

OWNER/DEVELOPER

3701 LINCOLN, LLC
6905 Telegraph Rd. Suite 200
Bloomfield Hills, MI 48301
Contact:
Mr. Tim Loughrin
Ph: 248-282-1428

Mr. Jason Jones
Ph: 313-575-6835

Mr. George Roberts
Ph: 248-302-8662

LANDSCAPE ARCHITECT

LAND DESIGN STUDIO
750 Forest Ave. Suite 101
Birmingham, MI 48009
Contact: Tad Krear
Ph. 248-594-3220

CIVIL ENGINEER

NOWAK & FRAUS ENGINEERS
46777 Woodward Ave.
Pontiac, MI 48342-5032
Tel. (248) 332-7931
Fax. (248) 332-8257
CONTACT: Brad Brickel, P.E.

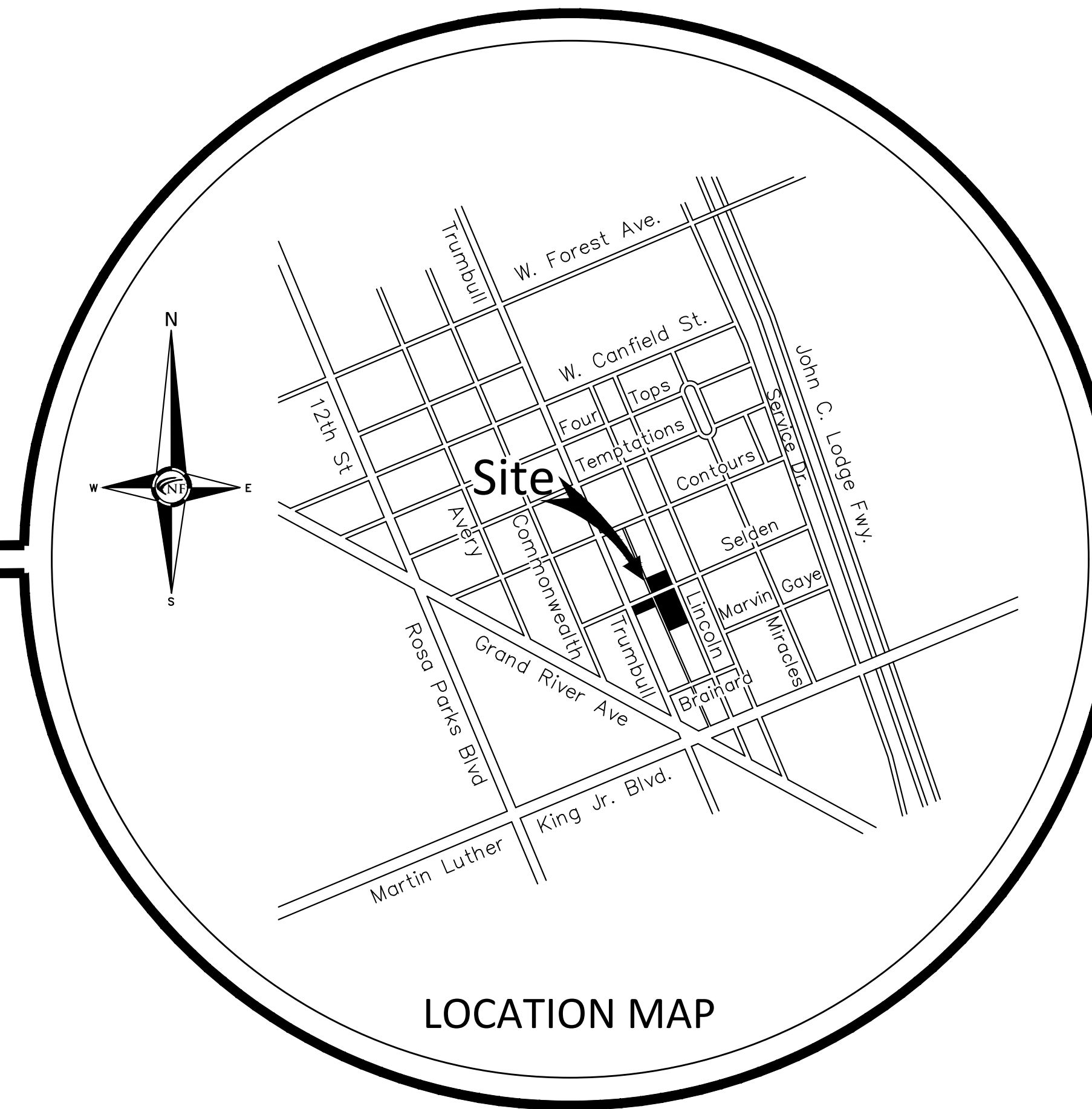
ARCHITECT

4545 ARCHITECTURE
3011 W. Grand River Blvd.
Suite 400
Detroit, MI 48202
Tel. (248) 672-0864
CONTACT: Joshua Maddox
Tim Flintoff

City of Detroit,
Wayne County, Michigan
ENGINEERING CONSTRUCTION DOCUMENTS

Prepared For
3701 Lincoln, LLC

PART OF THE NW1/4 OF SECTION 3,
CITY OF DETROIT,
WAYNE COUNTY, MICHIGAN



LOCATION MAP

SHEET INDEX

- C00 Cover Sheet
- C01 Boundary / Topographic / Tree Survey/ Site Analysis
- C02 Survey Notes / Tree List
- C03 Demolition Plan
- C04 Stringer Dimension Plan
- C04.1 Foundation Exhibit Plan (Parcel A)
- C04.2 Foundation Exhibit Plan (Parcel B)
- C04.3 Foundation Exhibit Plan (Parcel C)
- C05 Paving & Grading Plan (1 of 2)
- C05A Paving & Grading Plan (2 of 2)
- C06 Storm Drainage Plan (1 of 2)
- C06A Storm Drainage Plan (2 of 2)
- C07 Sanitary Sewer & Water Main Plan (1 of 2)
- C07A Sanitary Sewer & Water Main Plan (2 of 2)
- C08 Storm Drainage Profile Plan
- C09 Storm Drainage Profile Plan
- C10 Storm Drainage Profile Plan
- C11 Storm Calculations Plan
- C12 Storm Water Management Plan
- C13 Detention System Detail Plan
- C14 Post-Construction Storm Water Management Plan
- C15 Additional Details
- C16 Soil Erosion/ Drainage Area Plan
- C17 Soil Boring Plan
- C18 Soil Boring Logs
- C19 City of Detroit Standard Details
- C20 City of Detroit Standard Details
- C21 City of Detroit Standard Details
- C22 City of Detroit Standard Details
- C23 City of Detroit Standard Details

- L-1 Overall Landscape Plan
- L-2 Central Amenity Plan & Precedents
- L-3 Landscape Enlargement Details
- L-4 Landscape Details

- A1 Foundation Plan

LEGAL DESCRIPTION

**LEGAL DESCRIPTION - PARCEL A
PER TITLE COMMITMENT**

LAND IN THE CITY OF DETROIT, WAYNE COUNTY, MI, DESCRIBED AS FOLLOWS:

PARCEL 1:
LOT 45 AND THE NORTH 20 FEET OF LOT 46, OF HODGES BROS SUBDIVISION OF OUTLOTS 98, 99, 102 & 103 WOODBRIDGE FARM, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS.
PROPERTY ADDRESS: 3713 LINCOLN
TAX ITEM NO. 005779/WARD 06

PARCEL 2:
SOUTH 30 FEET OF LOT 46, OF HODGES BROS SUBDIVISION OF OUTLOTS 98, 99, 102 & 103 WOODBRIDGE FARM, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS.
PROPERTY ADDRESS: 3707 LINCOLN
TAX ITEM NO. 005780/WARD 06

PARCEL 3:
LOT 47, OF HODGES BROS SUBDIVISION OF OUTLOTS 98, 99, 102 & 103 WOODBRIDGE FARM, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS.
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PARCEL 4:
LOT 48, OF HODGES BROS SUBDIVISION OF OUTLOTS 98, 99, 102 & 103 WOODBRIDGE FARM, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS.
PROPERTY ADDRESS: 3697 LINCOLN
TAX ITEM NO. 005782/WARD 06

PARCEL 5:
LOT 49, OF HODGES BROS SUBDIVISION OF OUTLOTS 98, 99, 102 & 103 WOODBRIDGE FARM, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS.
PROPERTY ADDRESS: 3689 LINCOLN
TAX ITEM NO. 005783/WARD 06

**LEGAL DESCRIPTION - PARCEL B
PER TITLE COMMITMENT**

LAND IN THE CITY OF DETROIT, WAYNE COUNTY, MI, DESCRIBED AS FOLLOWS:

PARCEL 6:
LOT 85, INCLUDING 1/2 OF ADJACENT VACATED ALLEY, OF HODGES BROS SUBDIVISION OF OUTLOTS 98, 99, 102 & 103 WOODBRIDGE FARM, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS.
PROPERTY ADDRESS: 3915 LINCOLN
TAX ITEM NO. 005777/WARD 06

PARCEL 7:
LOT 86, INCLUDING 1/2 OF ADJACENT VACATED ALLEY, OF HODGES BROS SUBDIVISION OF OUTLOTS 98, 99, 102 & 103 WOODBRIDGE FARM, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS.
PROPERTY ADDRESS: 3907 LINCOLN
TAX ITEM NO. 005778/WARD 06

**LEGAL DESCRIPTION - PARCEL C
PER TITLE COMMITMENT**

LAND IN THE CITY OF DETROIT, WAYNE COUNTY, MI, DESCRIBED AS FOLLOWS:

PARCEL 8:
LOTS 33 THROUGH 43, BOTH INCLUSIVE, INCLUDING THE NORTHERLY 8.00 FEET OF VACATED BRAINARD STREET ADJACENT THERETO, OF HODGES BROS SUBDIVISION OF OUTLOTS 98, 99, 102 & 103 WOODBRIDGE FARM, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS.
PROPERTY ADDRESS: 3664 TRUMBULL
TAX ITEM NO. 005913-5/WARD 06
AS TO NORTH 8 FEET OF VACATED BRAINARD STREET AND LOTS 33 THROUGH 39 AND THE SOUTH 37 FEET OF LOT 40 OF PARCEL 8

PROPERTY ADDRESS: 3690 TRUMBULL
TAX ITEM NO. 005916/WARD 06
AS TO NORTH 13 FEET OF LOT 40, ALL OF LOT 41 AND THE SOUTH 2 FEET OF LOT 42 OF PARCEL 8

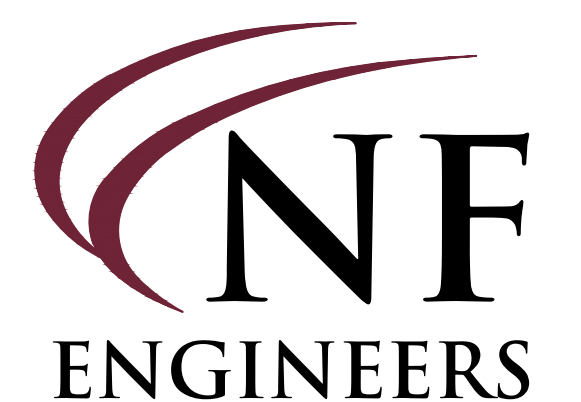
PROPERTY ADDRESS: 3700 TRUMBULL
TAX ITEM NO. 005917/WARD 06
AS TO NORTH 48 FEET OF LOT 42 OF PARCEL 8

PROPERTY ADDRESS: 3708 TRUMBULL
TAX ITEM NO. 005918/WARD 06
AS TO LOT 43 OF PARCEL 8

Project Name

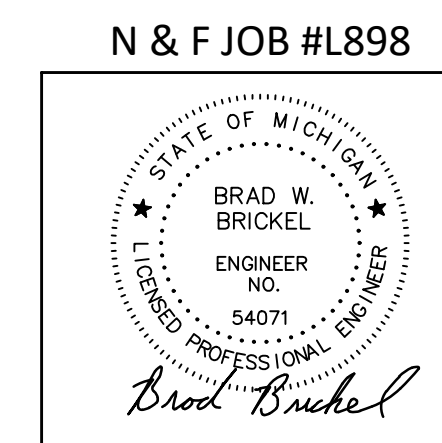
**Scripps District
3700 Trumbull**

REVISIONS:	
08-27-21	ISSUED FOR ENGINEERING REVIEW
09-20-21	REVISED GRADING
12-01-21	REVISED PER CITY
01-15-22	REVISED PER CITY



CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM



N & F JOB #L898

SEAL

PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Phone: Jason Jones
Phone: 313.575.6835

Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
Survey Notes / Tree List



Know what's below
Call before you dig.

DATE ISSUED/REVISED
08/27-21 ISSUED FOR ENGINEERING REVIEW

DRAWN BY:
M. Carnaghi
DESIGNED BY:

APPROVED BY:
K. Navaroli
DATE:
September 10, 2020

SCALE: N.T.S.

NFE JOB NO. SHEET NO.
L898 C02

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LEGAL DESCRIPTION - PARCEL C
PER TITLE COMMITMENT

LAND IN THE CITY OF DETROIT, WAYNE COUNTY, MI, DESCRIBED AS FOLLOWS:

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PROPERTY ADDRESS: 3690 TRUMBULL TAX ITEM NO. 005916/WARD 06, AS TO NORTH 13 FEET OF LOT 40, ALL OF LOT 41 AND THE SOUTH 2 FEET OF LOT 42 OF PARCEL 8

PROPERTY ADDRESS: 3700 TRUMBULL TAX ITEM NO. 005917/WARD 06, AS TO NORTH 48 FEET OF LOT 42 OF PARCEL 8

PROPERTY ADDRESS: 3708 TRUMBULL TAX ITEM NO. 005918/WARD 06, AS TO LOT 43 OF PARCEL 8

SURVEY DATA

SITE AREA:
PARCEL 1: 7,985.60 SQ. FT. OR 0.183 ACRES (3713 LINCOLN)
PARCEL 2: 3,720.00 SQ. FT. OR 0.085 ACRES (3707 LINCOLN)
PARCEL 3: 6,200.00 SQ. FT. OR 0.142 ACRES (3701 LINCOLN)
PARCEL 4: 6,200.00 SQ. FT. OR 0.142 ACRES (3697 LINCOLN)
PARCEL 5: 6,200.00 SQ. FT. OR 0.142 ACRES (3689 LINCOLN)
PARCEL 6: 6,650.00 SQ. FT. OR 0.153 ACRES (3915 LINCOLN)
PARCEL 7: 6,650.00 SQ. FT. OR 0.153 ACRES (3907 LINCOLN)
PARCEL 8: 69,192.00 SQ. FT. OR 1,588 ACRES (TRUMBULL)

ZONED:
R3-H, LOW DENSITY RESIDENTIAL DISTRICT - HISTORIC DISTRICT
NO PARKING SPACES

A SURVEYOR CANNOT MAKE A CERTIFICATION ON THE BASIS OF AN INTERPRETATION OR OPINION OF ANOTHER PARTY. A ZONING ENDORSEMENT LETTER SHOULD BE OBTAINED FROM THE CITY OF DETROIT TO INSURE CONFORMITY AS WELL AS MAKE A FINAL DETERMINATION OF THE REQUIRED BUILDING SETBACK REQUIREMENTS.

CERTIFICATE OF SURVEY

CERTIFIED TO:
-3701 LINCOLN LLC, A MICHIGAN LIMITED LIABILITY COMPANY - THE DETROIT LAND BANK AUTHORITY, AS TO PARCELS 1, 2, 3, 4, 5, 6 AND 7
-CIVIC TRUMBULL HOLDINGS, LLC, A MICHIGAN LIMITED LIABILITY COMPANY, AS TO PARCEL 8
-FIRST AMERICAN TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDE ITEMS 1, 2, 3, 4, 6(a), 6(b), 7(c), 7(d)(1), 7(c), 8, 9, 11(c), 13, 14, 16, 17, 18 AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON AUGUST 28, 2020.



ALTA SURVEY NOTES

THERE IS NO VISIBLE EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS.

THERE IS NO PROPOSED CHANGES IN STREET RIGHT OF WAY LINES AND THERE IS NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIR.

THERE IS NO VISIBLE EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.

THERE IS NO VISIBLE EVIDENCE OF ANY WETLAND AREAS.

LOCATION OF UTILITIES EXISTING ON OR SERVING THE PROPERTY AS DETERMINED BY: OBSERVED EVIDENCE OR EVIDENCE FROM PLANS REQUESTED BY THE SURVEYOR AND OBTAINED FROM UTILITY COMPANIES.

THE SUBJECT PROPERTY HAS ACCESS TO TRUMBULL STREET, LINCOLN STREET, SELDEN STREET AND BRANNARD STREET, ALL BEING PUBLICLY DEDICATED ROADS.

DATUM NOTE

ALL ELEVATIONS SHOWN HEREON ARE ON THE CITY OF DETROIT DATUM. AN ELEVATION OF 479.332 MUST BE ADDED TO THE CITY OF DETROIT DATUM TO ACHIEVE THE N.A.V.D. 88 DATUM (CORS).

BASIS OF BEARING NOTE

ALL BEARINGS ARE IN RELATION TO THE PREVIOUSLY ESTABLISHED EASTERLY RIGHT-OF-WAY LINE OF TRUMBULL AVENUE (PLATTED AS NINTH AVENUE) OF HODGES BROS. SUBDIVISION AS RECORDED IN LIBER 1 OF PLATS, PAGE 308, WAYNE COUNTY RECORDS. (N.22°47'W)

FLOOD HAZARD NOTE

THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY; THE PROPERTY LIES WITHIN ZONE X OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAP NO. 2018X0202BE BEARING AN EFFECTIVE DATE OF 2-2-2012.

MISS DIG / UTILITY DISCLAIMER NOTE

A MISS DIG TICKET NUMBER A002310506, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY, DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON SEPTEMBER 17, 2020. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISH PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

POWER LINE NOTE

THE MEASUREMENTS WERE TAKEN ON AUG. 28, 2020. PLEASE NOTE THE AMOUNT OF SAG IN THE LINE IS NOT A CONSTANT. POLE MOVEMENT, WIND, ICE AND CONDUCTOR LOAD MAY EFFECT THE AMOUNT OF SAG IN THE LINE. CLIENT SHALL CONSULT WITH THE UTILITY COMPANY TO INSURE PROPER SAFETY CLEARANCES ARE BEING MAINTAINED TO ANY STRUCTURE.

