANY**  
CONSULTING COMPANY  
PH: 317.459.4765  
675 North Main Street  
Franklin, IN 46131  
atl@mainstreetconsulting.com  
www.mainstreetconsulting.com

**BRADLEY P. O'NEILL**  
REGISTERED  
No. 9800012  
STATE OF INDIANA  
LAND SURVEYOR  
*Bradley P. O'Neill*

REVISIONS

**OVERALL LOT**

**Chart Lifecycle, Inc.**  
1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

**C1.3-LOT/DWG**  
04-2-2023  
2102  
BOT  
BOT  
BOT  
1"=50'

**DRAWING:**  
DATE: 04-2-2023  
PROJ. NO.: 2102  
DRAWN BY: BOT  
SURVEYED BY: BOT  
SCALE: 1"=50'

**OVERALL**

SHEET NO.:  
**C1.3**







**BENCHMARKS:**

FRANKLIN 1920 NO 1 1974 = 730.55 (NAVD 1988)

REFERENCE MARK 1 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 1 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTHWEST CORNER OF THE CONCRETE BASE OF RAILROAD CROSSING LIGHT , 24 FEET NORTH OF THE CENTERLINE OF MADISON STREET AND 16 FEET EAST OF THE EAST RAIL OF THE RAILROAD BETWEEN CROWELL AND DEPOT STREETS.

**BM#1 = 749.82**  
REBAR WITH RED CAP MARKED MAURER RLS 880006 AT THE SOUTHEAST CORNER OF LOT 1.

**BM#2 = 747.99**  
REBAR WITH NO CAP AT THE SOUTHWEST CORNER OF LOT 1.

**UTILITY STATEMENT:**

The underground utilities shown have been located from field survey information 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 surveyor 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.

EXISTING LEGEND:	
DESCRIPTION:	DESCRIPTION:
EXISTING ASPHALT	TRAFFIC POLE
EXISTING STONE	TRAFFIC MANHOLE
EXISTING CONCRETE	SANITARY MANHOLE
TEMPORARY BENCH MARK	CLEAN OUT
SECTION CORNER	CURB INLET
REBAR FOUND	INLET
REBAR SET	DRAINAGE MANHOLE
POWER POLE	GAS METER
GUY WIRE	GAS VALVE
ELECTRIC TRANSFORMER	GAS MARKER
ELECTRIC CROSS BOX	BUSH
AIR CONDITIONER	DECIDUOUS TREE
ELECTRIC METER BOX	CONIFEROUS TREE
LIGHT POLE	FARM FIELD FENCE
GUARD POST	CHAIN LINK FENCE
TELEPHONE PEDESTAL	FLOWLINE
SOIL BORING	OVERHEAD ELECTRIC LINE
MAIL BOX	UNDERGROUND ELECTRIC
SIGN	UNDERGROUND TELEPHONE
WATER VALVE	FIBER OPTIC LINE
FIRE HYDRANT	WATER LINE
WATER METER	GAS LINE

**FLOOD ZONE NOTE:**

The accuracy of any flood hazard data shown on this survey is subject to map scale uncertainty and to any other uncertainty in location or elevation on the referenced Flood Insurance Rate Map. The property described on this Survey is located in Zone X (shaded 0.2% annual chance flood hazard) and is NOT located in Zone A (Areas of 100 year flood) as sold tract plots by scale on Community Panel No. 18081 C 0231 E of the Flood Insurance Rate Maps for Johnson County, Indiana dated January 29, 2021.

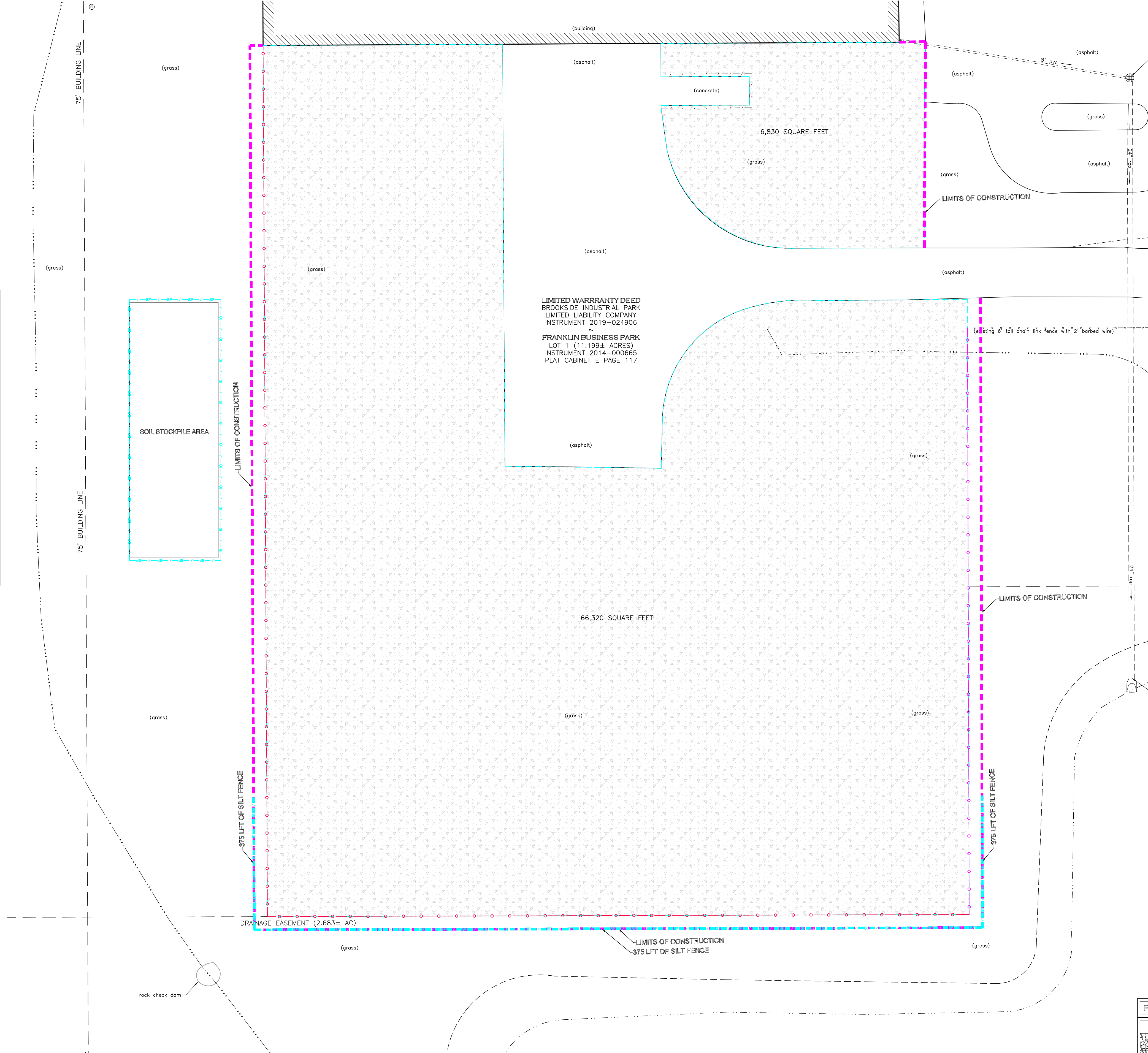
**TOPO NOTE:**

THIS TOPOGRAPHIC SURVEY MAP WAS PREPARED IN ACCORDANCE WITH 865 IAC 1-12-12. THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT AND IS BASED ON THE RECORD PLAT.

**811**

Know what's below.  
Call before you dig.

Scale 1" = 20'



- EROSION CONTROL NOTES**
1. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
  2. LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
  3. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
  4. SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
  5. WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORMWATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
  6. SEDIMENT BEING TRACED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
  7. SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND REDISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
  8. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
  9. ALL EXISTING STRUCTURES, FENCING, TREES AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. BURNING IS NOT ALLOWED ON-SITE.
  10. SCHEDULE OF EARTHWORK ACTIVITIES:
    - a) THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDED WITHIN 14 DAYS OR ACTIVITY CEASES FOR MORE THAN 21 DAYS OR AS DIRECTED BY THE ENGINEER.
    - b) TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIME OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
  11. INFORM ALL GENERAL CONTRACTORS, CONSTRUCTION MANAGEMENT FIRMS, GRADING OR EXCAVATING CONTRACTORS, AND ALL OTHER CONTRACTORS WITH PRIMARY OVERSIGHT ON INDIVIDUAL BUILDING LOTS OF THE TERMS AND CONDITIONS OF THE STORM WATER RULE 5, AND THE CONDITIONS AND STANDARDS OF THIS EROSION CONTROL PLAN, SCHEDULE FOR IMPLEMENTATION, AND THE CONSTRUCTION SITE EROSION CONTROL PLAN REPORT.
  12. ADDITIONAL MEASURES MAY BE REQUIRED IN THE FIELD BY THE INSPECTOR.

PROPOSED EROSION CONTROL LEGEND:		
DESCRIPTION:	DETAIL #/SH. #	
PROPOSED GRAVEL CONST. ENTRANCE	DETAIL 01/C4.1	
PROPOSED EROSION CONTROL MAT	DETAIL 02/C4.1	
PROPOSED RIPRAP	DETAIL 03/C4.1	
DB PROPOSED DANDY BAG INLET PROTECTION	DETAIL 04/C4.1	
-/- SF -/- PROPOSED SILT FENCE	DETAIL 05/C4.1	
TEMPORARY AND PERMANENT SEEDING	DETAIL 06/C4.1	
CONSTRUCTION LIMITS		

**MAIN STREET CONSULTING COMPANY**

Ph: 317.459.4765  
Franklin, IN 46131  
ot@mainstreetconsulting.com  
www.mainstreetconsulting.com

**BRADLEY P. O'NEILL**

REGISTERED PROFESSIONAL ENGINEER  
NO. PE0200087  
STATE OF INDIANA

*Bradley P. O'Neill*

**SWPPP**

**Chart Lifecycle, Inc.**

1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

**SWPPP**

**Chart Lifecycle, Inc.**

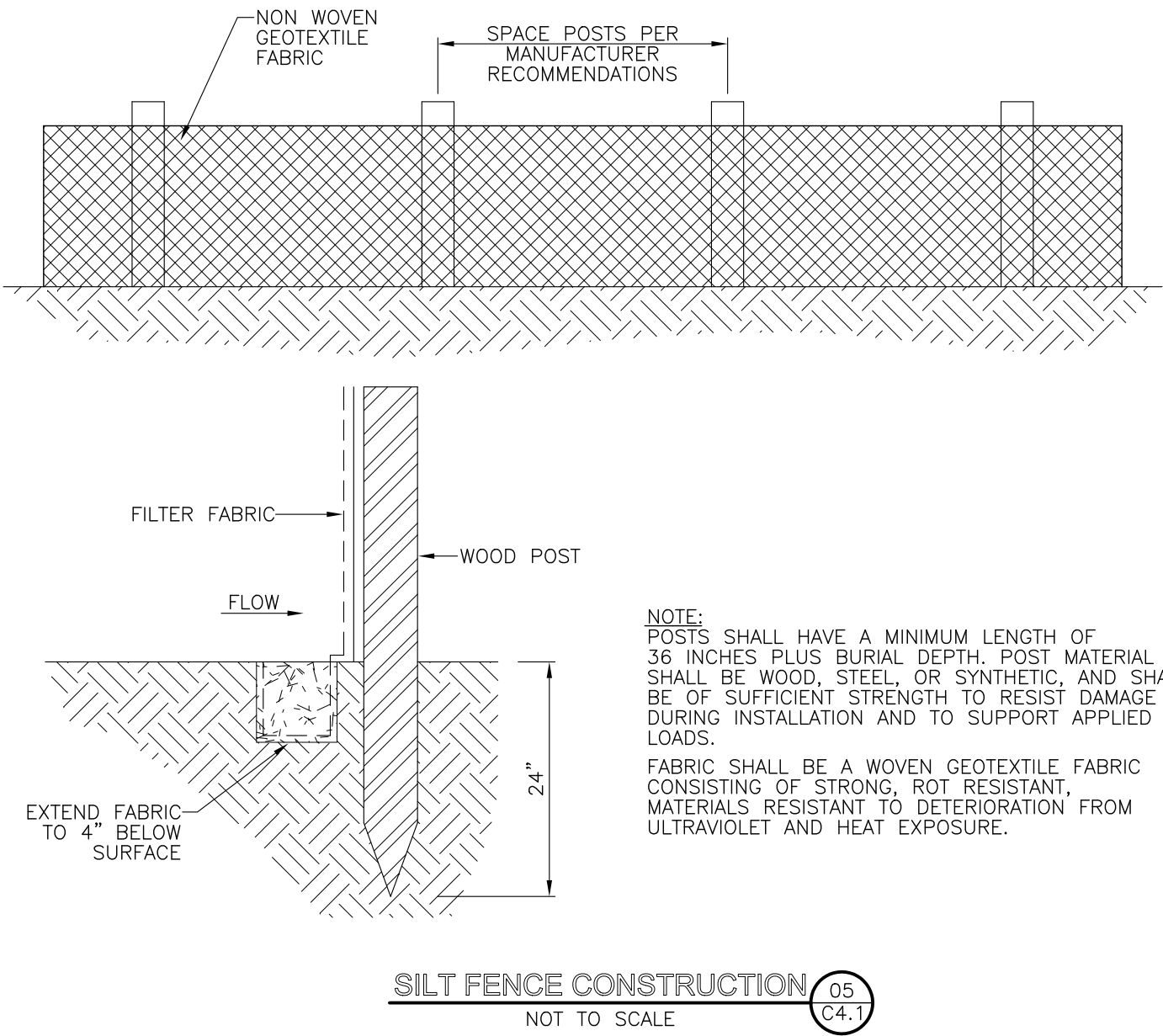
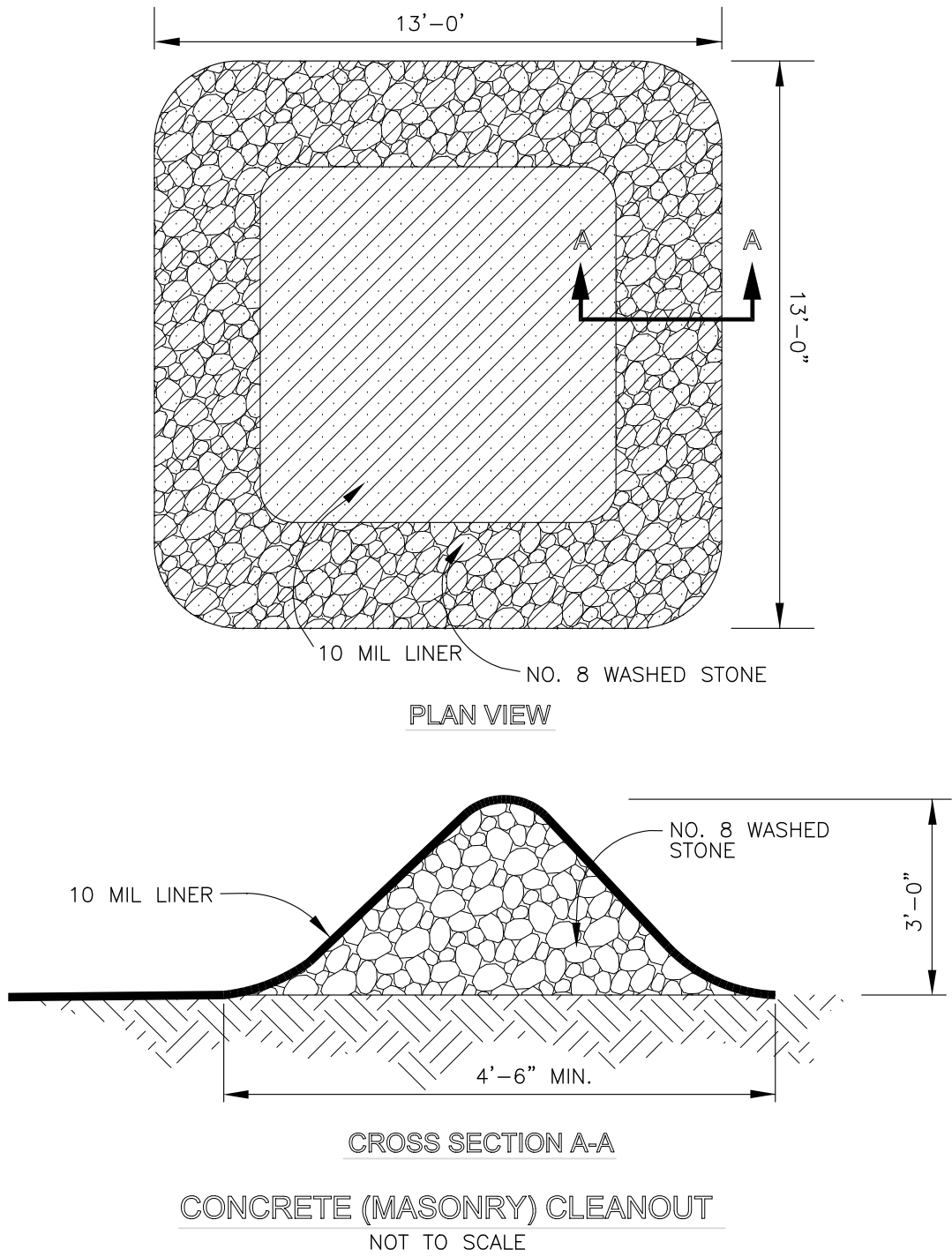
1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

**SWPPP**

**Chart Lifecycle, Inc.**

1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

EROSION CONTROL SCHEDULE POST CONSTRUCTION			
MEASURE	MAINTENANCE/MONITORING ACTIVTY	SCHEDULE	INSTALLATION SEQUENCE
DETENTION/RETENTION BASINS	• CLEANING AND REMOVAL OF DEBRIS • HARVEST VEGETATION WHEN 50% REDUCTION IN THE ORIGINAL OPEN WATER SURFACE AREA OCCURS. • REPAIR OF EMBANKMENT AND SIDE SLOPES • REPAIR OF CONTROL STRUCTURE	ANNUAL OR AS NEEDED	DURING ROUGH GRADING
	• REMOVAL OF ACCUMULATED SEDIMENT FROM FOREBAYS OR SEDIMENT STORAGE AREAS WHEN 60% OF THE ORIGINAL VOLUME HAS BEEN LOST	5-YEAR CYCLE	
	• REMOVAL OF ACCUMULATED SEDIMENT FROM MAIN PART OF POND ONCE 50% OF ORIGINAL VOLUME HAS BEEN LOST	20-YEAR CYCLE	
PERMANENT SEEDING	• WATERING ONCE ESTABLISHED & THROUGH DROUGHT TIMES • MOWING AND LITTER DEBRIS REMOVAL • STABILIZATION OF ERODED SLOPES • NUTRIENT AND PESTICIDE USE MANAGEMENT • DETATCHING AND REMOVAL OF THATCHING • DISCING OR AERATION	ANNUAL OR AS NEEDED	AFTER FINAL GRADING
	• SEEDING/SODDING TO RESTORE GROUND COVER (USE PROPER EROSION AND SEDIMENT CONTROL)	5-YEAR CYCLE	
EROSION CONTROL MATS	• PER MANUFACTURER'S RECOMMENDATIONS	PER MANUFACTURER'S RECOMMENDATION	AFTER FINAL GRADING



	SOIL CONDITION			SHADE TOLERANCE	CLOSING TO 2-3 1/2 INCHES	TOLERANCE	FERTILITY NEEDS	WINTER HARDNESS	FLOODING TOLERANCE (DAYS)	MATURE HEIGHT (INCHES)	EMERGENCE TIME (DAYS)	SOIL TOLERANCE		
	WET	NORM	DRY									GEN.	SOIL	SPRAY
CREeping RED FESCUE FESTUCA RUBRA	2	1	2	1	1	1	MED.	1	20-25	12-18	7-21			S
KENTUCKY BLUEGRASS POA PROTINISIS	2	1	2	1	1	1	MED.	1	20-35	12-18	10-20			MT
TALL FESCUE FESTUCA L. ARUNDINACEA	2	1	1	1	1	1	LOW	1	24-35	24-36	5-14		T	
PERENNIAL RYEGRASS LOLLUM PERENNE	2	1	2	-	1	2	MED. HIGH	2	15-20	12-18	5-10		MT	
CROWNVEtCH CORONILLA VARLA	-	1	1	2	-	-	LOW	1	5-10	24	14-21	T		
RED CLOVER TRIFOLIUM PROTENSE	-	1	-	2	-	-	MED.	1	7-10	18	5-10	S	S	

**RANKING:**  
1 GOOD  
2 MEDIUM  
- NOT TOLERANT

**SALT TOLERANCE (TO BOTH SOIL SALTS & SPRAY)**  
T TOLERANCE  
MT MEDIUM TOLERANCE  
S SLIGHT TOLERANCE

#### SEED TOLERANCE

##### SEEDBED PREPARATION

APPLY LIME TO RAISE THE pH TO THE LEVEL NEEDED FOR SPECIES BEING SEED. APPLY 23 POUNDS OF 12-12-12 ANALYSIS FERTILIZER (OR EQUIVALENT) PER 1000 SQ. FT. (APPROXIMATELY 1000 POUNDS PER ACRE) OR FERTILIZE ACCORDING TO TEST. APPLICATION OF 150 LBS. OF AMMONIUM NITRATE ON AREAS LOW IN ORGANIC MATTER AND FERTILITY WILL GREATLY ENHANCE VEGETATIVE GROWTH.

WORK THE FERTILIZER AND LIME INTO THE SOIL TO A DEPTH OF 2-3 INCHES WITH A HARROW, DISK OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.

##### SEEDING

SELECT A SEED MIXTURE BASED ON PROJECTED USE OF THE AREA (SEE PERMANENT SEED MIXTURE CHART). WHILE CONSIDERING BEST SEEDING DATES. IF PERMANENT SEEDING IS NOT PERMITTED USE TEMPORARY SEEDING UNTIL PERMANENT SEEDING CAN BE APPLIED. IF TOLERANCES ARE A PROBLEM, SUCH AS SALT TOLERANCE OF SEEDINGS ADJACENT TO STREETS AND HIGHWAYS, SEE SEED TOLERANCE CHART.

#### TEMPORARY SEEDING DATES

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

#### PERMANENT SEEDING DATES

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



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

\*

LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED.

\*\*

INCREASE SEEDING APPLICATION BY 50%.

#### TEMPORARY SEEDINGS

TYPE OF SEED	1000 SQ. FT. ACRE	REMARKS
WHEAT OR RYE	3.5 LBS. 2 BU.	COVER SEED 1" TO 1 1/2" DEEP
SPRING OATS	2.3 LBS. 3 BU.	COVER SEED 1" DEEP
ANNUAL RYEGRASS	1 LB. 40 LB.	COVER SEED 1/4" DEEP

\* NOT NECESSARY WHERE MULCH IS APPLIED.