TOPOGRAPHIC SURVEY NOTES

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.
UTILTY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

DTE DISCLAIMER NOTE

PLEASE NOTE THAT DTE HAS NEW REGULATIONS THAT MAY IMPACT DEVELOPMENT OUTSIDE THEIR EASEMENT OR THE PUBLIC RIGHT OF WAY. CLIENT SHALL CONTACT DTE TO DETERMINE THE "NEW STRUCTURES AND POWER LINE" REQUIREMENTS AS THEY MAY APPLY TO ANY FUTURE BUILDING OR RENOVATION OF A STRUCTURE. DTE ENERGY CAN BE CONTACTED AT 800-477-4747

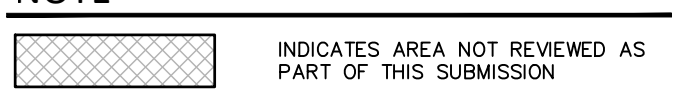
COVID-19 PANDEMIC CONDITION

DUE TO THE UNPRECEDENTED COVID-19 PANDEMIC CONDITION AND RESTRICTIONS THE STANDARD DATA WHICH IS OBTAINED FROM MISS DIG/CALL 811 HAS BEEN RESTRICTED TO CRITICAL INFRASTRUCTURE ONLY. NFE WILL MAKE EVERY EFFORT TO OBTAIN CURRENT REFERENCE DATA FROM THE GOVERNING AGENCIES, HOWEVER, THIS DATA MAY BE PARTIAL OR INCOMPLETE. NFE WILL ISSUE THIS SURVEY WITH THE BEST AVAILABLE INFORMATION FROM OUR FIELD SURVEY AND OTHER AVAILABLE REFERENCE DATA. NFE WILL NOT BE RESPONSIBLE FOR INCOMPLETE OR PARTIAL DATA PROVIDED BY THIRD PARTY FACILITY OWNERS.

ALL SURVEYS BEING UTILIZED FOR DESIGN PURPOSES BY OTHERS; IT WILL BE THE CLIENT'S OBLIGATION TO UPDATE THE UTILITY INFORMATION AS IT BECOMES AVAILABLE. NFE IS NOT RESPONSIBLE FOR BURIED UTILITIES FOR WHICH PLANS WERE NOT FURNISHED OR CANNOT BE OBSERVED IN THE FIELD.

Tree #	Botanical Name	Common Name	Dia.	Type	Other Dia.	Condition	Comments
2501	Picea pungens	Colorado Blue Spruce	13			Fair	Canopy Die-Back, Competition
2502	Picea pungens	Colorado Blue Spruce	14			Fair	Canopy Die-Back, Competition
2503	Picea pungens	Colorado Blue Spruce	16			Fair	Canopy Die-Back, Competition
2504	Pinus strobus	Eastern White Pine	13			Good	
2505	Pinus strobus	Eastern White Pine	11			Fair	Winding Lead, Competition
2506	Pinus strobus	Eastern White Pine	10			Good	
2507	Picea pungens	Colorado Blue Spruce	18			Fair	Minor Lean, Canopy Die-Back, Competition
2508	Picea abies	Norway Spruce	18			Good	
2509	Salix amygdaloides	Peachleaf Willow	11	Twin	10	Fair	Twin Leans, Competing Leads, Competition
2510	Populus deltoides	Eastern Cottonwood	18			Poor	Rotting Canker, Minor Lean, Competition
2511	Ulmus rubra	Siberian Elm	7			Poor	Competition, Bent Lead, Canopy Die-Back, Disease
2512	Morus alba	White Mulberry	16	Multiple Stemmed	16, 13, 13, 13, 13, 12	Poor	Rotting Seams, Dead and Dying Leads, Canopy Die-Back, Competition, Large Rotting Cankers
2513	Ulmus pumila	Siberian Elm	8			Poor	Competition, Major Canopy Die-Back, Lacks Upper Canopy
2514	Ulmus rubra	Slippery Elm	6			Fair	Winding Lead, Canopy Die-Back, Competition
2515	Ulmus pumila	Siberian Elm	14			Fair	Competition, Missing Lead, Canopy Die-Back
2516	Ulmus rubra	Slippery Elm	10			Fair	Bent Leads, Competing Leads, Competition, Canopy Die-Back
2517	Ulmus pumila	Siberian Elm	8			Poor	Competition, Lacks Upper Canopy, Canopy Die-Back
2518	Ulmus pumila	Siberian Elm	7			Poor	Canopy Die-Back, Competition
2519	Ulmus pumila	Siberian Elm	9			Fair	Bent Lead, Canopy Die-Back, Competition
2520	Ulmus rubra	Slippery Elm	7			Fair	Bent Lead, Canopy Die-Back, Competition, Minor Lean
2521	Ulmus rubra	Slippery Elm	6	Multiple Stemmed	6, 5, 5, 4, 3	Fair	Competing Leads, Minor Leans, Competition, Dead Tree Leaning On It
2522	Morus alba	White Mulberry	14	Twin	14	Fair	Canopy Die-Back, Competition
2523	Fraxinus pennsylvanica	Green Ash	7	Multiple Stemmed	7 (Dead), 6, 5, 5 (Dead)	Poor	Competing Leads, Insect Activity, Dead Lead, Canopy Die-Back
2524	Ulmus pumila	Siberian Elm	25			Fair	Canopy Die-Back, Insect Activity, Insectulation
2525	Ulmus pumila	Siberian Elm	12			Fair	Canopy Die-Back, Competition, Minor Lean
2526	Ulmus pumila	Siberian Elm	7	Twin	5	Fair	Competition, Canopy Die-Back, Competing Leads
2527	Ulmus pumila	Siberian Elm	9			Fair	Canopy Die-Back, Competition
2528	Acer negundo	Boxelder Maple	21	Twin	12	Fair	Rotting Canker At Base, Competing Leads, Minor Leans, Canopy Die-Back, Competition
2529	Ulmus rubra	Slippery Elm	9			Fair	Canopy Die-Back, Competition
2530	Ulmus rubra	Slippery Elm	9	Twin	7	Fair	Rotting Canker At Base, Competing Leads, Competition
2531	Ailanthus altissima	Tree Of Heaven	13			Fair	Canopy Die-Back, Competition
2532	Ulmus pumila	Siberian Elm	24			Poor	Major Canopy Die-Back, Minor Lean
2533	Ailanthus altissima	Tree Of Heaven	6			Fair	Winding Lead, Competition
2534	Ulmus pumila	Siberian Elm	15			Fair	Minor Lean, Competing Leads, Competition, Canopy Die-Back
2535	Catalpa speciosa	Northern Catalpa	7	Twin	4	Fair	Burl At Base, Poor Seaming, Competition, Canopy Die-Back
2536	Ulmus pumila	Siberian Elm	7	Multiple Stemmed	4, 2	Poor	A-Typical Growth Structure, Poor Seaming, Competition, Canopy Die-Back
2537	Ulmus pumila	Siberian Elm	10	Multiple Stemmed	8, 7, 3	Fair	Poor Seaming, Canopy Die-Back, Competition, Competing Leads
2538	Ulmus americana	American Elm	8			Fair	Competition
2539	Prunus avium	Mazzard Cherry	10	Multiple Stemmed	9, 4	Fair	Competing Leads, Pruning, Competition, Canopy Die-Back
2540	Malus sp.	Domestic Apple	8			Fair	Canopy Die-Back, Minor Lean, Competition
2541	Acer negundo	Boxelder Maple	20	Multiple Stemmed	20	Poor	Major Canopy Die-Back, Minor Leans, Competing Leads
2542	Acer negundo	Boxelder Maple	20			Poor	Nearly Dead, Major Canopy Die-Back, Insect Activity, Missing Bark, Missing Lead
2543	Ulmus rubra	Slippery Elm	12	Multiple Stemmed	10, 4	Fair	Competing Leads, Minor Leans, Competition
2544	Ailanthus altissima	Tree Of Heaven	10			Poor	A-Typical Growth Structure, Canopy Die-Back, Canker, Competition
2545	Morus alba	White Mulberry	36	Twin	22	Fair	Competing Leads, Minor Leans
2546	Acer negundo	Boxelder Maple	8			Fair	Winding Lead, Canopy Die-Back, Competition
2547	Acer negundo	Boxelder Maple	10			Fair	Winding Lead, Canopy Die-Back, Competition
2548	Acer negundo	Boxelder Maple	6			Fair	Moderate Lean, Competition, Canopy Die-Back
2549	Acer negundo	Boxelder Maple	6	Twin	4	Poor	Heavy Lean, Canopy Die-Back, Competition, Poor Seaming
2550	Acer negundo	Boxelder Maple	8			Poor	Heavy Lean, Canopy Die-Back, Competition
2551	Acer negundo	Boxelder Maple	6			Fair	Heavy Lean, Canopy Die-Back, Competition
2552	Acer negundo	Boxelder Maple	12			Fair	Moderate Lean, Competition, Canopy Die-Back
2553	Acer negundo	Boxelder Maple	14	Twin	11	Fair	Competing Leads, Minor Leans, Competition, Canopy Die-Back
2554	Acer negundo	Boxelder Maple	8			Poor	Heavy Lean, Canopy Die-Back, Competition
2555	Prunus avium	Mazzard Cherry	9			Fair	Canopy Die-Back, Competition
2556	Ulmus americana	American Elm	7			Fair	Canopy Die-Back, Competition, Minor Lean
2557	Prunus avium	Mazzard Cherry	6			Poor	Moderate Lean, Competition, Canopy Die-Back
2558	Acer negundo	Boxelder Maple	9	Twin	4	Poor	Nearly Dead, Major Canopy Die-Back, Insect Activity, Missing Bark, Missing Lead
2559	Acer negundo	Boxelder Maple	16	Multiple Stemmed	10, 9	Fair	Moderate Leans, Competition, Poor Seaming, Overhangs Street ROW
2650	Prunus avium	Mazzard Cherry	9			Fair	Canopy Die-Back, Competition, Minor Lean
2651	Prunus avium	Mazzard Cherry	6			Fair	Winding Lead, Canopy Die-Back, Competition
2652	Acer negundo	Boxelder Maple	10			Poor	Moderate Lean, Competition, Major Canopy Die-Back
2653	Acer negundo	Boxelder Maple	18	Twin	15	Fair	Canopy Die-Back, Competition, Competing Leads, Minor Leans
2654	Acer negundo	Boxelder Maple	11	Multiple Stemmed	10, 4	Fair	Heavy Leans, Canopy Die-Back, Competition, Competing Leads
2655	Acer negundo	Boxelder Maple	10	Multiple Stemmed	7, 6, 6	Fair	Heavy Lean, Canopy Die-Back, Competition, Competing Leads
2656	Ulmus rubra	Slippery Elm	7			Poor	Heavy Lean, Canopy Die-Back, Competition, Bent Lead
2657	Ailanthus altissima	Tree Of Heaven	10	Twin	9	Fair	Poor Seaming, Competing Leads, Competition
2658	Ailanthus altissima	Tree Of Heaven	6			Poor	Winding Lead, Rotting Cankers, Competition, Canopy Die-Back
2659	Acer negundo	Boxelder Maple	7			Poor	Major Canopy Die-Back, Moderate Lean, Competition
2660	Ulmus rubra	Slippery Elm	6	Multiple Stemmed	5, 4, 3, 2	Fair	Competing Leads, Minor Leans, Competition
2661	Catalpa speciosa	Northern Catalpa	10	Twin	8	Poor	Heavy Lean, Canopy Die-Back, Rot At Base

NOTE



DEMOLITION NOTES

DEMOLITION OF SITE IMPROVEMENTS SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE PUBLIC AGENCY HAVING JURISDICTION OVER SAID DEMOLITION.

FOR ANY DEMOLITION WITHIN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR, AND SECURE, ALL NECESSARY PERMITS AND LICENSES FOR ALL SITE INSPECTIONS.

SITE DEMOLITION INCLUDES THE COMPLETE REMOVAL OF SITE IMPROVEMENTS AND OFF-SITE DISPOSAL. DEBRIS SHALL BE TRANSPORTED TO AN APPROPRIATE DISPOSAL FACILITY THAT IS LICENSED FOR THAT TYPE OF DEBRIS.

THE CONTRACTOR SHALL COORDINATE TRUCK ROUTES WITH THE MUNICIPALITY PRIOR TO COMMENCEMENT OF SITE DEMOLITION. ALL TRUCKS SHALL BE TARPED OR PROPERLY SECURED TO CONTAIN DEMOLITION DEBRIS PRIOR TO LEAVING SITE.

EXISTING ON-SITE UNDERGROUND UTILITIES AND BUILDING SERVICES HAVE BEEN INDICATED BASED UPON THE BEST AVAILABLE UTILITY RECORDS AND/OR ON-SITE INSPECTION. NO GUARANTEE IS MADE BY THE DESIGN ENGINEER, AS TO THE COMPLETENESS OR ACCURACY OF UTILITY DATA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF UTILITY INFORMATION (THE DESIGN ENGINEER MAKES NO WARRANTY NOR ASSUMES ANY LIABILITY AS TO THE COMPLETENESS AND/OR ACCURACY OF UTILITY DATA).

PRIOR TO THE REMOVAL OR ABANDONMENT OF ANY EXISTING UNDERGROUND UTILITY OR BUILDING SERVICE LINES CALLED FOR IN THE PLANS OR DISCOVERED DURING EXCAVATION, THE CONTRACTOR MUST DETERMINE IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE. IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE/ACTIVE, THE CONTRACTOR MUST TAKE ALL THE NECESSARY STEPS TO GUARANTEE THAT THE UTILITY LINE OR BUILDING SERVICE IS RECONNECTED WITHOUT AN INTERRUPTION IN SERVICE. THE RECONNECTION OF THE UTILITY LINE OR BUILDING SERVICE MUST BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE APPROPRIATE GOVERNMENTAL AGENCY OR PRIVATE UTILITY COMPANY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO SITE DEMOLITION.

* THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF THE SITE DEMOLITION.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE DETROIT EDISON COMPANY. REMOVAL OF DETROIT EDISON SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF DETROIT EDISON.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH CONSUMERS ENERGY/MICHCON. REMOVAL OF CONSUMERS ENERGY/ MICHCON GAS SERVICES SHALL BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF CONSUMERS ENERGY/MICHCON.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH AMERITECH. REMOVAL OF AMERITECH COMMUNICATION SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF AMERITECH.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE APPROPRIATE CABLE MEDIA COMPANY. REMOVAL OF CABLE SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE CABLE COMPANY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF PRIVATE UTILITY COMPANIES AND COORDINATE UTILITY SERVICE SHUT OFF/DISCONNECT, PRIOR TO DEMOLITION OF EXISTING STRUCTURES OR PROPERTIES.

ALL UTILITY METERS SHALL BE REMOVED BY THE APPROPRIATE UTILITY COMPANY.

ANY ON-SITE STORM SEWER FACILITIES LOCATED DURING DEMOLITION SHALL BE REMOVED AND BULK HEADED AT THE PROPERTY LINE IF INDICATED FOR REMOVAL ON THE PLANS.

PRIOR TO BUILDING DEMOLITION, ALL HAZARDOUS MATERIAL SHALL BE REMOVED BY OTHERS. THE DEMOLITION CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUSPICIOUS MATERIAL BE FOUND.

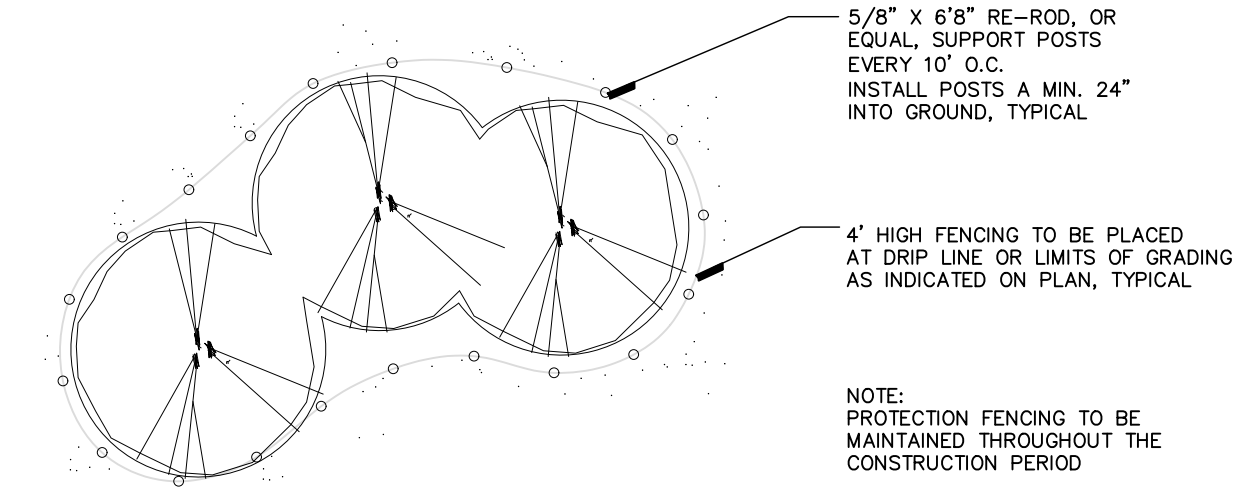
WATER SERVICES AND/OR STOP-BOX SHALL BE PRESERVED AND BULK HEADED AT THE PROPERTY LINE OR AS DIRECTED BY THE OWNER'S REPRESENTATION.

WHERE EXISTING BUILDINGS PLANNED FOR DEMOLITION FALL WITHIN PROPOSED BUILDING FOOT PRINTS, BASEMENT FLOOR SLABS, FOUNDATION WALLS AND FOOTINGS SHALL BE COMPLETELY REMOVED AND BACK FILLED WITH MDOOT CLASS II GRANULAR MATERIAL, AND BE MACHINE COMPACTED TO A MINIMUM OF 98% OF MATERIALS MAXIMUM DENSITY.

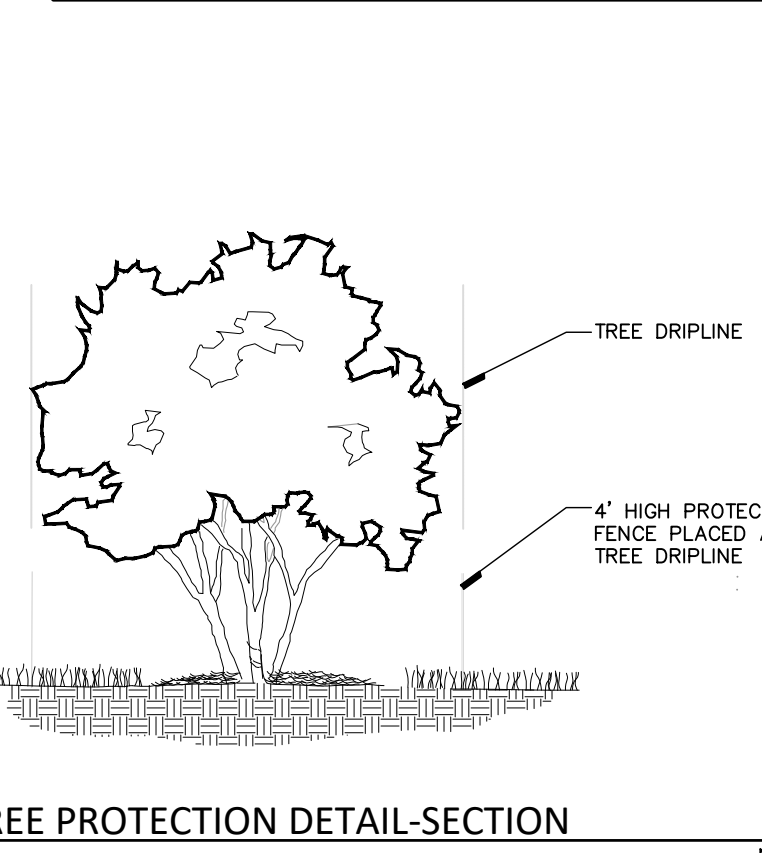
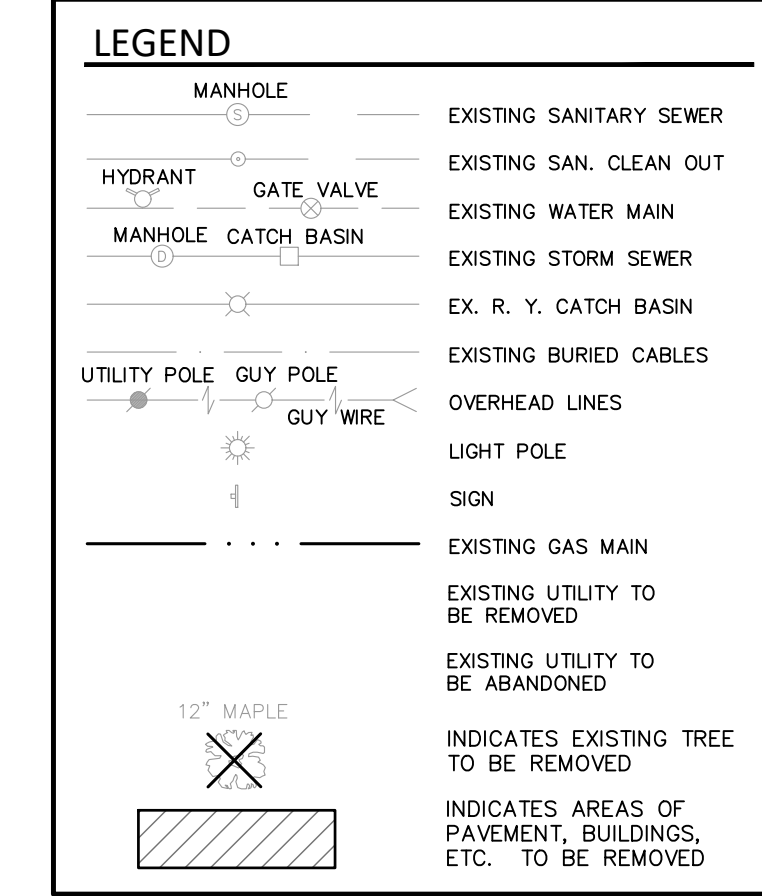
GENERAL TREE PROTECTION NOTES

- APPROVED TREE PROTECTION SHALL BE ERRECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- ALL UNDERSTORY VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PRESERVED.
- NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN THE DRIP LINE.
- WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE FENCING SHALL BE PLACED AT THE LIMITS OF GRADING LINE.
- DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY TREE.
- ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
- SWALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
- TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
- ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED WITH RIGIDLY STAKED FENCING.
- THE PARKING OF IDLE AND RUNNING EQUIPMENT SHALL BE PROHIBITED UNDER THE DRIP LINE OF PROTECTED TREES.
- THE STRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED.
- ALL TREES TO BE REMOVED SHALL BE CUT AWAY FROM TREES TO REMAIN.
- THE GRUBBING OF UNDERSTORY VEGETATION WITHIN CONSTRUCTION AREAS SHOULD BE CLEARED BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR MINIMALLY WITH A HYDRO-AXE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT PER ORDINANCE GUIDELINES, FOR THE DAMAGE OR REMOVAL OF ANY TREE DESIGNATED TO REMAIN.
- TREES TO BE REMOVED SHALL BE FIELD VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DIRECTED BY THE OWNER OR OWNERS REPRESENTATIVE.

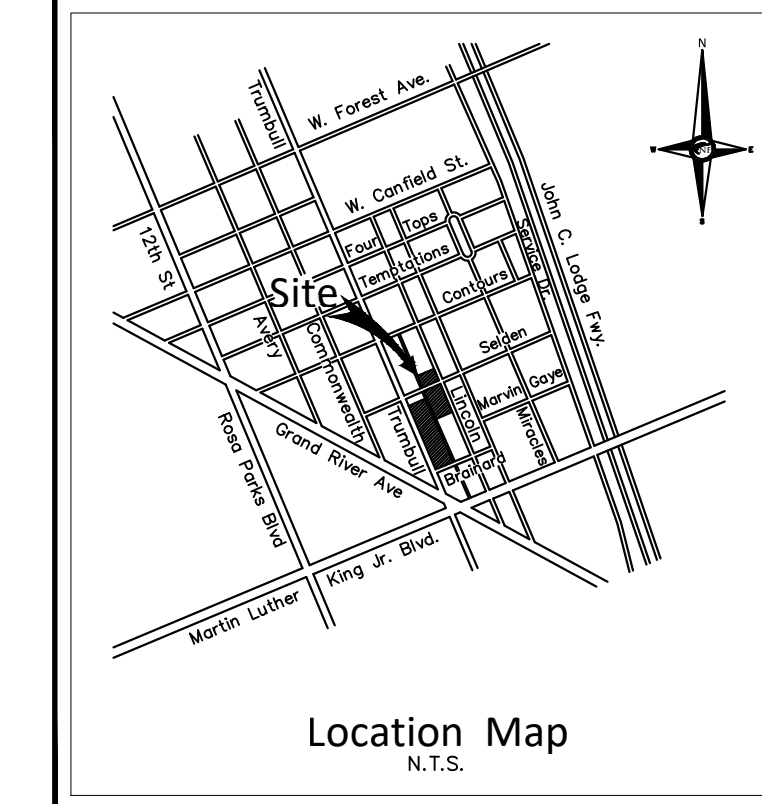
5/8" x 6" RE-ROD, OR EQUAL, SUPPORT POSTS EVERY 10' O.C. INSTALL POSTS A MIN. 24" INTO GROUND, TYPICAL



TREE PROTECTION DETAIL-PLAN



TREE PROTECTION DETAIL-SECTION



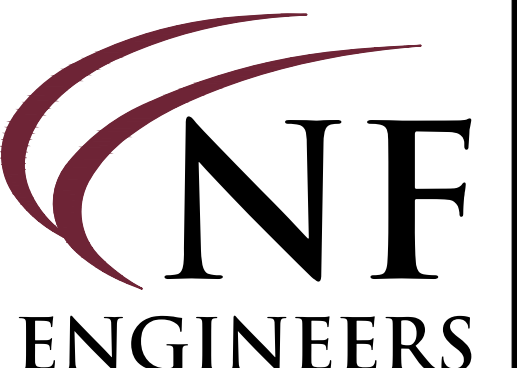
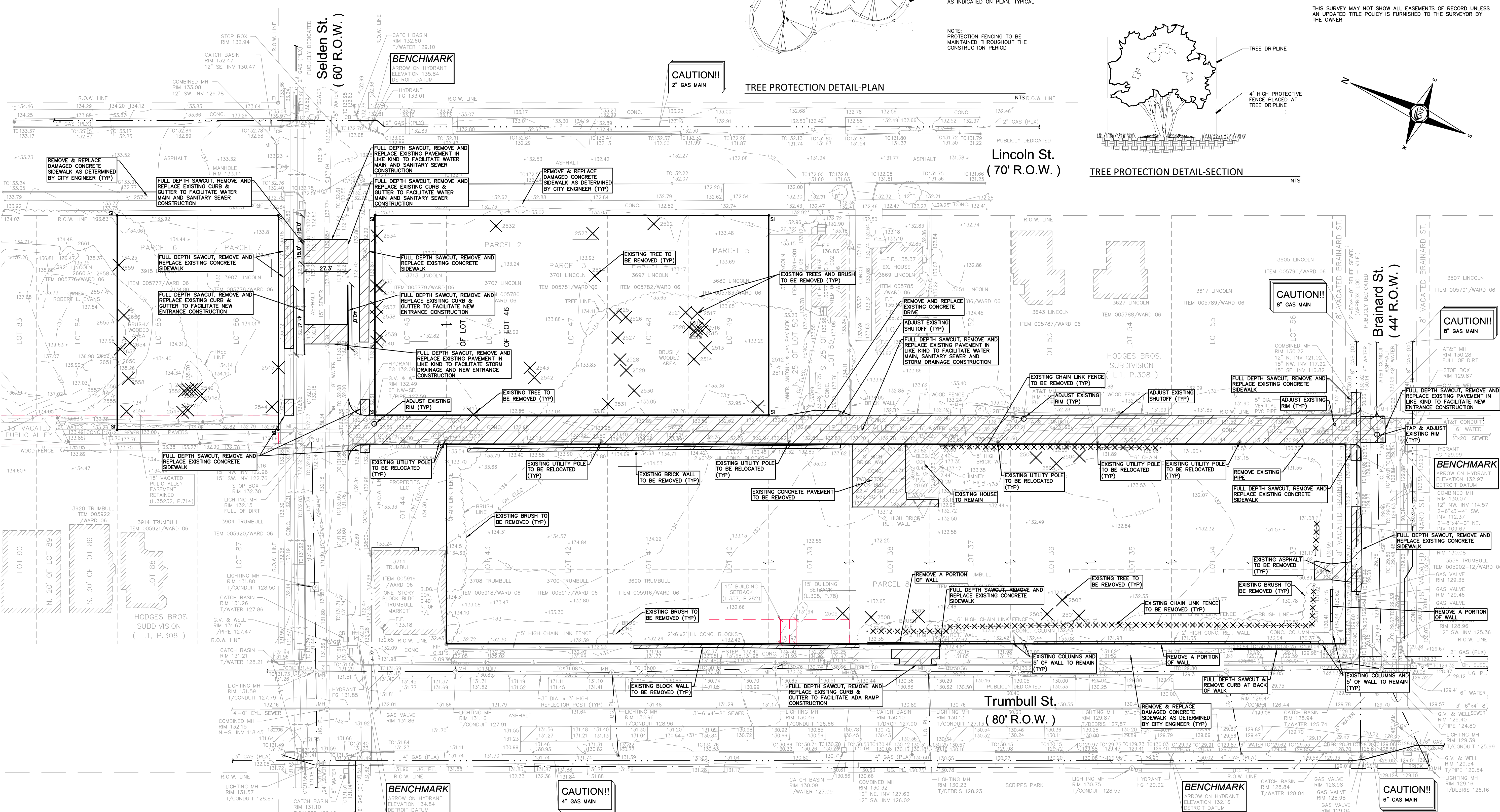
Location Map

TOPOGRAPHIC SURVEY NOTES

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

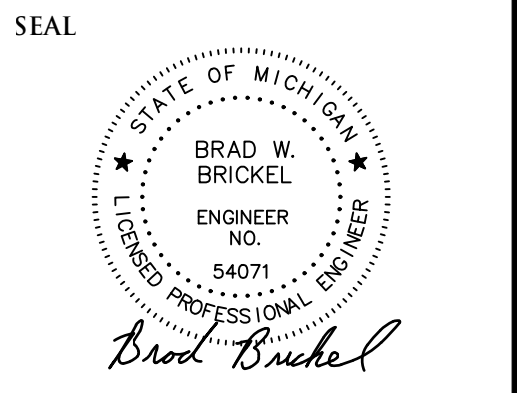
UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER



**CIVIL ENGINEERS
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PROJECT
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CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835
Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

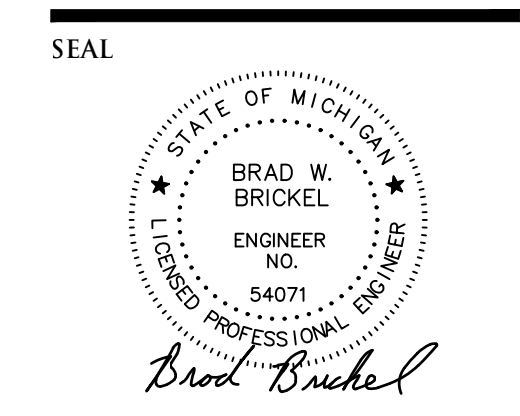
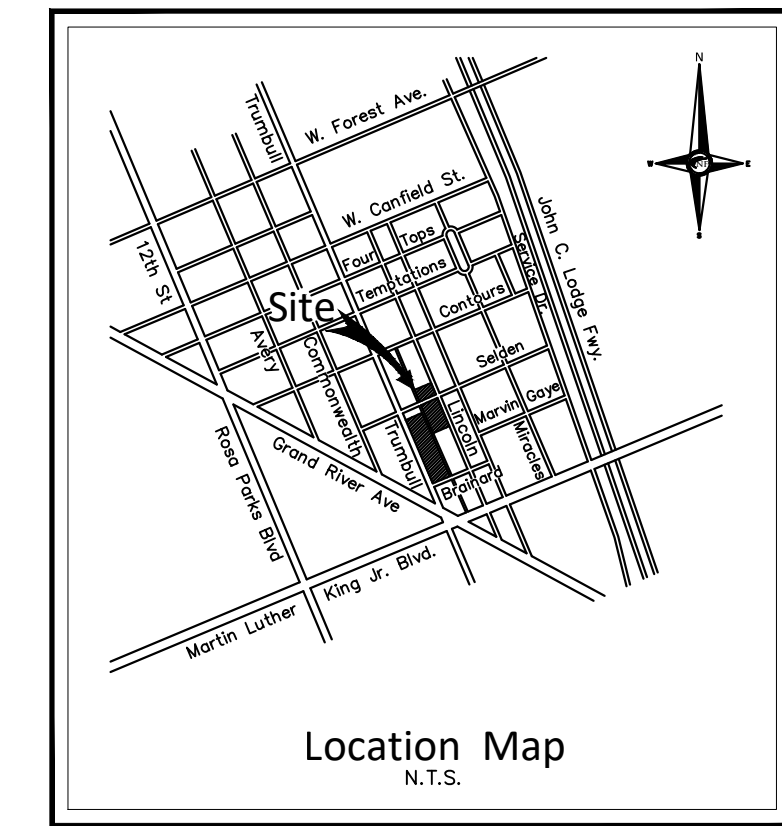
SHEET
Demolition Plan



DATE	ISSUED/REVISED
08-27-21	ISSUED FOR ENGINEERING REVIEW
09-20-21	REVISED GRADING
12-01-21	REVISED PER CITY
01-05-22	REVISED PER CITY

DRAWN BY:
J. Lawrey
DESIGNED BY:
B. Brickel
APPROVED BY:
B. Brickel
DATE:
September 10, 2020

SCALE: 1" = 30'
30 15 0 15 30 45
NFE JOB NO. L898 **SHEET NO.** C03



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Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
Foundation Exhibit Plan
(Parcel A)