#### SEEDING DETAIL

06 C4.1

**MAIN STREET**  
**CONSULTING COMPANY**  
675 North Main Street  
Franklin, IN 46131  
Ph: 317.459.4765  
www.mainstreetconsulting.com



*Bradley P. Ott*

REVISIONS

#### SWPPP DETAILS

*Chart Lifecycle, Inc.*  
1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C4.1-SWPPP.DWG  
DATE: 04.24.2023  
PROJ. NO.: 24002  
DRAIN BPT: B.012  
SURVEYED BY: B.011  
SCALE: ~

**SWPPP**

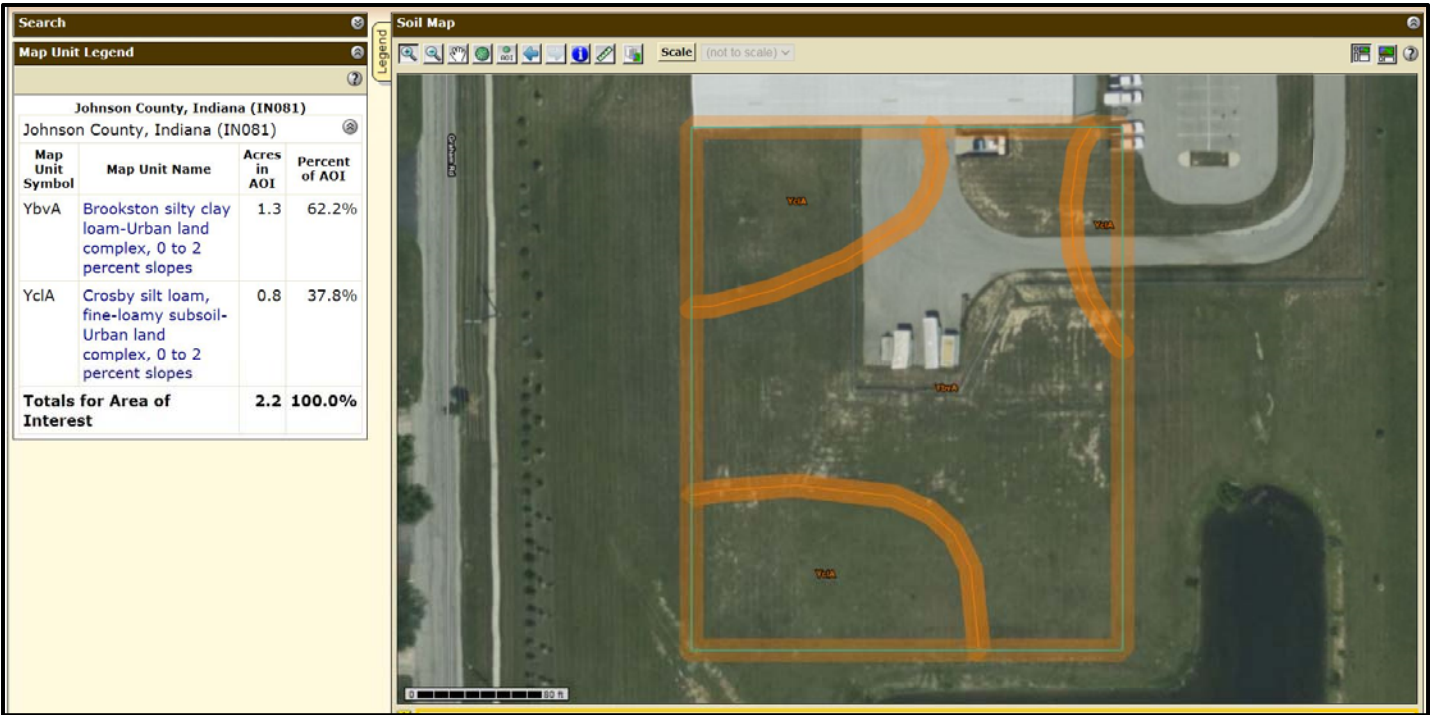
SHEET NO.:

C4.1



ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS (Section A)

- A1 INDEX SHOWING LOCATIONS OF REQUIRED PLAN ELEMENTS  
SEE PLAN SHEET C0.0
- A2 11"x17" PLAT OF BUILDING LOT NUMBERS/BOUNDARIES AND ROADS  
PROVIDED SEPARATELY
- A3 NATURE AND PURPOSE OF PROJECT  
IG, CHART LIFECYCLE, INC (ADD EXTERIOR GRAVEL STORAGE AREAS)
- A4 PROJECT SITE VICINITY MAP  
SEE TITLE SHEET C0.0
- A5 LEGAL DESCRIPTION OF PROJECT SITE  
LATITUDE/LONGITUDE: 39°29'59.83"N / 86°03'14.77"W  
FOR LEGAL DESCRIPTION, SEE SHEET C0.0
- A6 LOTS AND PROPOSED SITE IMPROVEMENTS  
SEE SITE PLAN SHEET C2.0
- A7 HYDROLOGIC UNIT CODE (14 DIGIT)  
HYDROLOGIC UNIT CODE: 05120204090010
- A8 STATE OR FEDERAL WATER QUALITY PERMITS  
CONSTRUCTION IN A FLOODWAY (IDNR): N/A  
401 WATER QUALITY CERTIFICATION (IDEM): N/A  
SECTION 404 PERMIT (USACE): N/A
- A9 POINTS OF STORMWATER DISCHARGE FROM SITE  
STORMWATER IS MAINTAINED TO CONTINUE EXISTING PATTERNS WHICH DRAIN INTO THE EXISTING DETENTION FACILITY AT THE SOUTHEAST SIDE OF THE SITE.
- A10 ADJACENT WETLANDS, LAKES AND WATER COURSES  
N/A
- A11 RECEIVING WATERS  
HURRICANE CREEK
- A12 POTENTIAL DISCHARGES TO GROUND WATER  
NONE KNOWN
- A13 FLOODPLAINS, FLOODWAYS AND FLOODWAY FRINGES  
NONE KNOWN
- A14 PRE-CONSTRUCTION/POST-CONSTRUCTION PEAK DISCHARGE  
PEAK DISCHARGE (ALLOWABLE) 100-YEAR: 3.34 CFS  
PEAK DISCHARGE (POST-CONSTRUCTION) 100-YEAR: 2.18~2.62 CFS
- A15 ADJACENT LAND USE  
NORTH - INDUSTRIAL  
SOUTH - INDUSTRIAL  
EAST - INDUSTRIAL  
WEST - CHURCH / RESIDENTIAL
- A16 CONSTRUCTION LIMITS  
SEE EROSION CONTROL PLAN SHEET C4.0
- A17 EXISTING VEGETATIVE COVER  
THE SITE IS CURRENTLY A VACANT GRASSY SITE.
- A18 SOILS MAP AND SOIL DESCRIPTIONS  
EXISTING SOIL TYPES & DESCRIPTION



- A19 PROPOSED STORMWATER SYSTEMS  
NO NEW SYSTEMS WILL BE INSTALLED
- A20 OFF-SITE CONSTRUCTION ACTIVITIES  
N/A
- A21 PROPOSED SOIL STOCKPILES  
SEE EROSION CONTROL PLAN SHEET C4.0 FOR LOCATION(S)
- A22 SITE TOPOGRAPHY  
SEE GRADING PLAN SHEET C2.0
- A23 FINAL SITE TOPOGRAPHY  
SEE GRADING PLAN SHEET C2.0

EROSION CONTROL PLAN - CONSTRUCTION COMPONENT (Section B)

- B1 POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES  
THE MATERIALS AND SUBSTANCES LISTED BELOW ARE EXPECTED ON-SITE
- PAINTS, THINNERS AND SOLVENTS  
ENSURE THAT CONTAINERS HAVE LIDS SO THAT THEY CAN BE COVERED BEFORE PERIODS OF RAIN, AND KEEP CONTAINERS IN DRY, COVERED AREA WHENEVER POSSIBLE.
  - BATTERIES  
STORE ONSITE IN DRY COVERED AREA AND DISPOSE OF PER MANUFACTURER'S RECOMMENDATIONS IN CONJUNCTION WITH STATE, LOCAL AND FEDERAL REGULATIONS
  - AEROSOL SPRAY PRODUCTS  
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.
  - ADHESIVES  
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.
  - BIOLOGICAL SOLID WASTE  
TRAP IN CONTAINERS, CLEANED REGULARLY, AND DISPOSED OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY. SCHEDULE WASTE COLLECTION MORE FREQUENTLY TO PREVENT CONTAINERS FROM OVERFILLING. UNTREATED, RAW SEWAGE OR SEPTAGE SHOULD NEVER BE DISCHARGED OR BURIED ONSITE.

- B2 SEQUENCE OF EROSION CONTROL MEASURES IMPLEMENTATION  
INITIAL SETUP (\* SEE SHEET C4.4 FOR JOHNSON COUNTY SPECIFIC TABLE)
- NOTIFY JOHNSON COUNTY DEPARTMENT OF P&Z FOR A PRECONSTRUCTION MEETING 48 HOURS IN ADVANCE OF START OF CONSTRUCTION
  - NOTIFY IDEM PER RULE 5 NOI 48 HOURS PRIOR TO START OF CONSTRUCTION
  - CALL FOR AN UNDERGROUND LOCATE TO VERIFY LOCATION OF EXISTING UTILITIES.
  - FLAG OR DENOTE ALL CONSTRUCTION LIMITS.
  - POST A NOTICE OF PROJECT IN PUBLICLY ACCESSIBLE LOCATION NEAR PROJECT FIELD OFFICE, TO INCLUDE: PROJECT NO, DATE OF COMPLETION, PROJECT NUMBER (IF AVAILABLE), AND NAME, COMPANY NAME, AND CONTACT PERSON TELEPHONE NUMBER.
  - INFORM ALL GENERAL CONTRACTORS, CONSTRUCTION MANAGEMENT FIRMS, GRADING OR EXCAVATING CONTRACTORS, AND ALL OTHER CONTRACTORS WITH PRIMARY OVERSIGHT ON INDIVIDUAL BUILDING LOTS OF THE TERMS AND CONDITIONS OF STORM WATER RULE 5, AND THE CONDITIONS AND STANDARDS OF THIS EROSION CONTROL PLAN, SCHEDULE FOR IMPLEMENTATION, AND THE CONSTRUCTION SITE EROSION CONTROL PLAN REPORT.
  - INSTALL PERIMETER SILT FENCE.
  - AFTER THE PERIMETER PRACTICES ARE INSTALLED, A MEETING WITH JOHNSON COUNTY IS REQUIRED BEFORE ADDITIONAL CONSTRUCTION PROCEEDS
  - BEGIN TOPSOIL REMOVAL TO STOCKPILE AREA AND ROUGH GRADE.
  - BEGIN SEEDING AND MULCHING PROGRAM (TEMPORARY SEED ALL DISTURBED AREAS).
  - IMPLEMENT SELF-MONITORING PROGRAM.
  - INSTALL ADDITIONAL SILT FENCES OR OTHER SUCH MECHANISM AS REQUIRED.
- B3 CONSTRUCTION ENTRANCE LOCATION  
SEE SHEET C4.0 FOR LOCATIONS; SEE SHEET C4.1 FOR DETAILS.
- B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS  
SILT FENCE, TEMPORARY AND PERMANENT SEEDING; SEE EROSION CONTROL PLAN SHEET C4.0 FOR LOCATIONS; SEE SHEET C4.1 FOR DETAILS.
- B5 CONTROL MEASURES FOR CONCENTRATED FLOW AREAS  
RIP RAP; SEE SHEET C4.0 FOR LOCATIONS; SEE C4.1 & C4.4 FOR DETAILS.
- B6 INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS  
DANDYBAG INLET PROTECTION SEE SHEET C4.0 FOR LOCATIONS; DETAILS ON SHEET C4.1
- B7 RUNOFF CONTROL MEASURES  
SILT FENCE: SEE PLAN SHEET C4.0; DETAILS SHEET C4.1 & C4.4
- B8 STORM WATER OUTLET PROTECTION SPECIFICATIONS  
RIP RAP AND EROSION CONTROL MAT; SEE SHEET C4.0 FOR LOCATIONS AND SHEET C4.1 FOR DETAILS.
- B9 GRADE STABILIZATION STRUCTURES  
SEEDING AND EROSION CONTROL MAT; SEE SHEET C4.0 FOR LOCATIONS AND SHEET C4.1 FOR DETAILS.
- B10 CONSTRUCTION DETAILS FOR STORMWATER MEASURES  
SEE EROSION CONTROL PLAN SHEET C4.0 FOR LOCATIONS AND SHEET C4.1 FOR DETAILS. (SILT FENCE TO BE NWSF-6 NON-WOVEN FABRIC OR AN APPROVED EQUAL.)
- B11 TEMPORARY SURFACE STABILIZATION METHODS
- ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
  - LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
  - THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
  - SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
  - WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORMWATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
  - SEDIMENT BEING TRACED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
  - SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND REDISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
  - ALL EXISTING STRUCTURES, FENCING, TREES AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. BURNING IS NOT ALLOWED ON-SITE.
  - SCHEDULE OF EARTHWORK ACTIVITIES:
    - THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDING WITHIN 14 DAYS OR ACTIVITY CEASES FOR MORE THAN 21 DAYS OR AS DIRECTED BY THE ENGINEER.
    - PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
    - TEMPORARY SEEDING SHALL UTILIZE SEED SPECIES, APPLICATION RATES, AND DATES SET FORTH IN THE CHARTS ON SHEET C4.1.