DATE	ISSUED/REVISED
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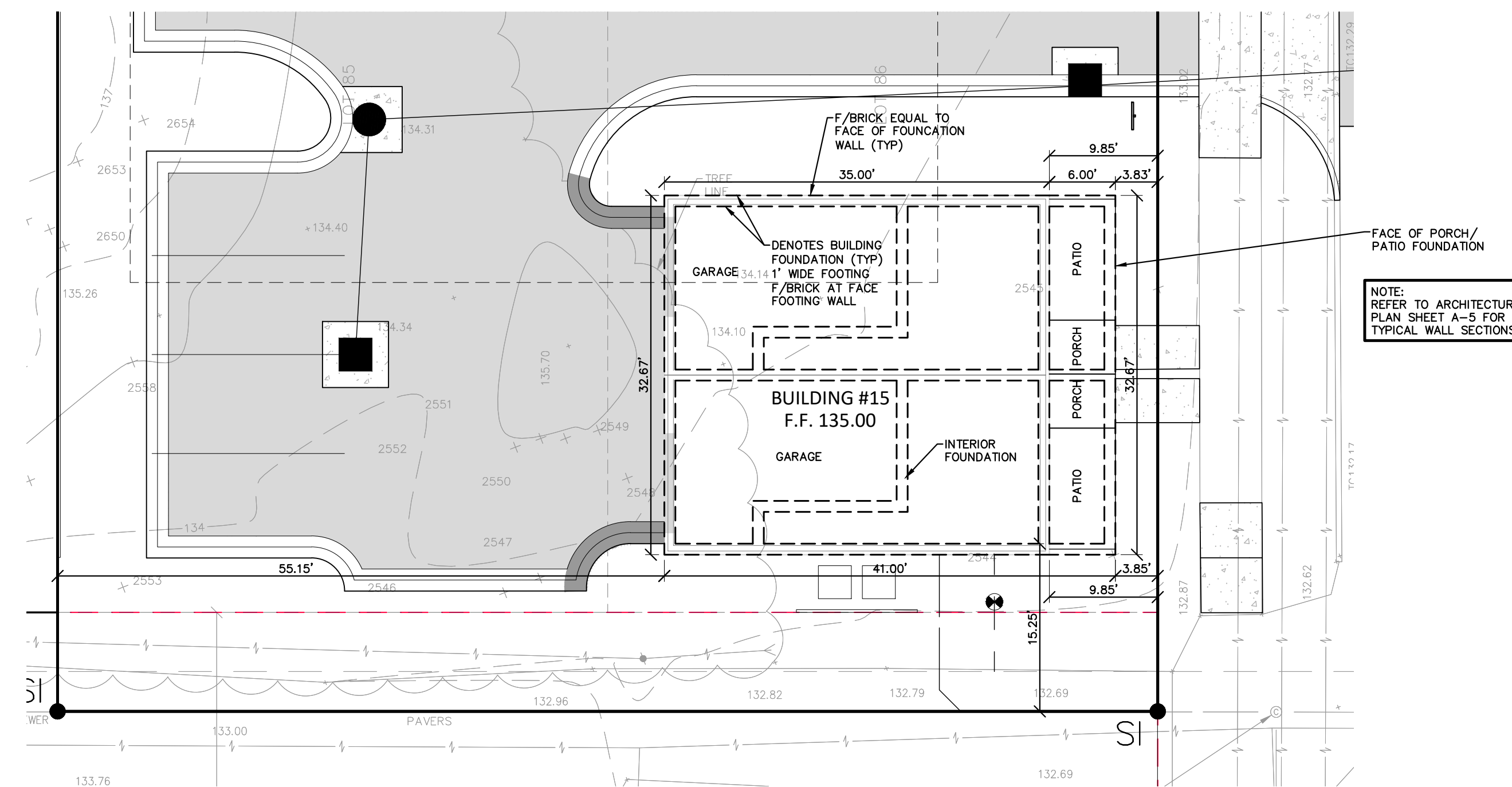
DRAWN BY:
J. Lawrey
DESIGNED BY:
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APPROVED BY:
B. Brickel

DATE:
September 10, 2020

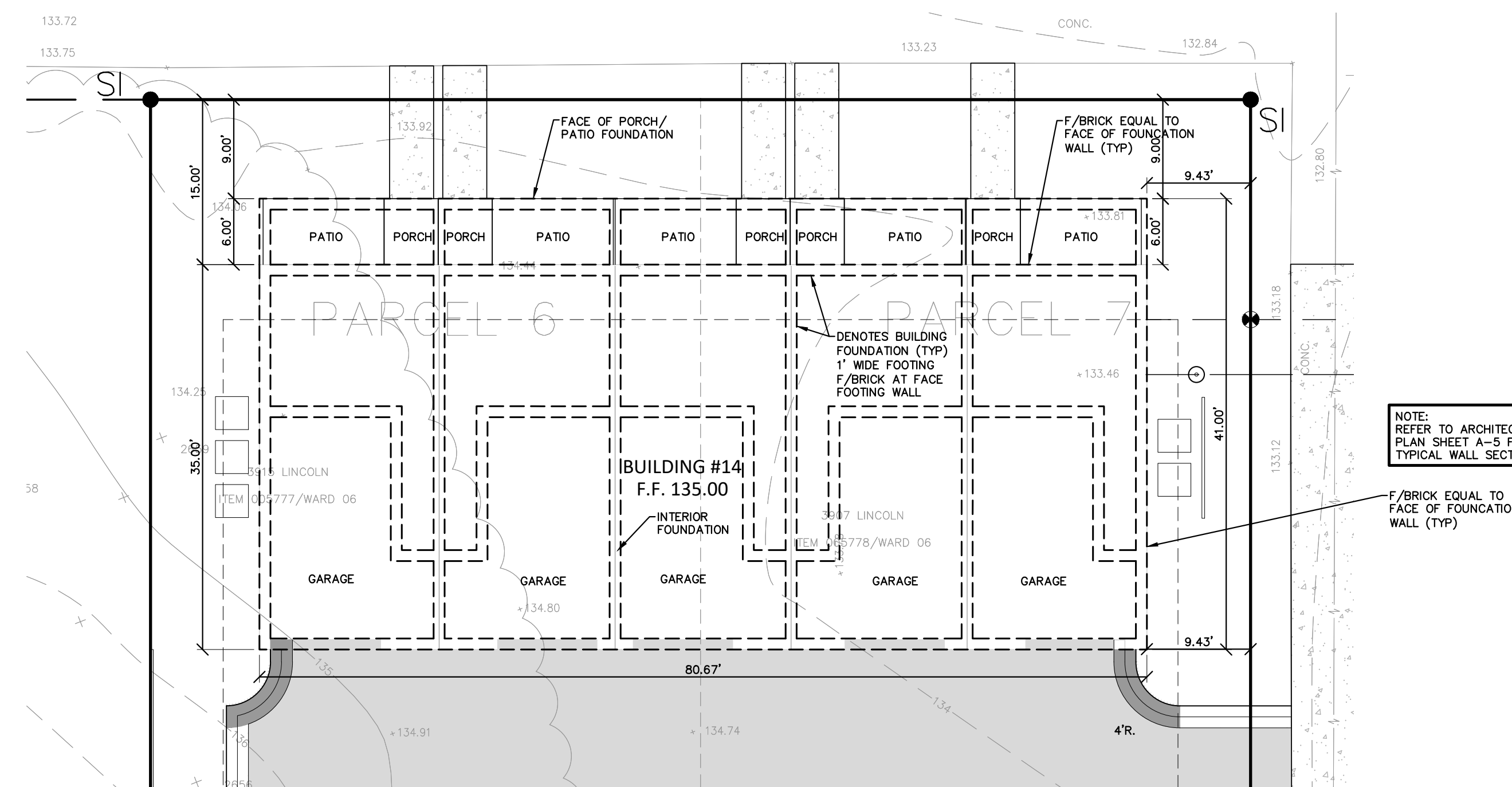
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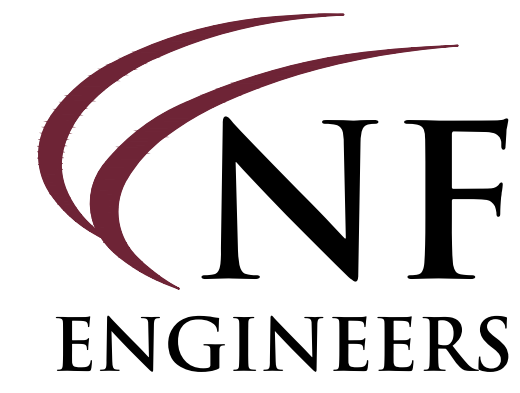
NFE JOB NO. SHEET NO.
L898 C04.1

BUILDING 15



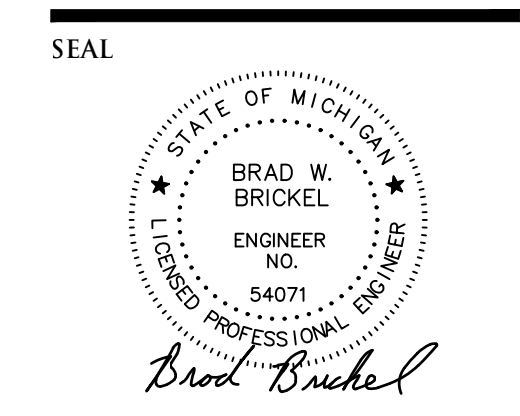
BUILDING 14





CIVIL ENGINEERS
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PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
Foundation Exhibit Plan
(Parcel B)



DATE	ISSUED/REVISED
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01-05-22	REVISED PER CITY

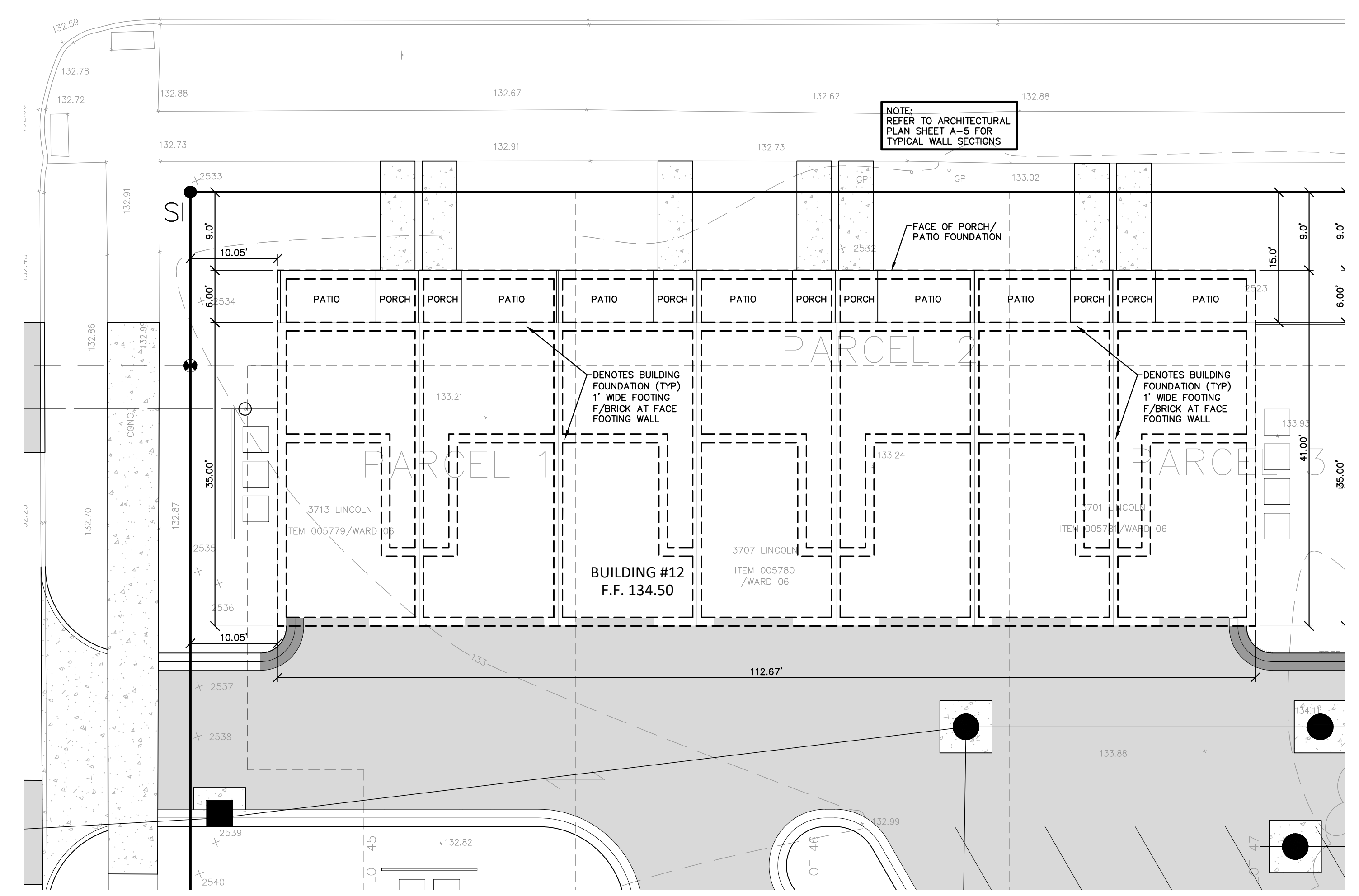
DRAWN BY:
J. Lawrey
DESIGNED BY:
B. Brickel
APPROVED BY:
B. Brickel

DATE:
September 10, 2020

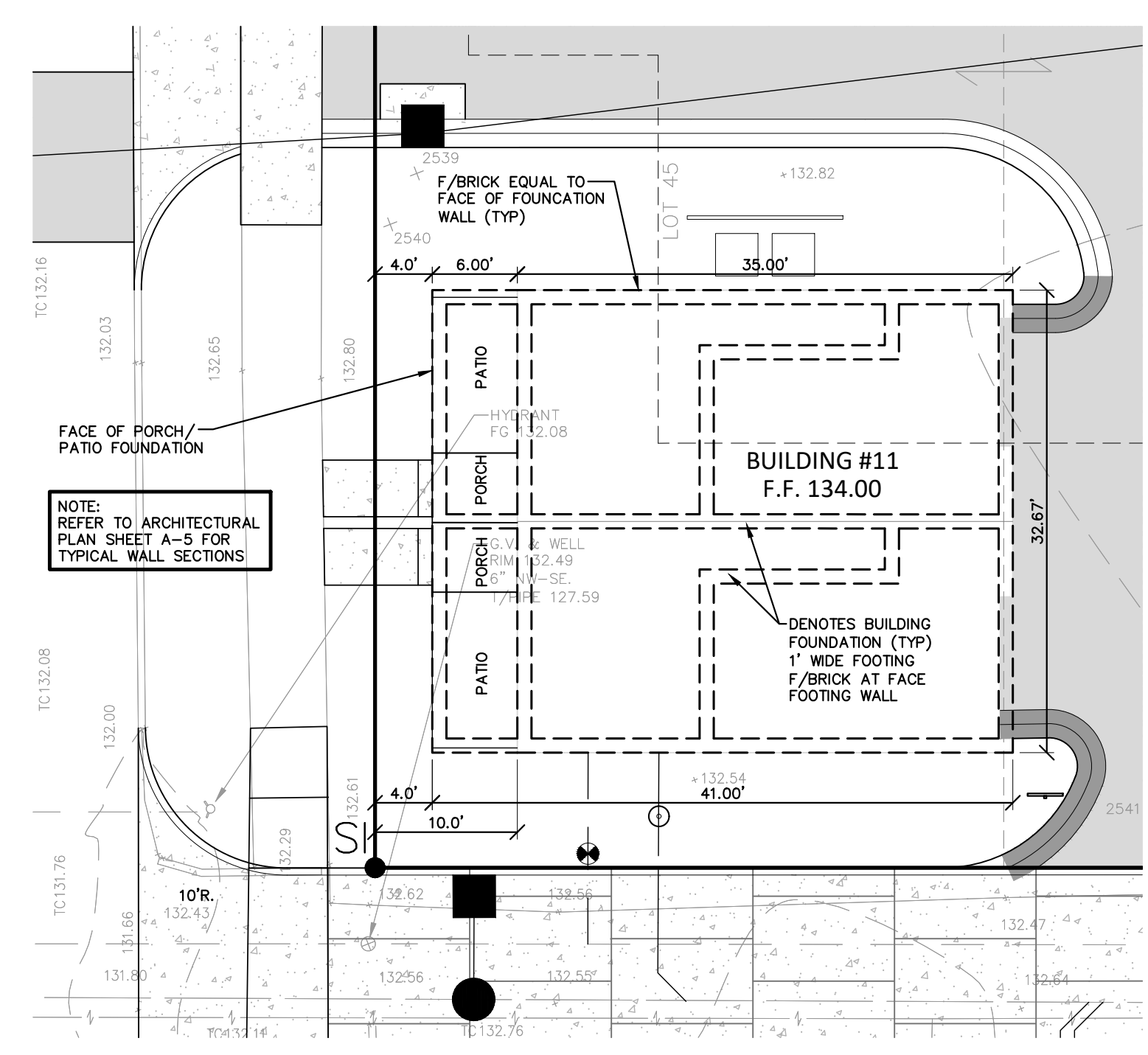
SCALE: 1" = 30'

NFE JOB NO. SHEET NO.
L898 C04.2

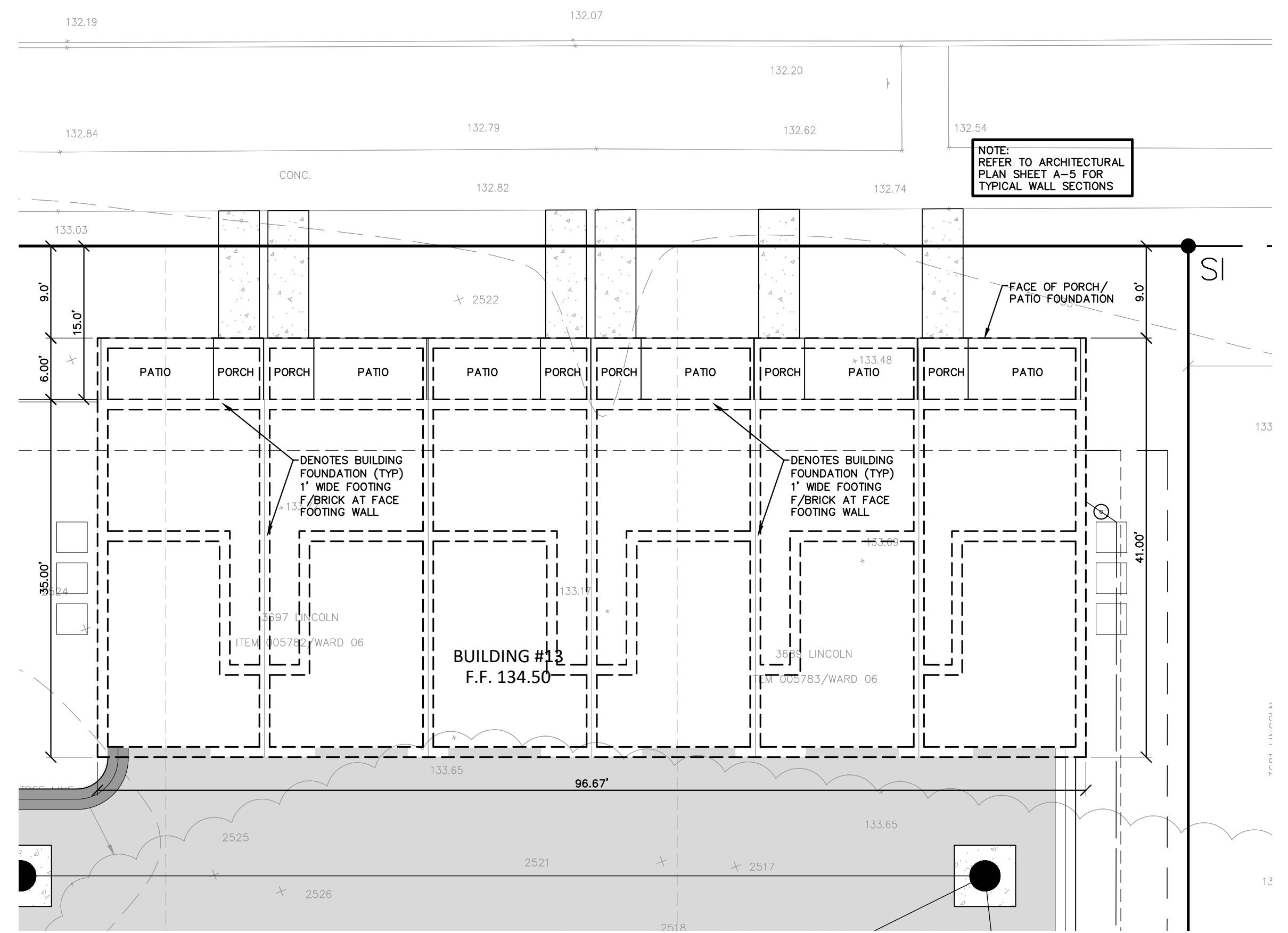
BUILDING 12

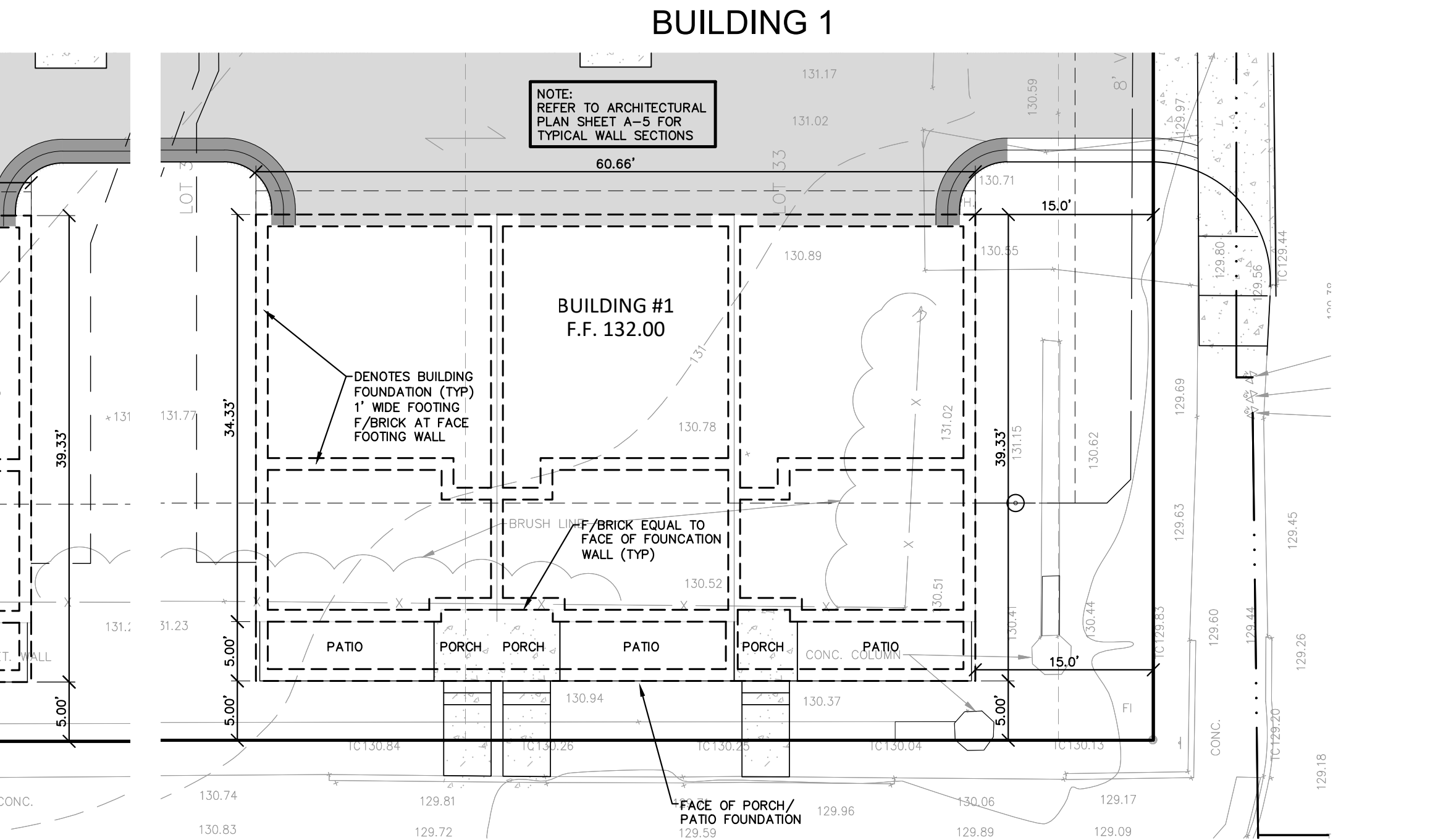
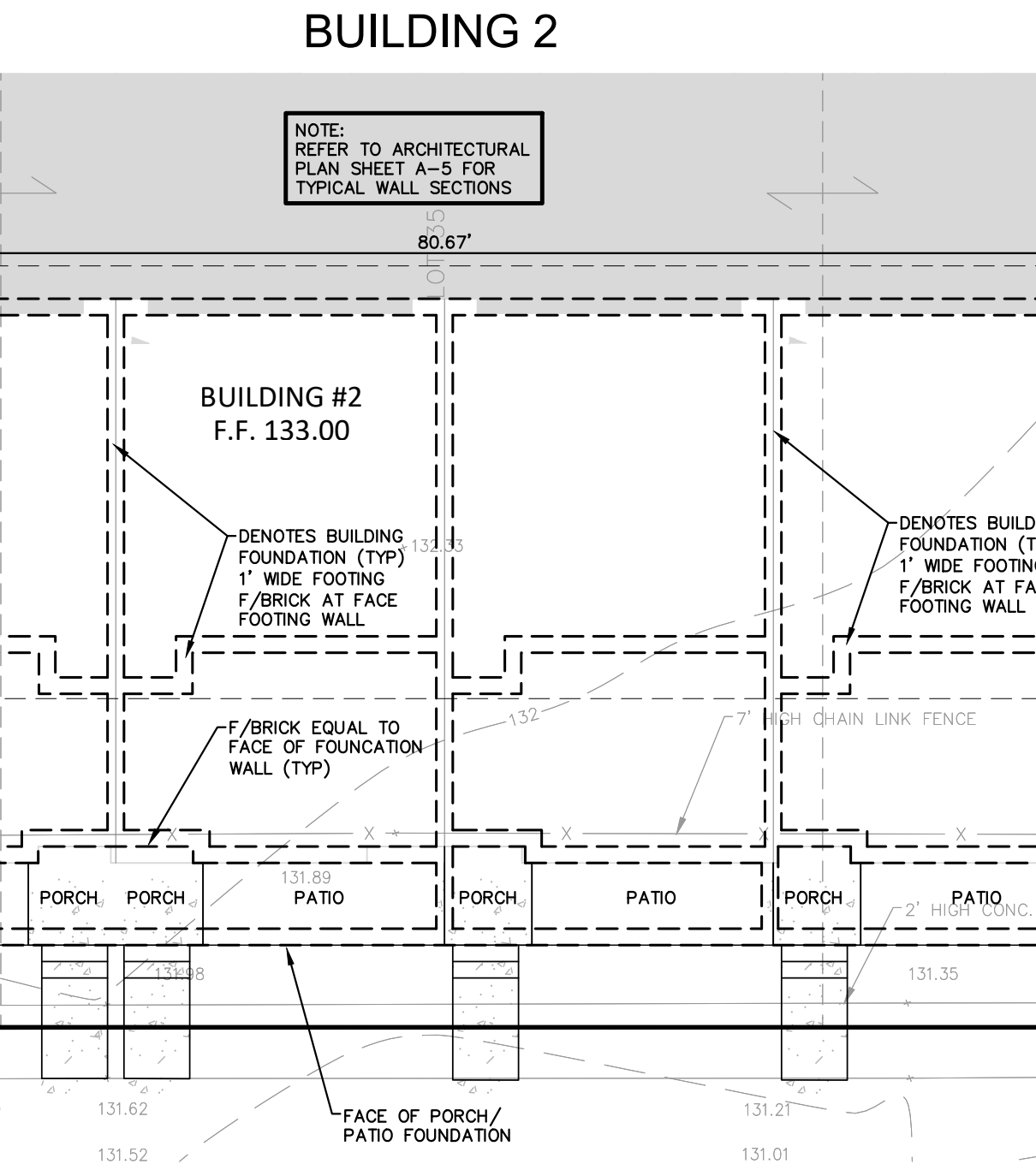
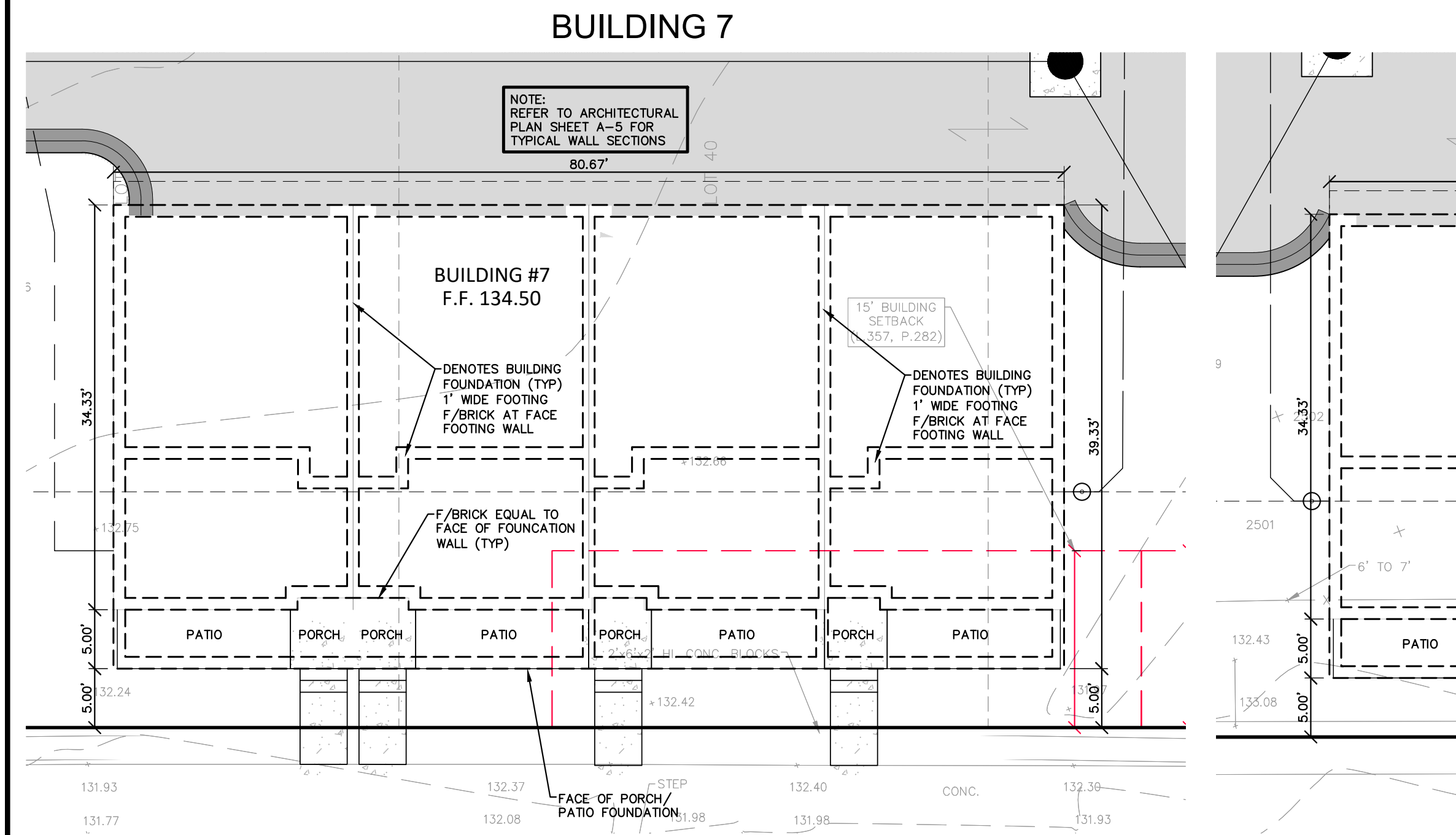
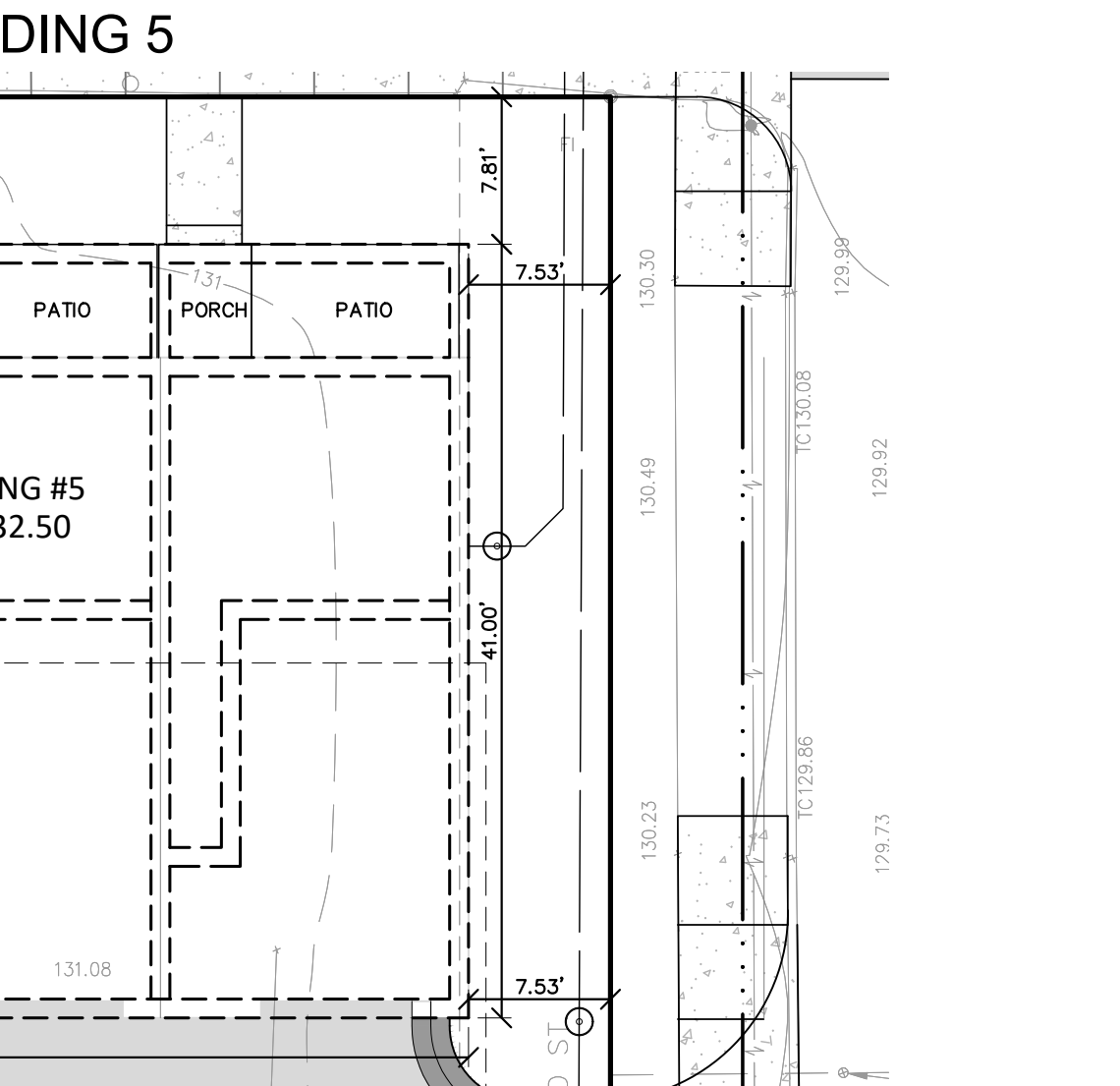