- B12 PERMANENT SURFACE STABILIZATION METHODS
- AT THE PROPER TIME, WITH APPROVAL FROM THE OWNER, AND ONLY AFTER NOTIFYING JOHNSON COUNTY, THE CONTRACTOR SHALL DISMANTLE THE REMAINING EROSION CONTROL ELEMENTS ONLY IF THE CONTRACTOR WISHES ALL GRADING, SEEDING, AND MULCHING TO BE COMPLETED IN ADVANCE AND ARRANGE FOR THE LANDSCAPING CONTRACTOR TO FOLLOW UP IMMEDIATELY WITH REVEGETATION OF THE REMAINING AREAS.
  - THE CONTRACTOR SHALL REMOVE ANY UNSUITABLE MATERIAL FROM THE SITE LEFT FROM THE EROSION CONTROL MEASURES.
  - ANY BARE DISTURBED AREAS WILL BE GRADED, SEEDING AND MULCHED OR OTHERWISE REVEGETATED OR STABILIZED, AS PER THE EROSION CONTROL PLAN. PERMANENT SEEDING WILL BE ACCORDING TO THE SEED SPECIES, RATES AND DATES SHOWN IN THE CHARTS ON SHEET C4.1.
  - FINAL STABILIZATION WILL BE CONSIDERED ACHIEVED WHEN PERENNIAL VEGETATIVE COVER HAS A DENSITY OF SEVENTY PERCENT (70%) ON ALL UNPAVED AREAS OR AN EQUIVALENT PERMANENT STABILIZATION MEASURE HAS BEEN UTILIZED. IMPLEMENTATION AND MAINTENANCE WILL BE ACCORDING TO SECTIONS C2 AND C5 BELOW.

- B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN
- THE PROPER MANAGEMENT AND DISPOSAL OF WASTES SHOULD BE PRACTICED ON SITE AT ALL TIMES TO REDUCE POLLUTION STORM WATER RUNOFF. HAZARDOUS WASTE SHOULD ALWAYS BE DISPOSED OF THROUGH A DESIGNATED HAZARDOUS WASTE MANAGEMENT OR RECYCLING FACILITY. HAZARDOUS WASTE SHOULD NOT BE DISPOSED OF WITH ORDINARY GARBAGE, OR POURED INTO THE SANITARY SEWER SYSTEM OR ONTO THE GROUND.
  - DESIGNATE A WASTE COLLECTION AREA ON-SITE THAT DOES NOT RECEIVE A SUBSTANTIAL AMOUNT OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY INTO A WATER BODY.
  - KEEP PRODUCTS IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RE-SEALABLE, THEN ORIGINAL LABEL AND MATERIAL SAFETY DATA WILL BE RETAINED. IF A PRODUCT DOES NOT HAVE ITS ORIGINAL LABEL, LABEL IT YOURSELF IF YOU ARE SURE OF CONTENTS. MAKE SURE PRODUCTS ARE PROPERLY SEALED TO PREVENT LEAKS AND SPILLS AND STORED IN A WEATHER PROOF SELF CONTAINED AREA AWAY FROM HEAT, SPARKS AND FLAMES.
  - A PROGRAM FOR RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE SHALL BE ESTABLISHED. ALL RECYCLING CONTAINERS WILL BE CLEARLY LABELED.
  - ALL CONSTRUCTION ACTIVITIES TO BE MONITORED AND MAINTAINED BY THE CONTRACTOR. AS EACH NEW SUB-CONTRACTOR COMES ON-SITE, THE CONTRACTOR WILL CONDUCT AND DOCUMENT A MEETING TO ENSURE AWARENESS OF THE POLLUTANT PREVENTION PROGRAM. GUIDELINES FOR PROPER HANDLING, STORAGE AND DISPOSAL OF CONSTRUCTION SITE WASTES SHOULD BE POSTED IN STORAGE AND USE AREAS AND WORKERS SHOULD BE TRAINED IN THESE PRACTICES TO ENSURE EVERYONE IS KNOWLEDGEABLE ENOUGH TO PARTICIPATE.
  - IN AN EMERGENCY, THE CONTRACTOR WILL CALL 911. IN THE EVENT OF A SPILL THAT POSES NO IMMEDIATE THREAT, THE CONTRACTOR WILL CONTACT THE LOCAL FIRE DEPARTMENT AT (317)776-6336 AND IDEM EMERGENCY RESPONSE AT (888) 233-7745 WITHIN 24 HOURS OF THE SPILL. EMERGENCY PHONE NUMBERS AND PROCEDURES SHALL BE PROMINENTLY DISPLAYED AT THE WORK SITE WHERE SPILLS MAY OCCUR, SUCH AS STAGING/REFUELING AREAS.
  - CLEAN UP SPILLS IMMEDIATELY. FOR HAZARDOUS MATERIALS FOLLOW CLEANUP INSTRUCTIONS ON THE PACKAGE. USE ABSORBENT MATERIAL SUCH AS SAWDUST OR KITTY LITTER TO CONTAIN THE SPILL. PROPER SAFETY MATERIALS SHOULD BE STORED ON SITE IN CASE OF ACCIDENT OR SPILL WHICH SHOULD INCLUDE BUT NOT LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THAT PURPOSE. SPILL AREAS SHOULD BE WELL VENTILATED.
  - DURING THE DEMOLITION PHASE OF CONSTRUCTION, PROVIDE EXTRA CONTAINERS AND SCHEDULE MORE FREQUENT PICKUPS FOR RECYCLABLES AND GARBAGE. COLLECT, REMOVE, AND DISPOSE OF ALL CONSTRUCTION SITE WASTES AT AUTHORIZED DISPOSAL AREAS. CONTACT LOCAL ENVIRONMENTAL AGENCY TO IDENTIFY DISPOSAL SITES OR AUTHORIZED CONTRACTORS.
  - CONSTRUCTION VEHICLES SHOULD BE INSPECTED FOR LEAKS DAILY AND REPAIRED IMMEDIATELY IN A SELF CONTAINED AREA DESIGNATED FOR VEHICLE MAINTENANCE AND REPAIR. THE VEHICLE MAINTENANCE AREA SHOULD BE CONDUCTED ON AN AREA THAT IS TO BECOME FUTURE PAVEMENT. THIS AREA WILL BE DESIGNED TO MINIMIZE CONTACT BETWEEN EQUIPMENT ACTIVITIES AND RAINFALL OR RUNOFF. SPILLS MUST BE CLEANED UP AND MATERIALS DISPOSED OF IMMEDIATELY.
  - CONTAINERS OR EQUIPMENT THAT MAY MALFUNCTION AND CAUSE LEAKS OR SPILLS SHOULD BE IDENTIFIED THROUGH REGULAR INSPECTION AND STORAGE OF USE AREAS. EQUIPMENT AND CONTAINERS SHOULD BE REPAIRED OR REPLACED REGULARLY FOR LEAKS, CORROSION, SUPPORT OR FOUNDATION FAILURE, OR ANY OTHER SIGNS OF DETERIORATION AND SHOULD BE TESTED FOR SOUNDNESS. ANY FOUND TO BE DEFECTIVE SHOULD BE REPAIRED OR REPLACED IMMEDIATELY.

- B14 MONITORING AND MAINTENANCE GUIDELINES  
A TRAINED INDIVIDUAL SHALL PERFORM A WRITTEN EVALUATION OF THE PROJECT SITE:
  - BY THE END OF THE NEXT BUSINESS DAY FOLLOWING EACH 1/2 STORM EVENT; AND
  - A MINIMUM OF ONE (1) TIME PER WEEK.THE EVALUATION WILL:
  - ADDRESS THE MAINTENANCE OF EXISTING EROSION CONTROL MEASURES TO ENSURE PROPER FUNCTIONING; AND
  - IDENTIFY ANY ADDITIONAL MEASURES NECESSARY TO MEET THE REQUIREMENTS OF THE EROSION CONTROL PLAN.WRITTEN EVALUATION REPORTS INCLUDE:
  - THE NAME OF THE INDIVIDUAL PERFORMING THE EVALUATION;
  - THE DATE OF THE EVALUATION;
  - PROBLEMS IDENTIFIED AT THE PROJECT SITE; AND
  - DETAILS OR CORRECTIVE ACTIONS RECOMMENDED AND COMPLETED.ALL WRITTEN EVALUATION REPORTS FOR THE PROJECT SITE WILL BE MAINTAINED BY THE CONSTRUCTION SUPERINTENDENT THROUGHOUT THE TERM OF THE PROJECT CONSTRUCTION AND MADE AVAILABLE TO THE TOWN OF FISHERS OR OTHER INSPECTING AUTHORITY WITHIN 48 HOURS OF A REQUEST.

- MAINTENANCE OF SPECIFIC EROSION CONTROL MEASURES SHALL BE ACCORDING TO THE FOLLOWING:
- SEEDING OF DISTURBED AREAS
- DISTURBED AREAS WILL BE SEEDING AND MULCHED FOR TEMPORARY OR PERMANENT STABILIZATION AS PHASES OF THE PROJECT CONSTRUCTION ARE COMPLETED.
  - UN-VEGETATED AREAS SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FIFTEEN (15) DAYS OR MORE WILL BE TEMPORARILY OR PERMANENTLY STABILIZED WITH MEASURES APPROPRIATE FOR THE SEASON TO MINIMIZE EROSION POTENTIAL.
  - SEEDING AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEDED AS NEEDED.
- SILT FENCE MAINTENANCE REQUIREMENTS:
- INSPECT THE SILT FENCE PERIODICALLY AND AFTER EACH STORM EVENT.
  - IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE OR SWEEPING. FLUSHING SHOULD ONLY BE USED IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN.
  - REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE.
  - TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT.
  - AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE MAINTENANCE REQUIREMENTS:
- INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER STORM EVENTS OR HEAVY USE.
  - RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
  - TOP DRESS WITH CLEAN STONE AS NEEDED.
  - IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN.
  - REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.