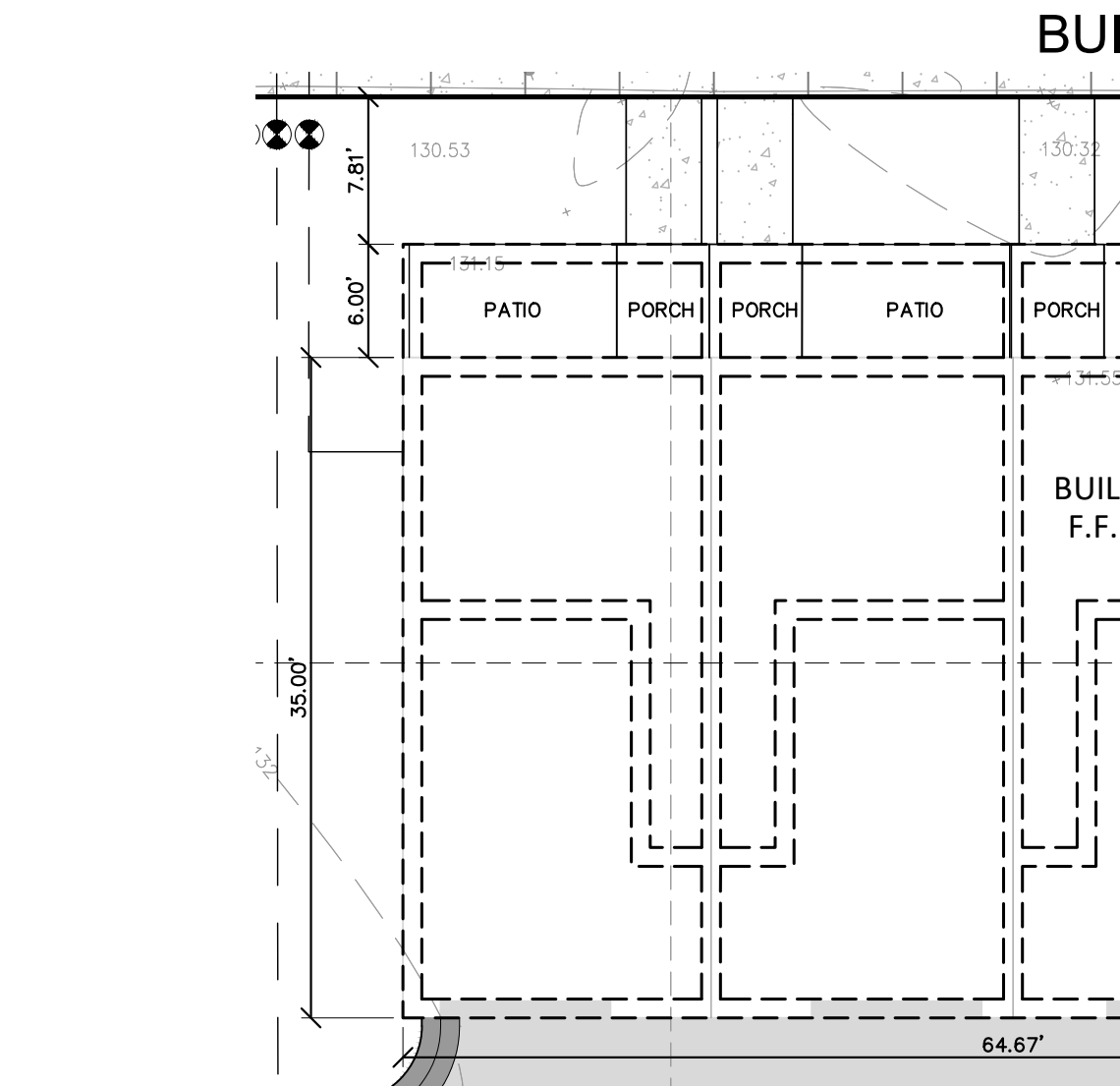
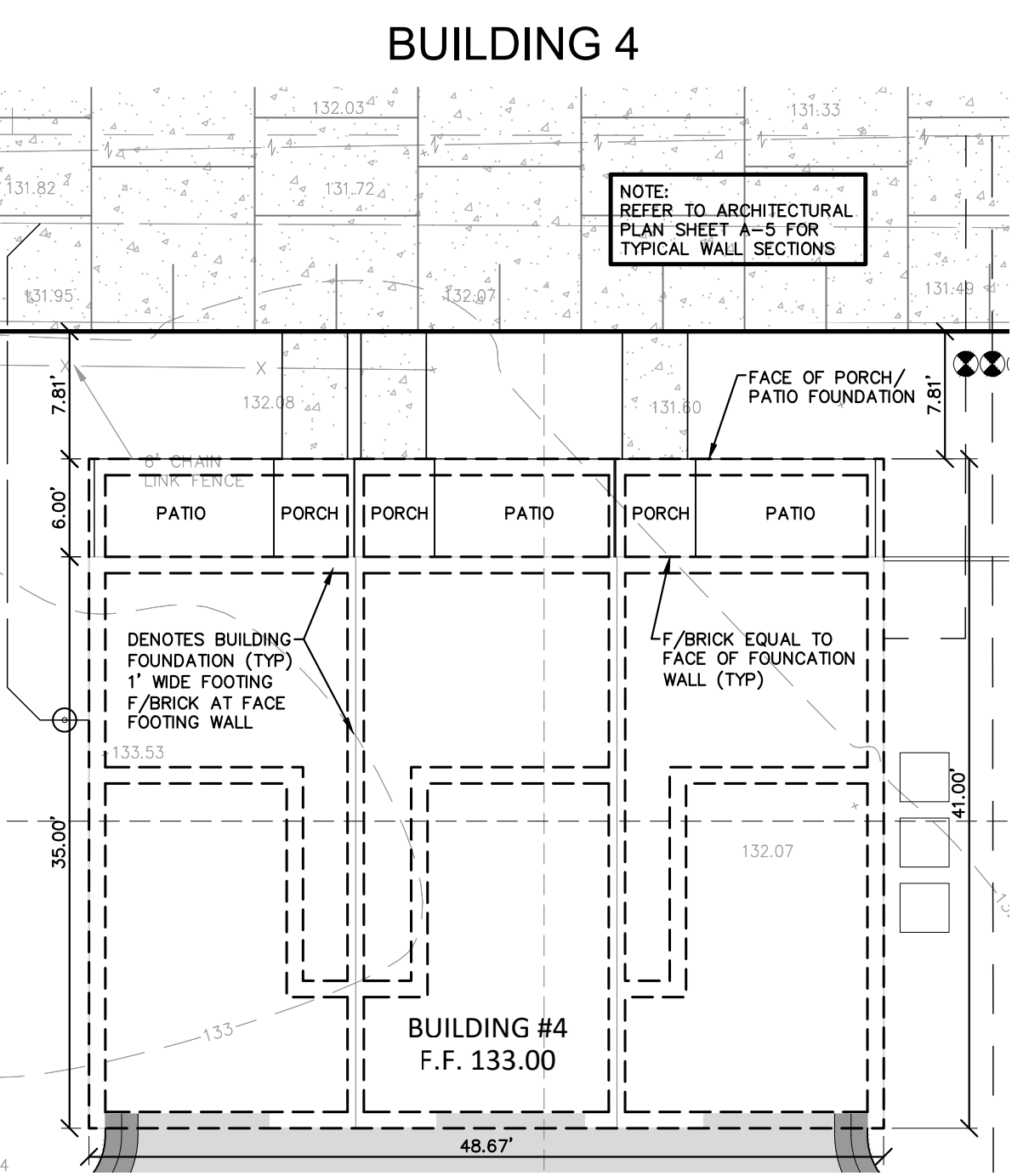
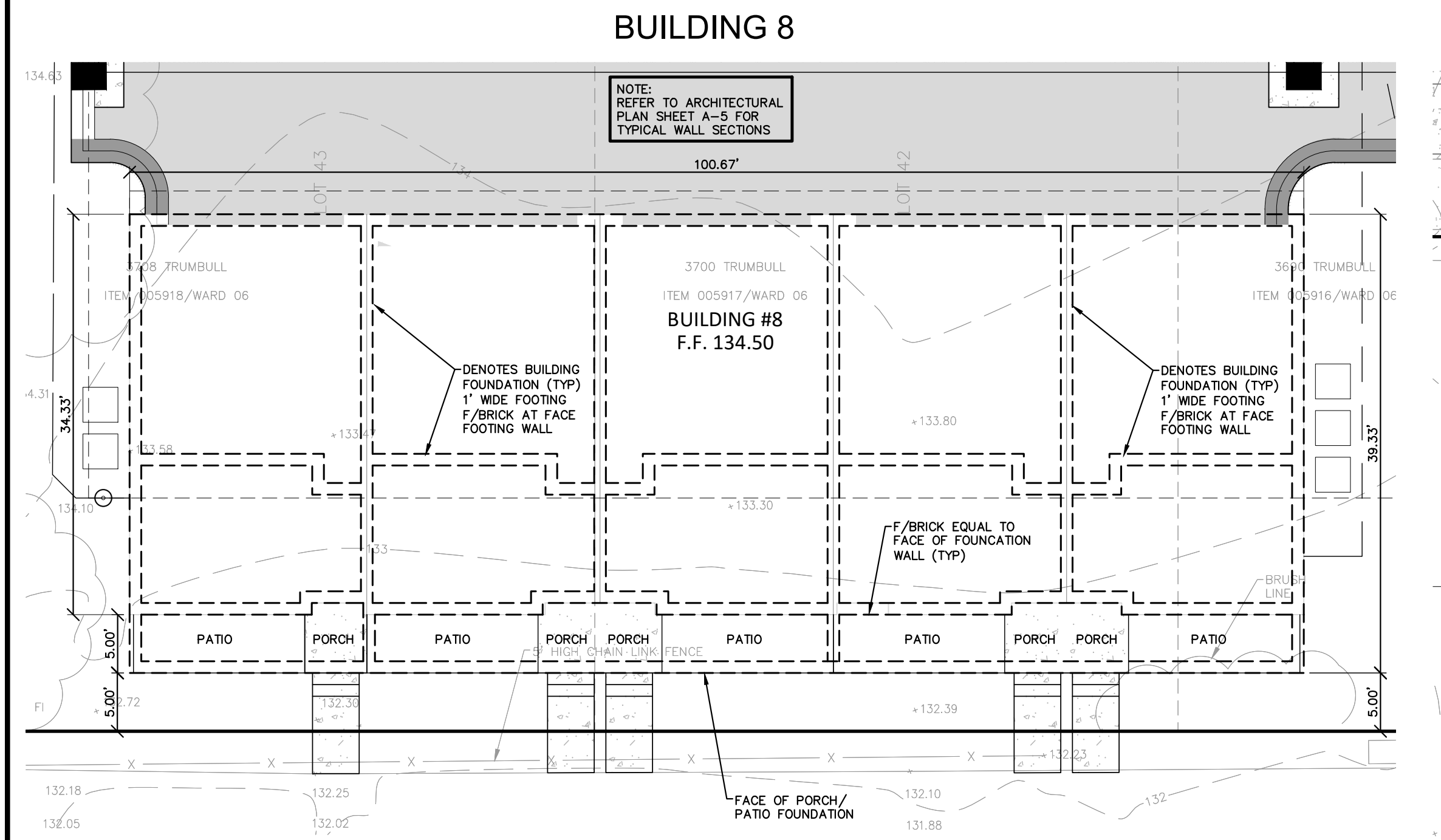
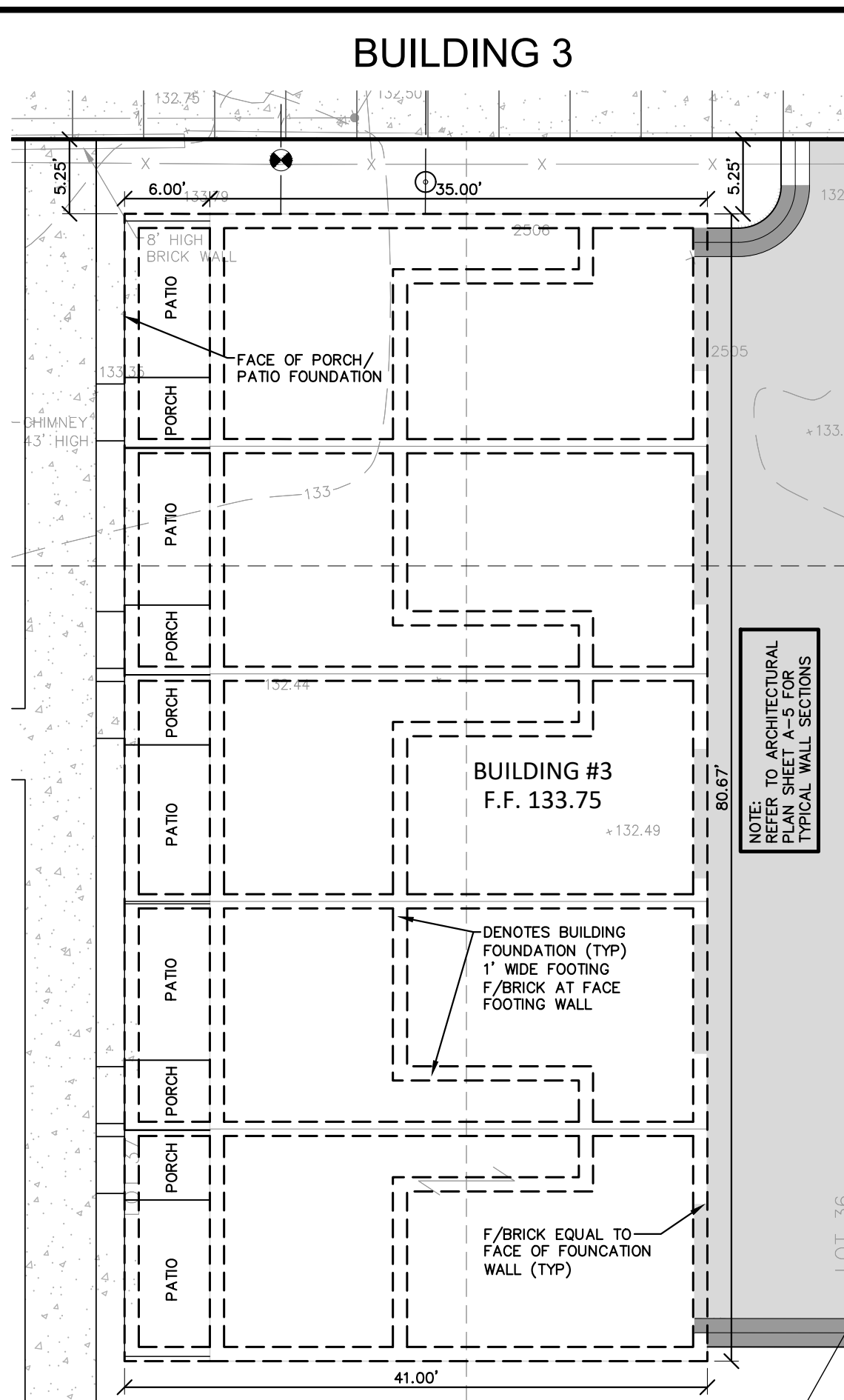
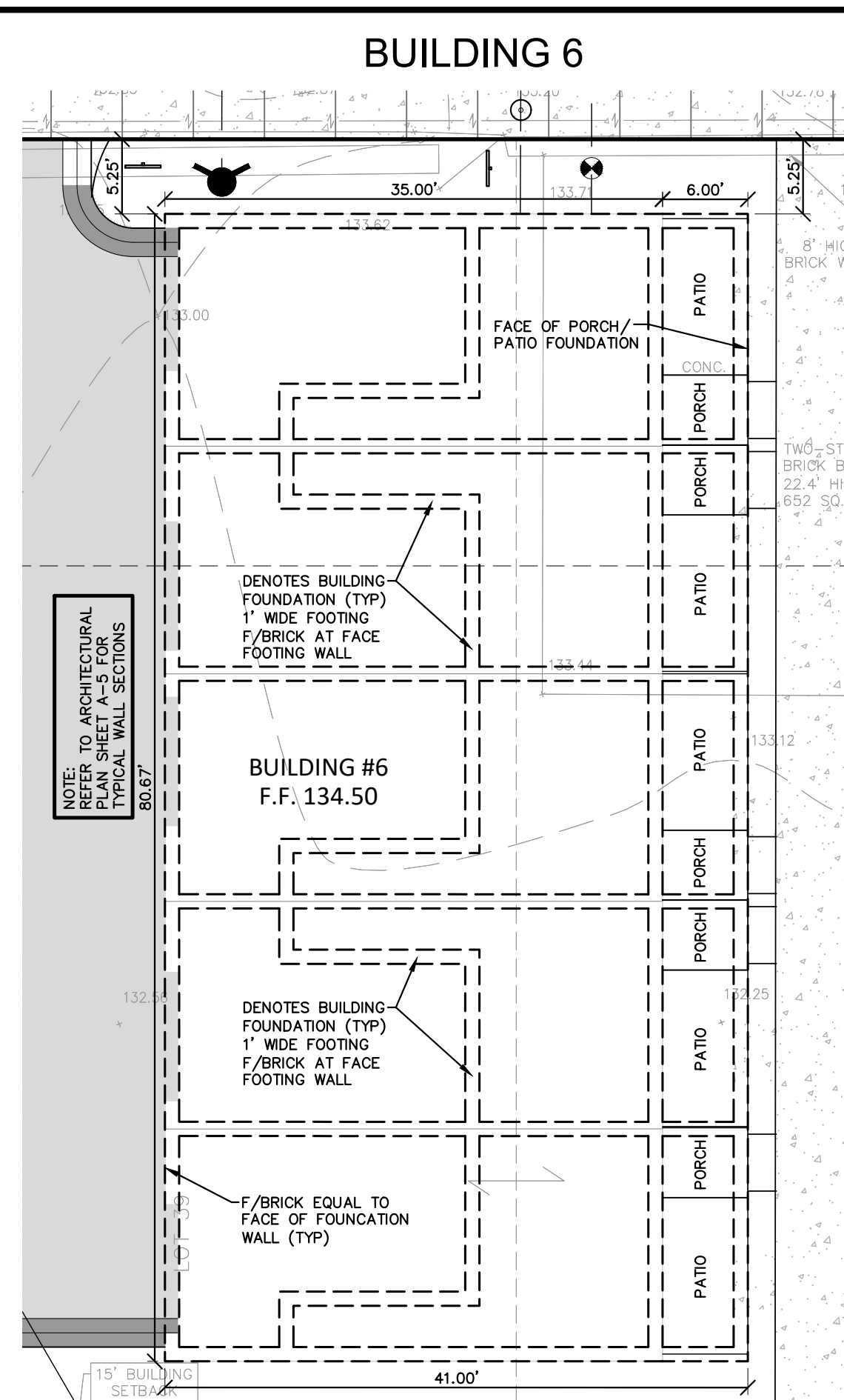
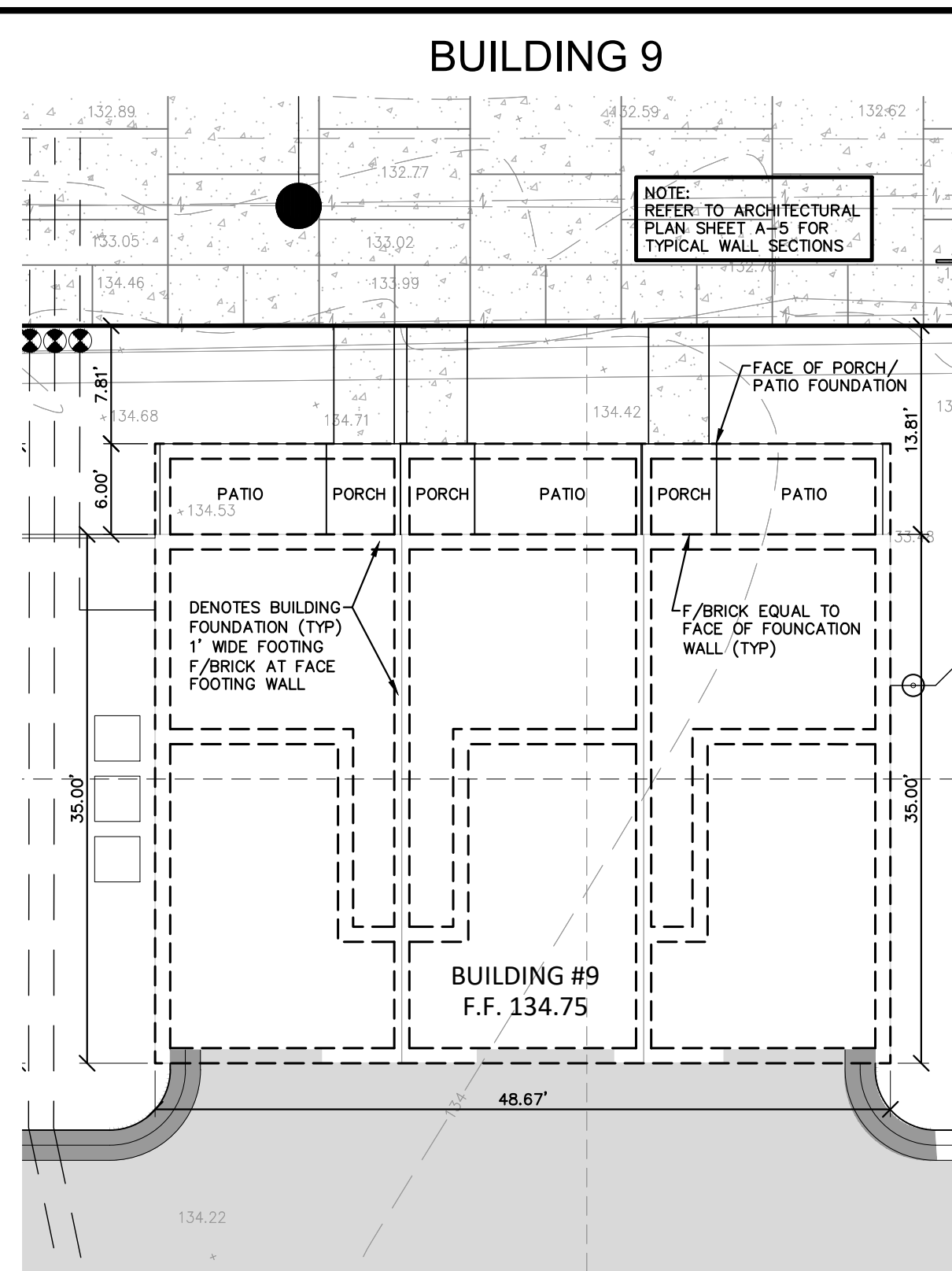
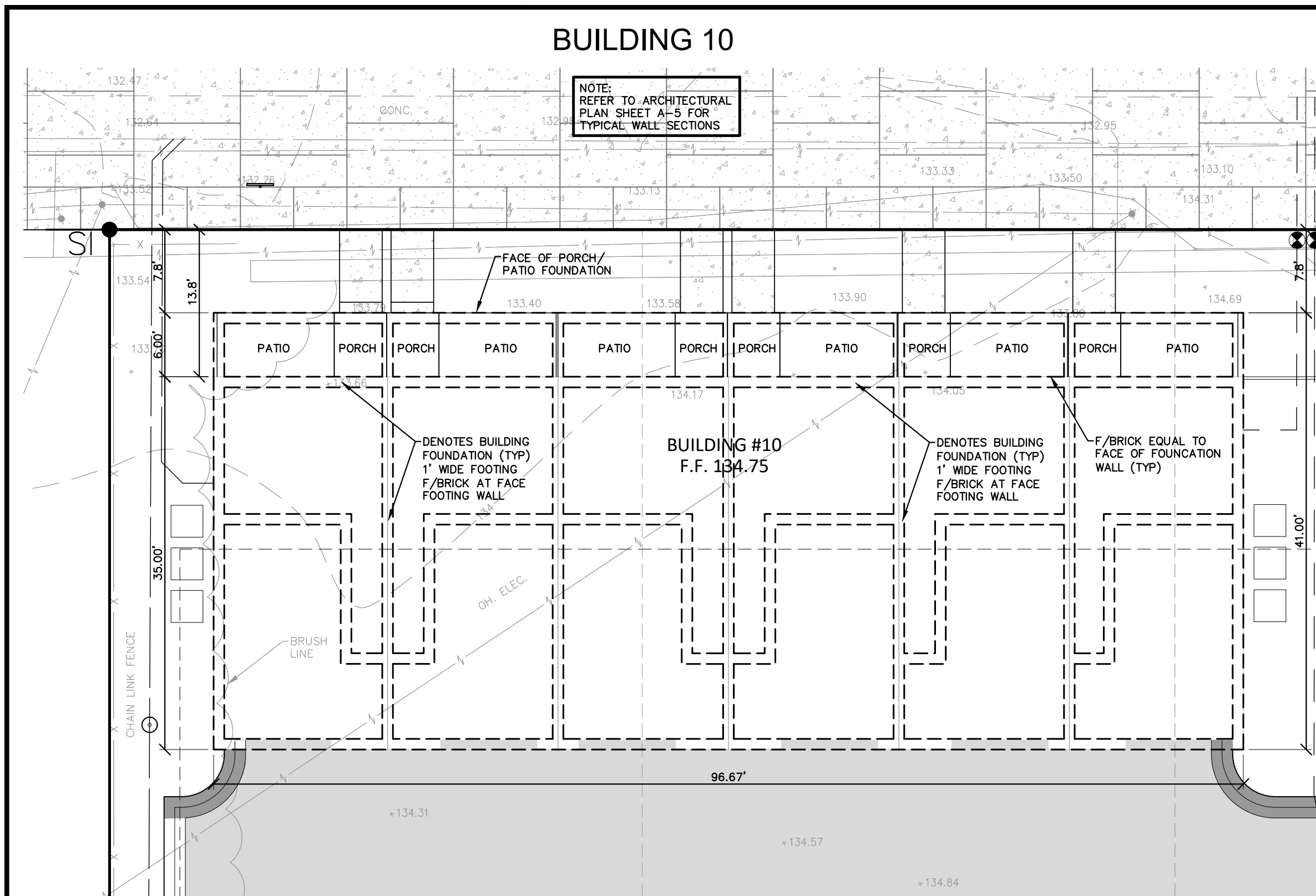