- STORM WATER BASIN MAINTENANCE REQUIREMENTS
- INSPECT THE STORM WATER BASIN AFTER EACH STORM EVENT. IMMEDIATELY REPAIR ANY EROSION AND PIPING HOLES.
  - THE NECESSITY FOR SEDIMENT REMOVAL WILL BE DETERMINED AFTER EACH EVENT.
  - REPLACE/REPAIR OUTLET RIPRAP AS REQUIRED AFTER EACH EVENT.
  - INSPECT VEGETATION, AND RE-SEED IF NECESSARY.

- EROSION CONTROL BLANKET (SURFACE APPLIED) MAINTENANCE REQUIREMENTS
- DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET.
  - IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-LAY AND STAPLE THE BLANKET.
  - AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY AND MAINTAIN AS PER CHART UNDER SECTION C2 SHEET 4.1 FOR DRY SWALE.

- B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS  
SEE DETAIL SHEET C4.1

EROSION CONTROL PLAN  
POST-CONSTRUCTION COMPONENT (Section C)

- C1 POTENTIAL POLLUTANT SOURCES FROM PROPOSED LAND USE
- THE GREATEST AMOUNT OF POST CONSTRUCTION POLLUTANTS EXPECTED FROM THIS PROJECT WILL COME FROM THE VEHICLES THAT UTILIZE THE SITE. POTENTIAL POLLUTANTS FROM VEHICLES INCLUDE: GREASE, OIL, GASOLINE, DIESEL, ANTIFREEZE, BRAKE FLUID, METALS, RUBBER FRAGMENTS AND OTHER HYDROCARBONS. ALSO SAND AND GRAVEL FROM ROADWAY SURFACES AND ROAD WEATHER TREATMENTS ARE ASSUMED. BACTERIA AND OTHER BIOLOGICAL AGENTS FROM DUMPSTER AREAS AND LITTERING ARE ALSO CONSIDERED POTENTIAL POLLUTANTS.
- FINAL LANDSCAPING AND SEEDING WILL BE DONE AFTER FINAL GRADING.
- WEEKLY PARKING LOT CLEANING AND DAILY LITTER CLEAN UP WILL BE PERFORMED.
- FERTILIZING WILL BE MINIMAL SINCE THERE IS VERY LITTLE TURF ON THE SITE. THE EXTENSIVE LANDSCAPE PLANTINGS WERE CHOSEN FOR THE LOW DEPENDENCY UPON FERTILIZERS AND PESTICIDES. THEY ALSO REQUIRE VERY LITTLE IRRIGATION SO TO MINIMIZE THE FERTILIZER AND PESTICIDE RUNOFF FROM THE SITE.

C2 SEQUENCE OF EROSION CONTROL MEASURES IMPLEMENTATION

- AFTER CONSTRUCTION AND FINAL GRADING, LANDSCAPE AND PERMANENTLY STABILIZE ALL DISTURBED SITES, INCLUDING BORROW AND DISPOSAL AREAS. TEMPORARY FACILITIES SHALL BE REMOVED ONLY AFTER ALL DISTURBED AREAS ARE STABILIZED.
- AQUA-SWIRL UNITS SHALL BE INSTALLED WITH STORM FACILITIES. SEE O&M MANUAL SEPERATE FROM THESE PLANS FOR MAINTENANCE

C3 PROPOSED STORMWATER QUALITY MEASURES

- AQUA-SWIRL UNITS (NOT REQUIRED FOR THIS PROJECT) SHALL BE INSTALLED WITH STORM FACILITIES.
- SEE O&M MANUAL SEPERATE FROM THESE PLANS FOR MAINTENANCE

C4 CONSTRUCTION DETAILS AND SPECIFICATIONS

SEE DETAILS SHEET C4.1

C5 MAINTENANCE GUIDELINES FOR STORMWATER MEASURES

SEE CHART DETAIL SEE SHEET C4.1  
ESTIMATED START: JULY 01, 2020  
ESTIMATED COMPLETION OF SITE DEVELOPMENT: DECEMBER 31, 2020

CONTACT PERSON:

Eric B Wiseman | Sr. Project Manager  
Chart Lifecycle, Inc.  
1725 Graham Road | Franklin, IN 46131 | USA  
Direct: 317-836-5778 | Mobile: 317-499-4855 |  
eric.wiseman@ChartLifecycle.com | www.chartlifecycle.com

MAIN STREET  
CONSULTING COMPANY

BRADLEY R. O'NEILL  
REGISTERED  
NO. PE0200097  
STATE OF  
INDIANA  
PROFESSIONAL ENGINEER

Bradley O'Neill

REVISIONS

SWPPP NOTES  
Chart Lifecycle, Inc.  
1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C4.2-SWPPP.DWG  
DATE: 04.15.2023  
PROJ. NO.: 24-001  
DRAWN BY: B.OIT  
SURVEYED BY: B.OIT  
SCALE: ~

SWPPP

SHEET NO.:  
C4.2



SURFACE STABILIZATION

Mulching

Mulching is the application of plant residue or other material to enhance and protect vegetation establishment and minimize erosion potential.

Purpose

- To prevent erosion by protecting the soil from wind and water impact.
- To provide temporary surface stabilization.
- To prevent soil from eroding.
- To conserve soil moisture, moderate soil temperature, and promote seed germination and seedling growth.

Note: This measure should not be used in storm water runoff channels or areas where concentrated flow is attempted.

Specifications

Materials

Table 1. Mulch Specifications

Material <sup>1</sup>	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.

<sup>1</sup> Mulching is not recommended in concentrated flows. Consider erosion control blankets or other stabilization methods.

October 2007 Chapter 7 55

MULCHING

Coverage

The mulch should have a uniform density of at least 75 percent over the soil surface.

Anchoring

Table 2. Mulch Anchoring Methods

Anchoring Method <sup>1</sup>	How to Apply
Mulch anchoring tool or firm disk disk, straight, 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.
Cleaning with closer tracks	Operate closer up and down slopes to prevent formation of rills by closer chains.
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.

<sup>1</sup> 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 firm disk with dull serrated blades set straight, or track chain of a bulldozer.
  - b. Apply hydraulic mulch with short cellulose fibers.
  - c. Apply a liquid tackifier, or
  - d. Cover with netting secured by staples.

56 Chapter 7 October 2007

MULCHING

Maintenance

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

October 2007 Chapter 7 57

OUTLET PROTECTION & GRADE STABILIZATION

Energy Dissipater (Outlet Protection)

An energy dissipater (outlet protection) is an erosion control measure consisting of riprap placed at the outlet end of culverts, conduits, channels, etc.

Purpose

To prevent erosion at the outlet of a channel or conduit by reducing the velocity of storm water flow and dissipating its energy.

Specifications

Note: Designed by a qualified individual/professional engineer. Additional design considerations will be required when discharge velocities are very high or substrate conditions are very low.

Capacity:

Peak runoff from a 10-year frequency, 24-hour storm event or the design discharge of the water conveyance structure, whichever is greater.

Maximum Velocity

Ten feet per second.

Tailwater Depth

- Determined immediately below the structure outlet.
- Based on design discharge plus other contributing flows.

Apron

- Length and width determined according to tailwater conditions.

October 2007 Chapter 7 121

ENERGY DISSIPATER (OUTLET PROTECTION)

- Aligned straight with channel flow. If a curve is necessary to align the apron with the receiving stream, locate the curve in the upstream section of the apron.
- Plunge pool (used with higher velocity flows).
- Thickness
  - 1.2 times the maximum stone diameter for a  $d_{50}$  stone size of 15 inches or larger.
  - 1.5 times the maximum stone diameter for a  $d_{50}$  stone size of 15 inches or less.

Table 1. Sizing for Flow Dissipaters at Culvert Pipe Outlets<sup>1</sup>

Pipe Size	Average Runoff Discharge	Apron Width <sup>2</sup>	Apron Length <sup>3</sup>
8 in.	2 in.	2 to 3 ft.	5 to 7 ft.
12 in.	6 in.	3 to 4 ft.	6 to 12 ft.
18 in.	6 in.	4 to 6 ft.	8 to 18 ft.
24 in.	10 in.	6 to 8 ft.	12 to 22 ft.
30 in.	12 in.	8 to 10 ft.	14 to 28 ft.
36 in.	14 in.	10 to 12 ft.	16 to 32 ft.

<sup>1</sup> For larger or higher flows consult a registered engineer.

<sup>2</sup> Apron width at the narrow end of apron (pipe or channel outlet).

<sup>3</sup> Subsoil tamping into consideration the low flow (no pressure head or high flow pressure head condition of the culvert pipe).

Materials

- Riprap
  - Hard, angular, highly weather resistant.
  - Specific gravity of at least 2.5.
  - Size and gradation that will withstand velocities of storm water discharge flow design.
- Well-graded mixture of stone with 50 percent of the stone pieces, by weight, larger than the  $d_{50}$  size and the diameter of the largest stone equal to 3.5 times the  $d_{50}$  size.

Note: Concrete, gabion baskets, grouted riprap, interlocking concrete blocks, cabled concrete, and turf reinforcement products are alternative options to riprap.

- Geosynthetic fabric or well-graded aggregate (INDOT CA No. 9, 11, or 12 (see Appendix D)).

October 2007 Chapter 7 122

ENERGY DISSIPATER (OUTLET PROTECTION)

Installation

1. Excavate surface water runoff around the structure during construction so that the site can be properly devoted for foundation preparation.
2. Excavate foundation and apron area subgrades below design elevation to allow for thickness of the filter medium and riprap.
3. Compact any fill used in subgrade preparation to the density of surrounding undisturbed soil material.
4. Smooth subgrade enough to protect geosynthetic fabric from tearing.
5. Place geosynthetic fabric or aggregate bedding material (for stabilization and filtration) on the compacted and smoothed foundation.
6. Install riprap to the lines and elevations shown in the construction plans. Spread riprap smoothly to surrounding grade. If the channel is well defined, extend the apron across the channel bottom and up the channel banks to an elevation of six inches above the maximum subgrade depth or to the top of the bank, whichever is less.
7. If geosynthetic fabric tears when placing riprap, repair immediately by laying and stapling a piece of fabric over damaged area, overlapping the undamaged areas by at least 12 inches.
8. Construct a small plunge pool within the outlet apron. (Riprap aprons must be level with or slightly lower than the receiving channel and should not produce an overfall or restrict flow of the water conveyance structure.)

Maintenance

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- Inspect for stone displacement; replace stones ensuring placement at finished grade.
- Check for erosion or scouring around sides of the apron; repair immediately.
- Check for riprap or underlap; repair immediately.

October 2007 Chapter 7 123

Permanent CURB & PAVED AREA INLET PROTECTION

Insert (Basket) Curb Inlet Protection

Insert (basket) curb inlet protection is a permanent sediment control measure consisting of a metal frame or basket that is used to support a geosynthetic fabric. The system is installed under the storm sewer grade.

Purpose

To minimize sediment from entering the storm sewer system while allowing runoff to enter the storm sewer system in the event of excessive storm events. This measure traps sediment associated with small storm events below the grade of the paved area. This measure does not place an obstruction in the street to trap sediment and is especially conducive to stages of construction when the public has access to the project site.

Note: This measure should be used in conjunction with other sediment control measures.

Specifications

Contributing Drainage Area:

One-quarter acre maximum.

Capacity

Runoff from a two-year frequency, 24-hour storm event entering a storm drain without bypass flow.

October 2007 Chapter 7 177

## SEDIMENT BARRIERS & FILTERS

### Silt Fence

A *silt fence* is a temporary barrier of *erectured geosynthetic fabric stretched across and attached to supporting posts and installed on the contour to intercept and treat sediment-laden storm water runoff from small, unvegetated drainage areas.*

### Purpose

To trap sediment from small, disturbed areas by reducing the velocity of sheet flow. Silt fences capture sediment by ponding water to allow deposition, not by filtration.

**Note:** Silt fence is not recommended for use as a diversion and should not be used across a stream, channel, ditch, creek, or anywhere that concentrated flow is anticipated.

### Specifications

#### Drainage Area

- Limited to one-quarter acre per 100 linear feet of fence.
- Further restricted by slope steepness (see Table 1).

#### Effective Life

Six months (maximum).

#### Location

- Installed parallel to the slope contour.
- Minimum of 10 feet beyond the toe of the slope to provide a broad, shallow sediment pool.
- Accessible for maintenance (removal of sediment and silt fence repair).

## SILT FENCE

### Spacing

Table 1. Slope Steepness Restrictions

Percent Slope	Maximum Distance
< 2%	< 601
2% - 5%	301 to 601
5% - 10%	201 to 301
10% - 20%	101 to 201
> 20%	> 51

Consider other alternatives.

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

### Trench

- Depth - eight inches minimum.
- Width - four inches minimum.
- After installing fence, backfill with soil material and compact to bury and anchor the lower portion of the fence fabric.

**Note:** An alternative to trenching is to use mechanical equipment to place in the silt fence.

### Materials and Silt Fence Specifications

- Fabric - woven or non-woven geosynthetic fabric meeting specified minimums outlined in Table 2.

## SILT FENCE

Table 2. Geosynthetic Fabric Specifications for Silt Fence (Minimum)

Physical Property	Woven Geosynthetic Fabric	Non-Woven Geosynthetic Fabric
Filtration efficiency	85%	85%
Tensile strength at 50% elongation	30 lbs. per linear inch	50 lbs. per linear inch
Standard strength	50 lbs. per linear inch	70 lbs. per linear inch
Starry flow rate	0.2 gal./min./square foot	4.5 gal./min./square foot
Water flow rate	15 gal./min./square foot	220 gal./min./square foot
UV resistance	10%	60%
Post spacing	7 feet	5 feet

**Note:** Silt fences can be purchased commercially.

- Height - a minimum of 18 inches above ground level (30 inches maximum).
- Reinforcement - fabric securely fastened to posts with wood lath.
- Support Posts
  - 2 x 2 inch hardwood posts. Steel fence posts may be substituted for hardwood posts (steel posts should have projections for fastening fabric).
  - Spacing
    - Eight foot maximum if fence is supported by wire mesh fencing.
    - Six feet maximum for extra-strength fabric without wire backing.

### Installation

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

- 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 and terminates at a higher elevation than the top of the fence at its lowest point (see Exhibit 1).
- 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.
- 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.

## SILT FENCE

- 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.)
- 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.
- 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 geosynthetic specifications) and attach wooden lath 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.

### Maintenance

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- 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.**
- 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.

## SURFACE STABILIZATION

### Erosion Control Blanket

An *erosion control blanket* is a *biodegradable, organic or synthetic mulch incorporated with a biodegradable, photodegradable, or permanent polypropylene, natural fiber, or similar setting material. It is an alternative to mulch and normally used on slopes and in concentrated flow channels.*

### Purpose

- To prevent erosion by protecting the soil from rainfall impact, overhead water flow, concentrated runoff, or wind.
- To provide temporary surface stabilization.
- To anchor mulch in critical areas, including slopes and concentrated flow conveying systems.
- To reduce soil crusting.
- To conserve soil moisture and increase seed germination and seedling growth.

### Specifications

#### Effective Life

The functional life of an erosion control blanket is dependent on the materials used.

#### Anchoring

Staples, pins or stakes used to prevent movement or displacement of blanket. (Follow manufacturer's recommendations for specific applications.)

#### Materials

- Organic (straw, excelsior, woven paper, coconut fiber, etc.) or synthetic mulch incorporated with a polypropylene, natural fiber or similar setting material. (The testing may be biodegradable, photodegradable or permanent.)

## EROSION CONTROL BLANKET

**Note:** Some erosion control blanket settings may pose a threat to certain species of wildlife if they become entangled in the nesting matrix.

- Six to 12-inch staples, pins, or stakes.

### Installation

- Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
- Prepare the subsoil, add soil amendments, and permanently seed (see Permanent Seeding on page 35) the area immediately following seedbed preparation.
- 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.
- Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with soil and tamp down. In certain applications, the manufacturer may require additional check slots at specific locations down slope from the uppermost edge of the upper blankets.
- Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.

### Maintenance

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

## INSERT (BASKET) CURB INLET PROTECTION

### Location

- At curb inlets on paved roads and parking lots.
- Down grade from construction activities (e.g., individual home sites).

### Materials

- Metal frame or basket with a top width and length such that the frame fits into the side. (The frame is supported by the structural integrity of the storm sewer.)
- The metal frame or geosynthetic should be designed with a bypass to allow storm water to flow into the storm sewer system during excessive storm events.
- The system should be designed for ease of maintenance.
- Geosynthetic fabric.

Table 1. Geosynthetic Fabric Specifications

Physical Property	Woven	Non-Woven
Filtration efficiency	80%	85%
UV resistance	70%	85%
Tensile strength at 50% elongation	30 lbs. linear inch	50 lbs. linear inch
Standard strength	50 lbs. linear inch	70 lbs. linear inch
Starry flow rate	0.2 gal./min./sq. ft.	4.5 gal./min./sq. ft.
Water flow rate	15 gal./min./sq. ft.	220 gal./min./sq. ft.

### Installation

- Excavate the storm sewer grade and place the frame into the grate opening.
- Place geosynthetic fabric into the frame and secure according to the manufacturer's recommendations.
- Replace the storm sewer grate.

October 2007

Chapter 7 215

Chapter 7 216

Chapter 7 216

October 2007

October 2007

Chapter 7 217

Chapter 7 217

Chapter 7 218

Chapter 7 218

Chapter 7 63

Chapter 7 63

October 2007

Chapter 7 63

October 2007

Chapter 7 64

October 2007

Chapter 7 64

October 2007

Chapter 7 178

Chapter 7 178

Chapter 7 178

October 2007

Chapter 7 178

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD  
(LARGE SITES— TWO ACRES OR LARGER)

Temporary Construction Ingress/Egress Pad  
Plan View Worksheet  
(large sites—two acres or larger)

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1983.

October 2007 Chapter 7 19

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD  
(LARGE SITES— TWO ACRES OR LARGER)

**Materials**

- One to two and one-half inch diameter washed aggregate (Indiana Department of Transportation Course Aggregate No. 2 (see Appendix D)).
- One-half to one and one-half inch diameter washed aggregate (INDOT CA No. 53 (see Appendix D)).
- Geosynthetic fabric underlayer (see Appendix C) (used as a separation layer to prevent intermingling of aggregate and the underlying soil material and to provide greater bearing strength when encountering wet conditions or soils with a somewhat high water table limitation).

**Installation**

- Remove all vegetation and other objectionable material from the foundation area.
- Grade foundation and crown for positive drainage. If the slope of the construction entrance is toward a public road and exceeds two percent, construct an eight inch high diversion ridge with a ratio of 3-to-1 side slopes across the foundation area about 15 feet from the entrance to divert runoff away from the road (see Temporary Construction Ingress/Egress Pad Construction View Worksheet).
- Install a culvert pipe under the pad if needed to maintain proper public road drainage.
- If wet conditions are anticipated, place geosynthetic fabric on the graded foundation to improve stability.
- Place aggregate (INDOT CA No. 2) to the dimensions and grade shown in the construction plans, leaving the surface smooth and sloped for drainage.
- Top-dress the first 30 feet adjacent to the public roadway with two to three inches of washed aggregate (INDOT CA No. 53) (optional, used primarily where the presence of the pad is so keep soil from adhering to vehicle tires).
- Where possible, divert all storm water runoff and drainage from the ingress/egress pad to a sediment trap or basin.

**Maintenance**

- Inspect daily.
- Reshape pad as needed for drainage and runoff control.
- Top dress with clean aggregate as needed.
- Immediately remove mud and sediment tracked or washed onto public roads.
- Fishing should only be used if the water can be conveyed into a sediment trap or basin.

October 2007 Chapter 7 18

SURFACE STABILIZATION

Mulching

**Mulching** is the application of plant residues/ materials to enhance and protect vegetative establishment and minimize erosion potential.

Purpose

- To prevent erosion by protecting the soil from wind and water impact.
- To provide temporary surface stabilization.
- To prevent soil from eroding.
- To conserve soil moisture, moderate soil temperature, and promote seed germination and seedling growth.

**Note:** This measure should not be used in storm water runoff channels or areas where concentrated flow is attempted.

Specifications

Materials

Material <sup>1</sup>	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.

<sup>1</sup> Mulching is not recommended in concentrated flows. Consider erosion control blankets or other stabilization methods.

October 2007 Chapter 7 55

MULCHING

Coverage

The mulch should have a uniform density of at least 75 percent over the soil surface.

Anchoring

Anchoring Method <sup>1</sup>	How to Apply
Mulch anchoring tool or firm disk (disk, 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.
Cleaning with closer tracks	Operate closer up and down slope to prevent formation of rills by closer chains.
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.

<sup>1</sup> All forms of mulch must be anchored to prevent displacement by wind and/or water.

Application

- Apply mulch at the recommended rate shown in Table 1.
- 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.
- Anchor straw or hay mulch immediately after application. The mulch can be anchored using one of the methods listed below:
  - Crimp with a mulch anchoring tool, a weighted firm disk with dull serrated blades set straight, or track chain of a bulldozer.
  - Apply hydraulic mulch with short cellulose fibers.
  - Apply a liquid tackifier, or
  - Cover with netting secured by staples.