BUILDING 11

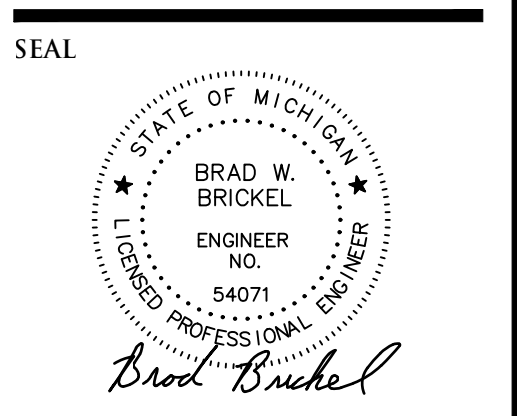


BUILDING 13





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PROJECT
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Contact: Jason Jones
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PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

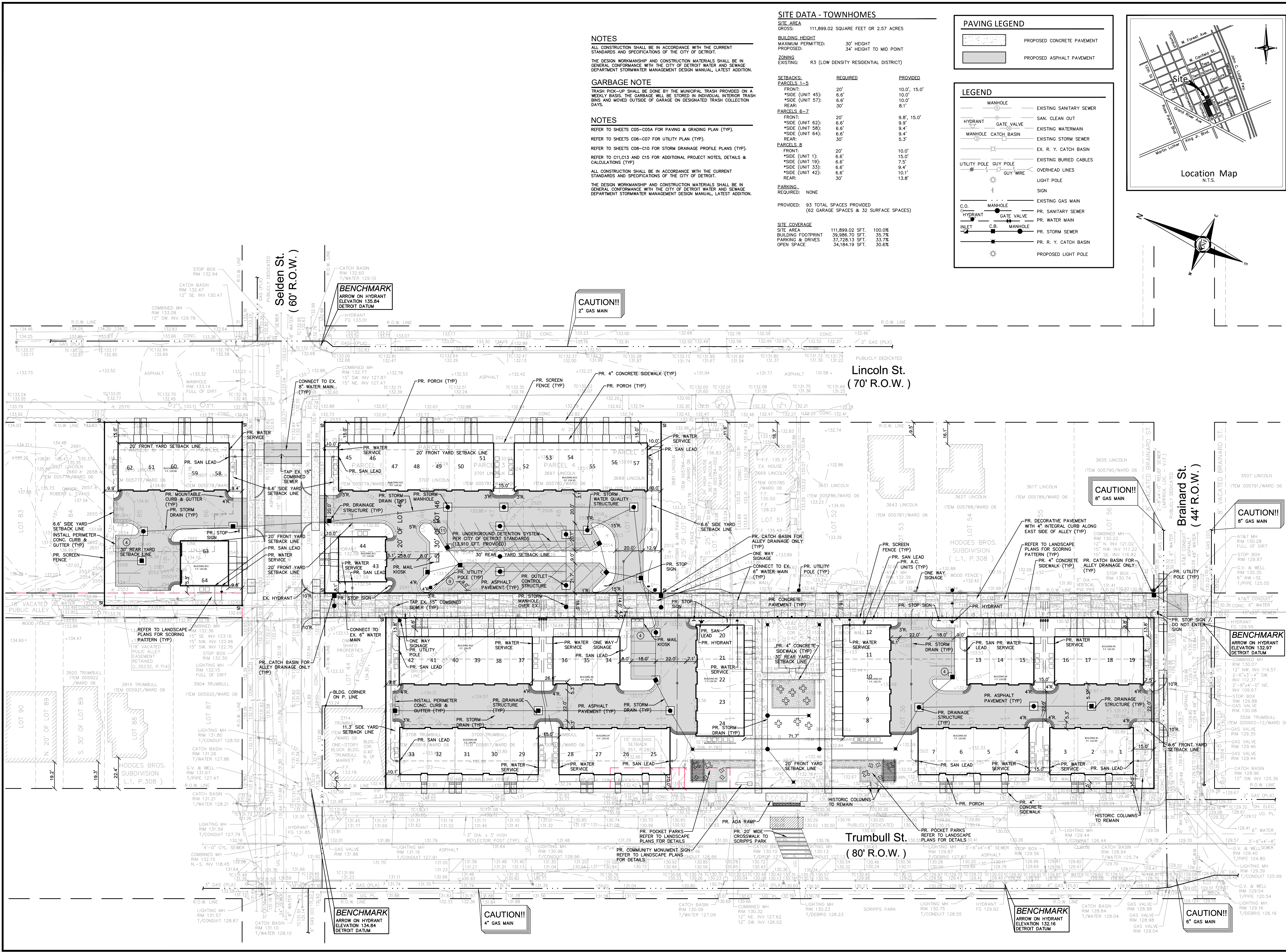
SHEET
Foundation Exhibit Plan
(Parcel C)



DATE	ISSUED/REVISED
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01-05-22	REVISED PER CITY

DRAWN BY:
J. Lawrey
DESIGNED BY:
B. Brickel
APPROVED BY:
B. Brickel
DATE:
September 10, 2020

SCALE: 1" = 10'
NFE JOB NO. **L898** SHEET NO. **C04.3**



SITE DATA - TOWNHOMES

SITE AREA
GROSS: 111,899.02 SQUARE FEET OR 2.57 ACRES

BUILDING HEIGHT
MAXIMUM PERMITTED: 30' HEIGHT
PROPOSED: 34' HEIGHT TO MID POINT

ZONING
EXISTING: R3 (LOW DENSITY RESIDENTIAL DISTRICT)

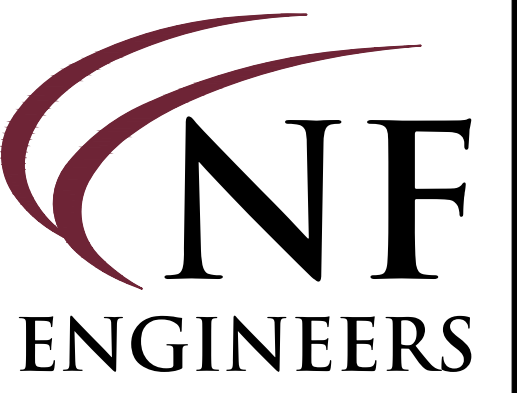
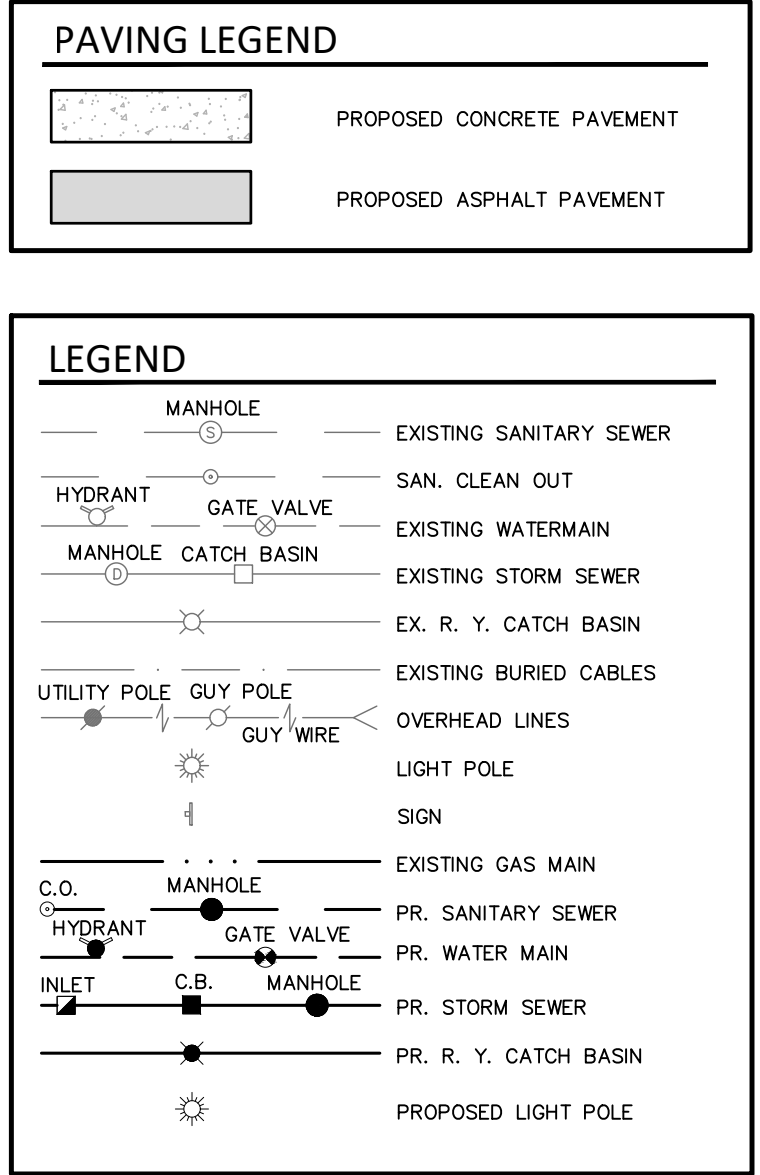
SETBACKS:	REQUIRED	PROVIDED
PARCELS 1-5		
FRONT:	20'	10.0', 15.0'
*SIDE (UNIT 45):	6.6'	10.0'
*SIDE (UNIT 57):	6.6'	10.0'
REAR:	30'	8.1'
PARCELS 6-7		
FRONT:	20'	9.8', 15.0'
*SIDE (UNIT 62):	6.6'	9.9'
*SIDE (UNIT 58):	6.6'	9.4'
*SIDE (UNIT 64):	6.6'	9.4'
REAR:	30'	5.3'
PARCELS 8		
FRONT:	20'	10.0'
*SIDE (UNIT 1):	6.6'	15.0'
*SIDE (UNIT 19):	6.6'	7.5'
*SIDE (UNIT 33):	6.6'	9.4'
*SIDE (UNIT 42):	6.6'	10.1'
REAR:	30'	13.8'

PARKING:
REQUIRED: NONE

PROVIDED: 93 TOTAL SPACES PROVIDED (62 GARAGE SPACES & 32 SURFACE SPACES)

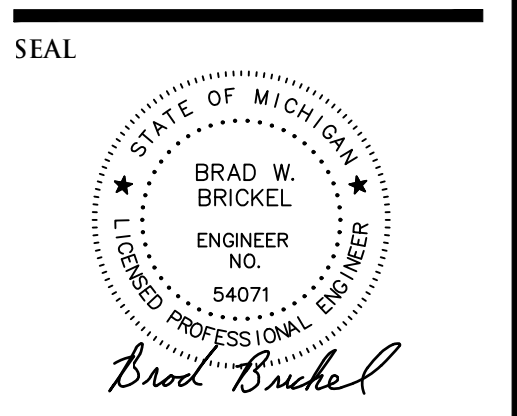
SITE COVERAGE

	111,899.02 SFT.	100.0%
SITE AREA	111,899.02 SFT.	100.0%
BUILDING FOOTPRINT	59,896.70 SFT.	53.7%
PARKING & DRIVES	37,728.13 SFT.	33.7%
OPEN SPACE	34,184.19 SFT.	30.6%