October 2007 Chapter 7 56

MULCHING

Maintenance

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

October 2007 Chapter 7 57

SILT FENCE

Exhibit 2

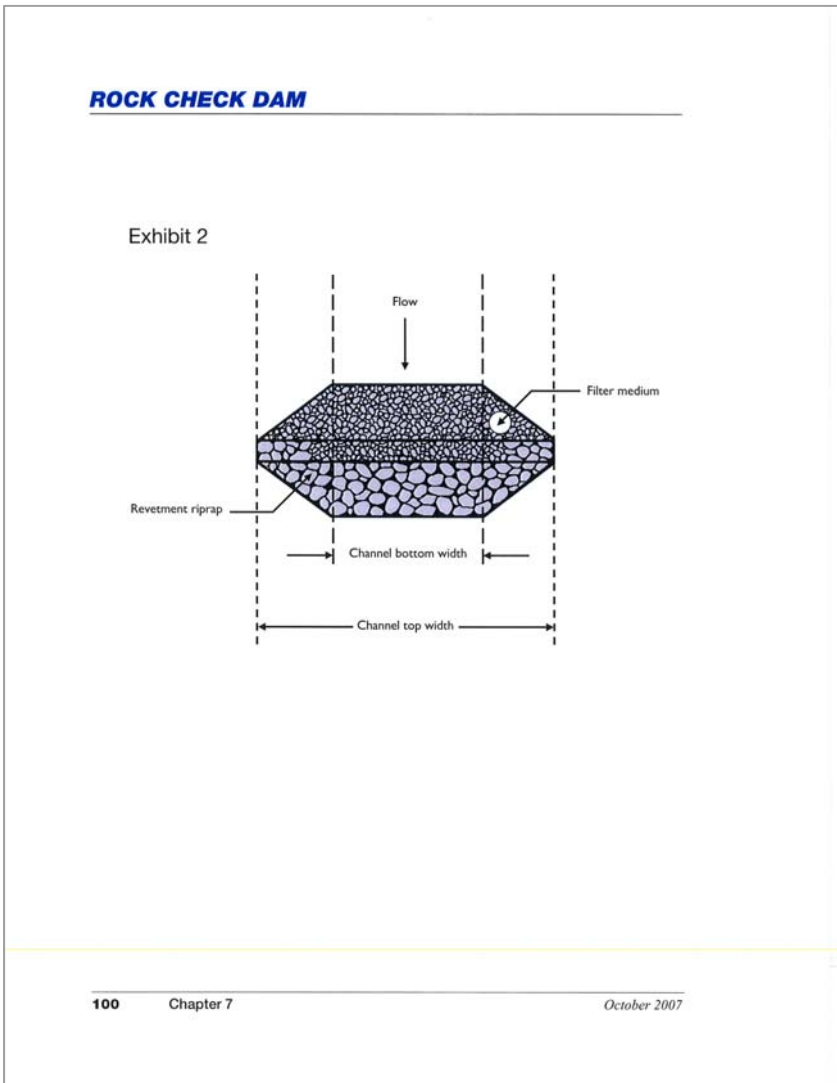
October 2007 Chapter 7 220

SILT FENCE

Exhibit 1

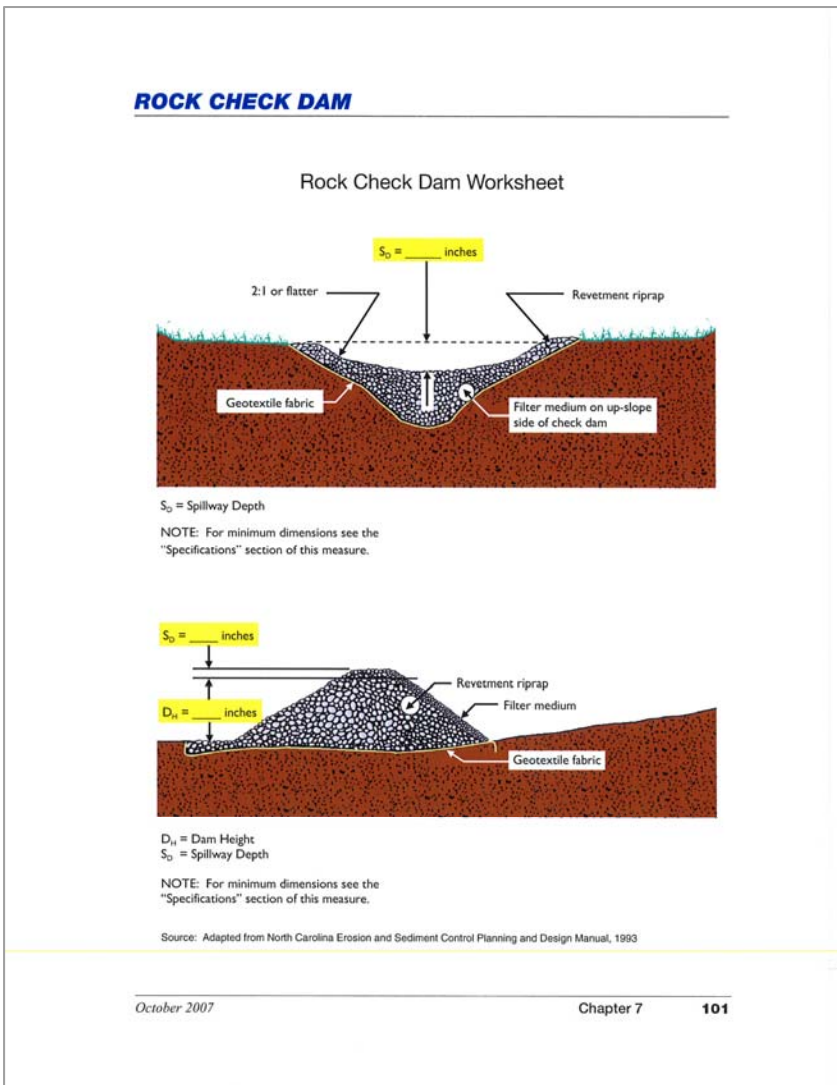
October 2007 Chapter 7 219





B5 CONTROL MEASURES FOR CONCENTRATED FLOW AREAS

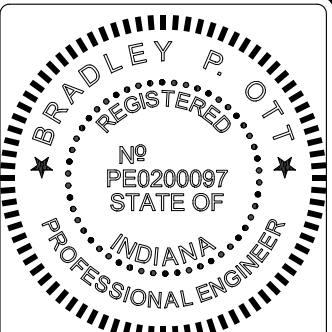
B7 RUNOFF CONTROL MEASURES



EROSION CONTROL CONSTRUCTION SEQUENCE SCHEDULING		
CONSTRUCTION PHASE (SPECIFIC ACTIVITIES OR EROSION CONTROL PRACTICES)	CONSTRUCTION SCHEDULE CONSIDERATION	MONITORING AND MAINTENANCE SCHEDULE
<u>PRE-CONSTRUCTION ACTIONS</u> (EVALUATION/PROTECTION OF IMPORTANT SITE CHARACTERISTICS)	BEFORE CONSTRUCTION, EVALUATE, MARK, AND PROTECT IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, UNIQUE AREAS (e.g., WETLANDS) TO BE PRESERVED, & VEGETATION SUITABLE FOR FILTER STRIPS, ESPECIALLY IN PERIMETER AREAS. INSTALL SILT FENCE.	ESTABLISH AND EVALUATE PROJECT ASSIGN SUPERINTENDENT/NOIC WHOM WILL BE IN CHARGE OF OVERSEEING EROSION FACILITIES.
<u>CONSTRUCTION ACCESS*</u> (CONSTRUCTION ENTRANCES, CONSTRUCTION ROUTES, EQUIPMENT PARKING AREAS)	STABILIZE BARE AREAS IMMEDIATELY WITH GRAVEL AND TEMPORARY VEGETATION AS WORK TAKES PLACE	INSPECT CONSTRUCTION ENTRANCE WEEKLY AND AFTER STORM EVENTS AND HEAVY USAGE, RESHAPE AND TOP DRESS AS NEEDED INCLUDING REMOVAL OF IMMEDIATE SEDIMENTS BY SWEEPING OR BRUSHING.
<u>SEDIMENT BARRIERS AND TRAPS*</u> (SEDIMENT BASINS, SILT FENCES, OUTLET PROTECTION, FILTER SOCKS)	INSTALL PRINCIPLE BASINS AFTER CONSTRUCTION SITE IS ASSESSED. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING & INSTALL PERIMETER SWALES. (EROSION CONTROL MEASURES)	INSPECT THE SILT FENCE WEEKLY AND AFTER RAIN EVENTS, AND MAKE NEEDED REPAIRS IMMEDIATELY. AVOID DAMAGING OR UNDERCUTTING THE FABRIC DURING SEDIMENT REMOVAL. WHEN THE CONTRIBUTING AREA HAS BEEN STABILIZED, REMOVE AND PROPERLY DISPOSED OF ALL CONSTRUCTION MATERIAL AND SEDIMENT.
<u>RUNOFF CONTROL*</u> (DIVERSIONS, PERIMETER Dikes, WATER BARS, OUTLET PROTECTION)	INSTALL PRACTICES AFTER PRINCIPAL SEDIMENT TRAPS ARE INSTALLED BUT BEFORE SITE GRADING. INSTALL ADDITIONAL RUNOFF CONTROL MEASURES DURING GRADING AS NEEDED.	INSPECT THE SEDIMENT BASINS WEEKLY AND AFTER RAIN EVENTS, REMOVE AND PROPERLY DISPOSE OF SEDIMENT WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN VOLUME
<u>RUNOFF CONVEYANCE SYSTEMS</u> (STABILIZED STREAM BANKS, STORM DRAINS, INLET AND OUTLET PROTECTION, CHANNELS)	WHEN NECESSARY INSTALL PRINCIPLE CONVEYING SYSTEM WITH RUNOFF CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.	INSPECT VEGETATION, AND RE-SEED IF NECESSARY.
<u>LAND CLEARING AND GRADING*</u> (GRUBBING, FILLING, GRADING, DRAINS, SEDIMENT TRAPS, BARRIERS, DIVERSIONS, SURFACE ROUGHENING)	BEGIN MAJOR CLEARING AND GRADING AFTER INSTALLING THE KEY SEDIMENT AND RUNOFF MEASURES. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES.	INSPECT NEWLY TOPSOIL AREAS WEEKLY UNTIL VEGETATION IS ESTABLISHED. REPAIR ERODED OR DAMAGED AREAS AND REVEGETATE.
<u>SURFACE STABILIZATION</u> (TEMPORARY AND PERMANENT SEEDING, MULCHING, SOILING, RP-DAP)	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHEN WORK IS DELAYED OR COMPLETED. IF LEFT INACTIVE FOR MORE THAN 15 DAYS, MORE APPROPRIATE MEASURES WILL BE IMPLEMENTED TO STABILIZE THE SITE. INSTALL GEOTEXTILE, GRAVEL & INFRASTRUCTURE FOR LIGHTEN.	INSPECT WEEKLY AND ESPECIALLY AFTER RAIN EVENTS, UNTIL THE TEMPORARY VEGETATION IS SUCCESSFULLY ESTABLISHED. REPAIR DAMAGED, BARE, OR SPARSE AREAS BY FILLING ANY GULLIES, OVER-ALL RE-SEEDING, AND MULCHING. IF PLANT COVERAGE IS SPARSE OR PATCHY, REVIEW THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCHING; THEN REPAIR THE AFFECTED AREA EITHER BY OVER-SEEDING OR BY RE-SEEDING AND MULCHING AFTER PREPARING THE SEEDBED. IF WASHOUT, OR BREAKAGE, OR EROSION IS PRESENT, REPAIR THE SURFACE, THEN RE-SEED, RE-MULCH AND, IF APPLICABLE, INSTALL NEW NETTING. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED. INSPECT PERIODICALLY FOR DISPLACED ROCK MATERIAL, SLUMPING, AND EROSION, ESPECIALLY DOWNSTREAM.
<u>CONSTRUCTION SITE</u> (BUILDING, UTILITIES, GRAVEL, CONCRETE PADS)	INSTALL NECESSARY EROSION AND SEDIMENT CONTROL PRACTICES AS WORK TAKES PLACE. IF LEFT INACTIVE FOR MORE THAN 15 DAYS, MORE APPROPRIATE MEASURES WILL BE IMPLEMENTED TO STABILIZE THE SITE.	DURING VEGETATIVE ESTABLISHMENT, INSPECT WEEKLY AND AFTER RAIN EVENTS FOR ANY EROSION BELOW THE BLANKET OR MULCHING. IF ANY AREAS SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-LAY AND STAPLE THE BLANKET. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY.
<u>LANDSCAPING &amp; FINAL STABILIZATION</u> (TOPSOIL, TREES, AND SHRUBS, PERMANENT SEEDING, MULCHING, SOILING, RP-DAP) (POST CONSTRUCTION)	STABILIZE ALL OPEN AREAS INCLUDING BORROW AND SPOIL AREAS. REMOVE TEMPORARY CONTROL MEASURES AND STABILIZE. PERMANENT SEED ALL BARE SOIL AREAS. CONVERT SEDIMENT BASINS INTO PERMANENT DETENTION BASINS.	INSPECT WEEKLY AND ESPECIALLY AFTER RAIN EVENTS, UNTIL THE STRAND IS SUCCESSFULLY ESTABLISHED. REPAIRED DAMAGED, BARE, OR SPARSE AREAS FILLING ANY GULLIES, RE-FERTILIZING. IF PLANT COVERAGE IS LESS THAN 70%, REVIEW THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCHING; THEN REPAIR THE AFFECTED AREA EITHER BY OVER-SEEDING OR BY RE-SEEDING AND MULCHING AFTER PREPARING THE SEEDBED. IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS. MONITOR OUTLET OF SPILLWAY FOR EROSION CONCERNS.

B2 SEQUENCE OF EROSION CONTROL MEASURES IMPLEMENTATION  
(JOHNSON COUNTY SPECIFIC TABLE)

MAIN STREET  
CONSULTING COMPANY  
675 North Main Street  
Franklin, IN 46131  
PH: 317.459.4765  
www.mainstreetconsulting.com



Bradley P. Ott

REVISIONS

SWPPP NOTES

Chart Lifecycle, Inc.

1725 GRAHAM ROAD, FRANKLIN, IN 46131  
FRANKLIN TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C4.4-SWPPP.DWG  
DATE: 04.15.2023  
PROJ. NO.: 23-002  
DRAIN BT: 8.01T  
SURVEYED BT: 8.01T  
SCALE: 1" = 2'

SWPPP

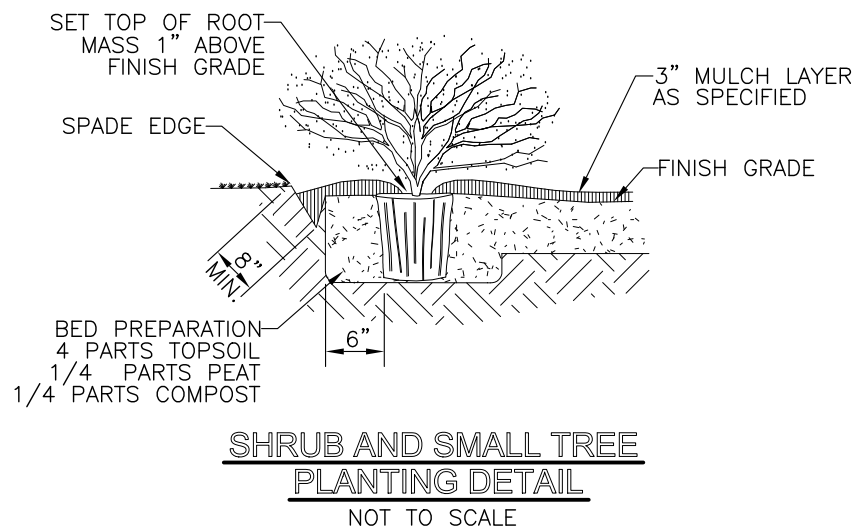
SHEET NO.:

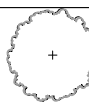







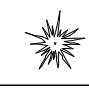
C4.4

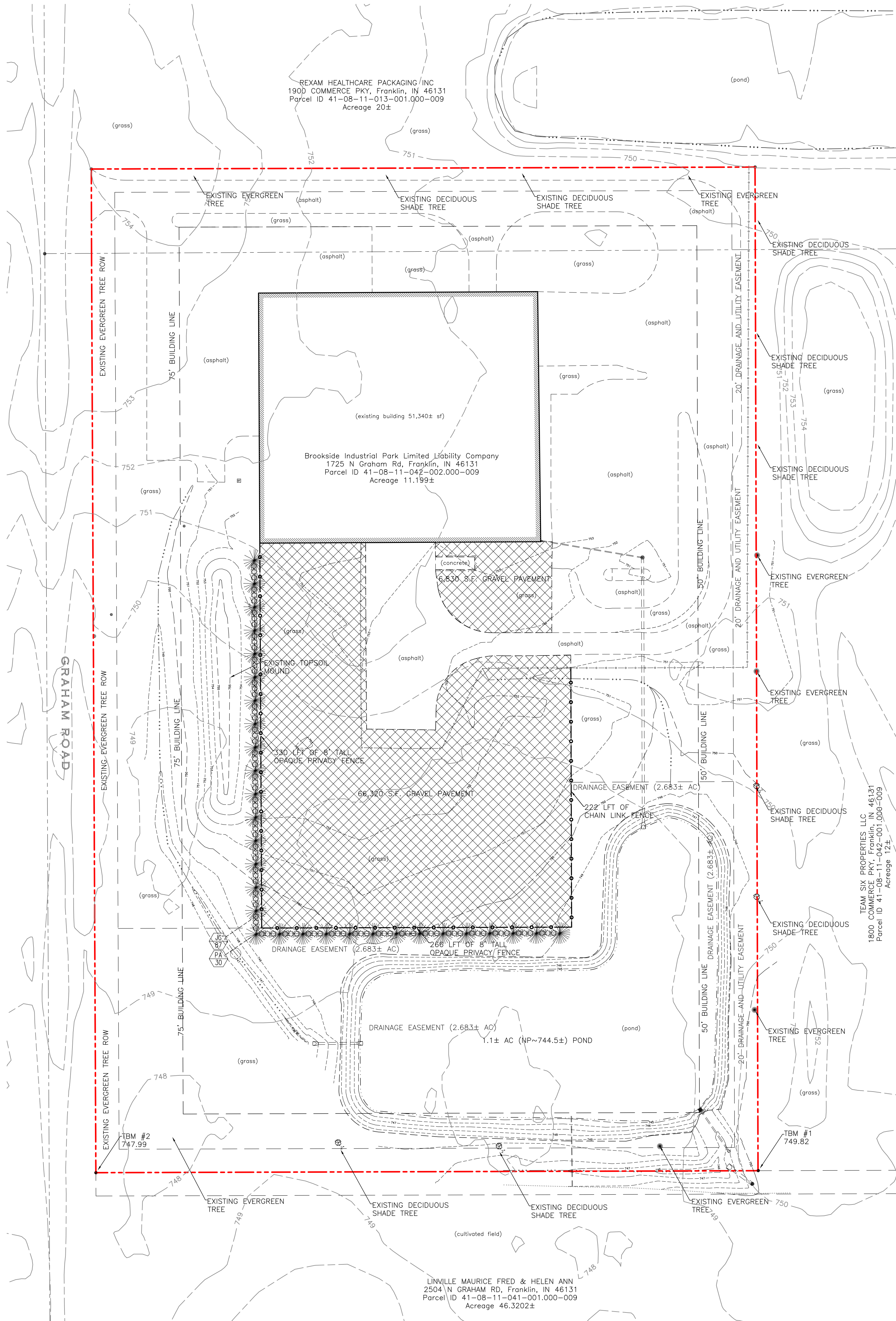


The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities 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.

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUALITY AND QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING AS SHOWN ON DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE "AMERICAN ASSOCIATION OF NURSERY STOCK, ANSI Z60.1-1996, OR CURRENTLY PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN."
4. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN FINISHED AND APPROVED.
5. ALL PLANTS SHALL BE PLANTED SO THAT THE ROOT CROWN IS PLANTED PER DETAIL ON THIS SHEET.
6. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING. ALL TWINE OR ROPE SHALL BE REMOVED FROM AROUND CROWN OF TRUNK TO PREVENT GIRDLING OF TREE.
7. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS.
8. THE DAY PRIOR TO PLANTING, THE LOCATIONS OF ALL TREES AND SHRUBS SHALL BE STAKED FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
9. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
10. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM THE TIME OF PROVISIONAL ACCEPTANCE.
11. IF THERE IS A DISCREPANCY BETWEEN THE PLANS AND THE PLANT LIST, THE PLANS SHALL TAKE PRECEDENCE.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.
13. STAKES AND GUY WIRES SHALL BE REMOVED AFTER ONE YEAR.
14. ALL EXISTING LANDSCAPING SHALL BE MAINTAINED DURING CONSTRUCTION. ANY MATERIAL DEEMED DEAD OR UNSATISFACTORY BY LANDSCAPE ARCHITECT WILL BE REPLACED EQUIVALENT IN SIZE AND SHAPE AT NO COST TO THE OWNER.
15. ALL EXISTING LANDSCAPING SHALL BE PRESERVED: NO SOIL STOCKPILING OR STRIPPING, NO EQUIPMENT OR MATERIAL STORAGE SHALL BE ALLOWED. AN ORANGE CONSTRUCTION FENCE SHALL BE CONSTRUCTED TO A DISTANCE OF NO LESS THAN 10 FEET OUTSIDE THE DRIP LINE OF THE EXISTING TREES. CONTACT LANDSCAPE ARCHITECT FOR ADDITIONAL INFORMATION.
16. DECORATIVE SIGNS, SPRINKLER SYSTEMS, TREES, LANDSCAPING MOUNDS, FENCES, LIGHT POLES, OR OTHER SUCH AMENITIES ARE NOT PERMITTED IN THE RIGHT-OF-WAY.
17. ALL BEDS TO HAVE SPADE EDGE.
18. ALL SEEDED/HYDROSEEDED TURF AREAS SHALL HAVE WEED FREE STRAW APPLIED TO RETAIN MOISTURE.



PLANTING SCHEDULE							
LEGEND	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE COND	REMARKS	MATURE HEIGHT MATURE SPREAD
<b>TREES</b>							
	AR	0	Acer x freemanii 'Jeffersred'	Autumn Blaze Maple	2'-1\2" B & B	Deciduous Canopy	50' 45'
	GT	0	Gleditsia triacanthos Inermis 'Skycole'	Skyline Honeylocust	2'-1\2" B & B	Deciduous Canopy	45' 45'
	LS	0	Liquidambar styraciflua	Sweetgum	2'-1\2" B & B	Deciduous Native Canopy	50' 45'
	PA	30	Picea abies	Norway Spruce	6'-7" B & B	Evergreen Tree	60' 40'
<b>SHRUBS</b>							
	EA	0	Euonymus alatus	Burning Bush	36" B & B	Deciduous Shrub	8'-10' 8'
	JC	87	Juniperus chinensis 'Sea Green'	Sea Green Juniper	36" No. 3 cont.	Evergreen Shrub	3' 5'-6'
	RM	0	Rosa 'Radcon'	Pink Knockout Shrub Rose	18"-24" No. 3 Cont.	Deciduous Shrub	3' 3'
	TO	0	Thuja occidentalis 'Woodward'	Woodward Arboresc	24"-36" No. 5 Cont.	Evergreen Shrub	4' 4'
	VO	0	Viburnum dentatum 'Christom'	Blue Muffin Viburnum	36" No. 5 Cont.	Deciduous Shrub	5' 5'
<b>GRASSES AND PERENNIALS</b>							
	PA	0	Fennisetum alopecuroides 'Hamel'	Hamel Fountain Grass	18"-24" No. 2 Cont.	Ornamental Grass	30" 24"



C8.0