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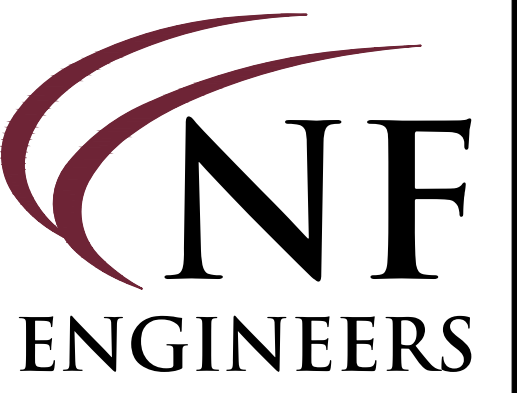
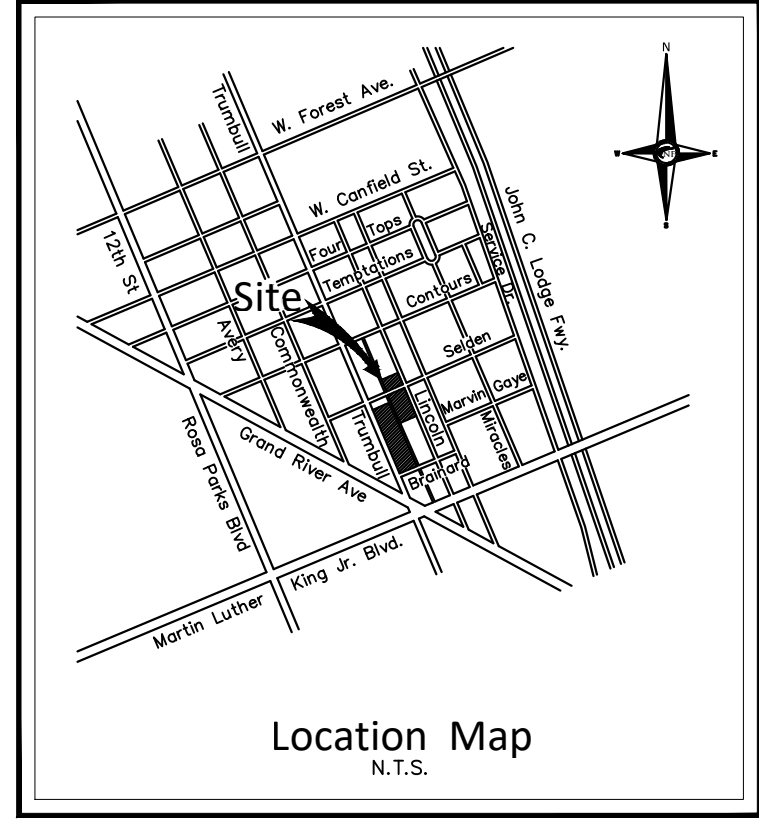
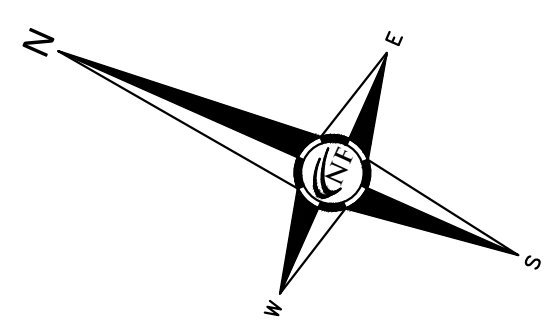
SHEET
Stringer Dimension Plan



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DESIGNED BY:
B. Brickel
APPROVED BY:
B. Brickel
DATE:
September 10, 2020

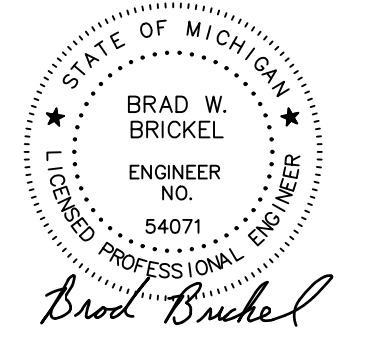
SCALE: 1" = 30'
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NFE JOB NO. L898 **SHEET NO.** C04



**CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS**

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL



PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835
Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
Paving & Grading Plan
(2 of 2)



Know what's below
Call before you dig.

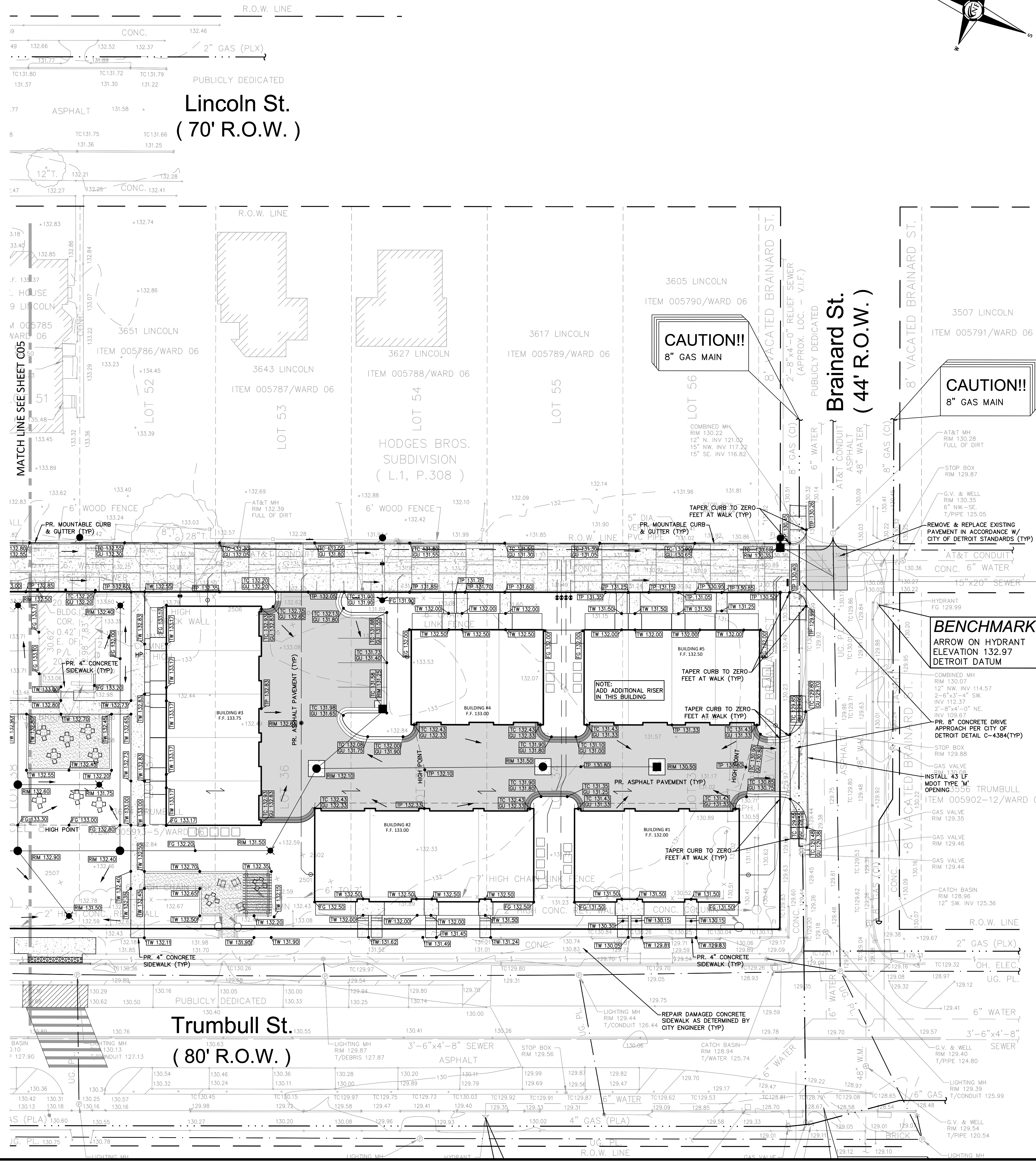
DATE ISSUED/REVISED
08-27-21 ISSUED FOR ENGINEERING REVIEW
09-20-21 REVISED GRADING
12-01-21 REVISED PER CITY
01-05-22 REVISED PER CITY

DRAWN BY:
J. Lawrey
DESIGNED BY:
B. Brickel
APPROVED BY:
B. Brickel

DATE:
September 10, 2020

SCALE: 1" = 20'

NFE JOB NO. SHEET NO.
L898 C05A



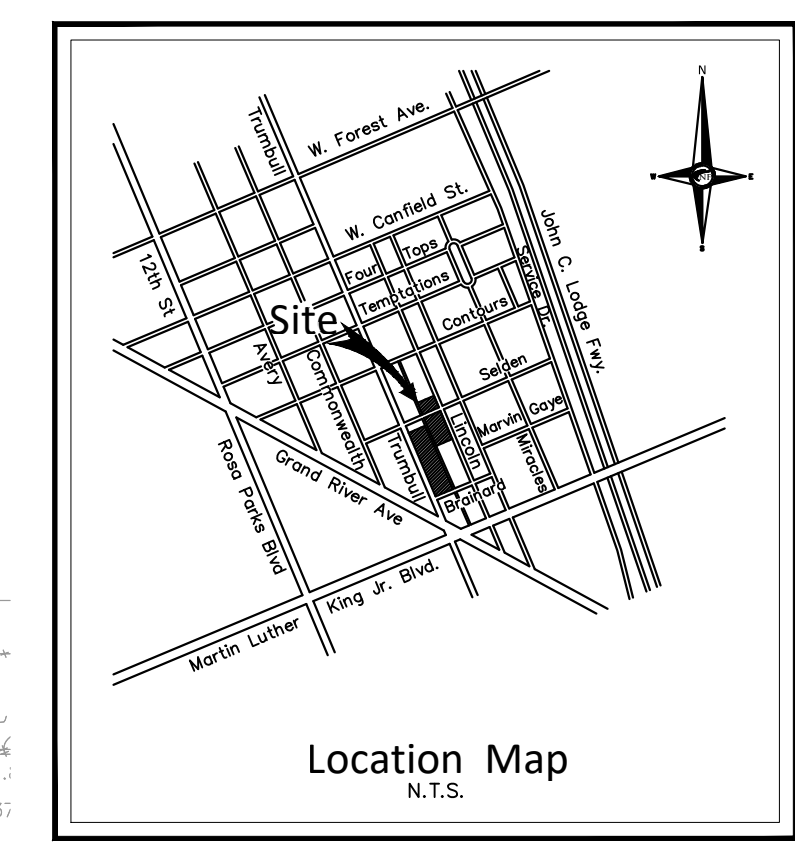
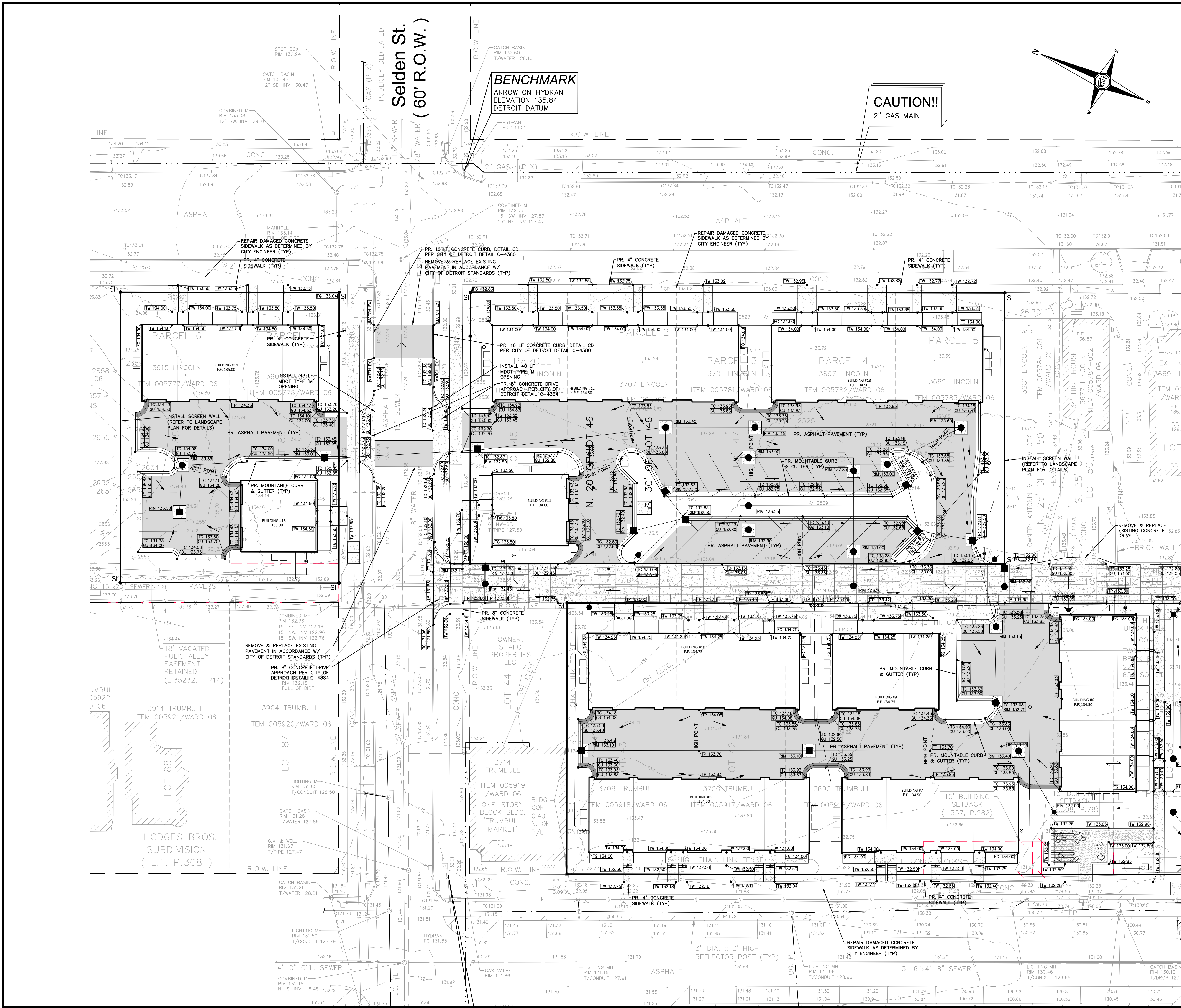
NOTES
REFER TO SHEETS C08-C10 FOR UTILITY PLAN (TYP).
REFER TO SHEETS C08-C10 FOR STORM DRAINAGE PROFILE PLANS (TYP).
REFER TO C11, C13 AND C15 FOR ADDITIONAL PROJECT NOTES, DETAILS & CALCULATIONS (TYP).
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF DETROIT.
THE DESIGN WORKMANSHIP AND CONSTRUCTION MATERIALS SHALL BE IN GENERAL CONFORMANCE WITH THE CITY OF DETROIT WATER AND SEWAGE DEPARTMENT STORMWATER MANAGEMENT DESIGN MANUAL, LATEST ADDITION.

PAVING LEGEND

	PROPOSED CONCRETE PAVEMENT
	PROPOSED ASPHALT PAVEMENT

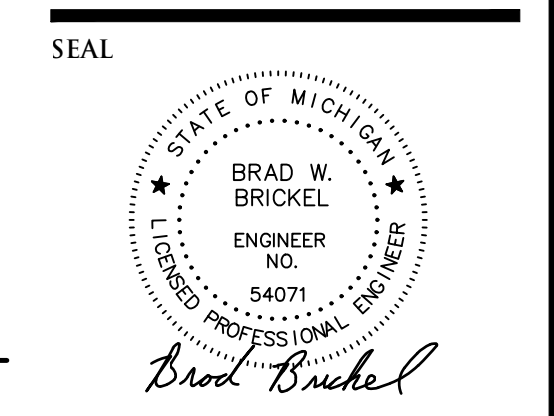
LEGEND

	MANHOLE		EXISTING SANITARY SEWER
	HYDRANT		GATE VALVE
	MANHOLE CATCH BASIN		EXISTING WATERMAIN
	UTILITY POLE		EXISTING STORM SEWER
	GUY POLE		EX. R. Y. CATCH BASIN
	GUY WIRE		EXISTING BURIED CABLES
	SIGN		OVERHEAD LINES
	EXISTING GAS MAIN		LIGHT POLE
	MANHOLE		EXISTING GAS MAIN
	HYDRANT		PR. SANITARY SEWER
	INLET		PR. WATER MAIN
	MANHOLE		PR. STORM SEWER
	MANHOLE		PR. R. Y. CATCH BASIN
	PROPOSED LIGHT POLE		PR. TOP OF CURB ELEVATION
	PR. TOP OF CURB ELEVATION		PR. GUTTER ELEVATION
	PR. TOP OF WALK ELEVATION		PR. TOP OF P.V.M.T. ELEVATION
	PR. TOP OF P.V.M.T. ELEVATION		FINISH GRADE ELEVATION
	FINISH GRADE ELEVATION		



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SIDEWALK NOTE
 REFER TO SHEETS C06-C07 FOR UTILITY PLAN (TYP).
 REFER TO SHEETS C08-C10 FOR STORM DRAINAGE PROFILE PLANS (TYP).
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NOTES
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 REFER TO SHEETS C08-C10 FOR STORM DRAINAGE PROFILE PLANS (TYP).
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ESTIMATED QUANTITIES - OVERALL PAVING

DESCRIPTION	QUANTITY	UNITS
4" ASPHALT ON 8" 21AA BASE	3,193	S.F.
4" CONCRETE SIDEWALK	4,807	S.F.
8" CONCRETE PAVEMENT	1,340	S.F.
8" CONCRETE COLLAR	675	S.F.
MOUNTABLE CURB & GUTTER	1,563	L.F.

PAVING LEGEND

- PROPOSED CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT

LEGEND

- MANHOLE
- HYDRANT
- MANHOLE CATCH BASIN
- UTILITY POLE GUY POLE
- EXISTING SANITARY SEWER
- SAN. CLEAN OUT
- EXISTING WATERMAIN
- EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
- EXISTING BURIED CABLES
- OVERHEAD LINES
- LIGHT POLE
- SIGN
- EXISTING GAS MAIN
- PR. SANITARY SEWER
- PR. WATER MAIN
- PR. STORM SEWER
- PR. R. Y. CATCH BASIN
- PROPOSED LIGHT POLE
- PR. TOP OF CURB ELEVATION
- PR. GUTTER ELEVATION
- PR. TOP OF WALK ELEVATION
- PR. TOP OF P.V.M.T. ELEVATION
- FINISH GRADE ELEVATION

SEAL

PROJECT
 Scripps District
 3700 Trumbull

CLIENT
 3701 Lincoln, LLC
 6905 Telegraph Road,
 Bloomfield Hills, MI 48301

Contact: Tim Loughrin
 Phone: 248.282.1428
 Contact: Jason Jones
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 Contact: George Roberts
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PROJECT LOCATION
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 Subdivision of Outlots
 98, 99, 102 & 103
 Woodbridge Farm
 City of Detroit,
 Wayne County, Michigan

SHEET
 Paving & Grading Plan
 (1 of 2)



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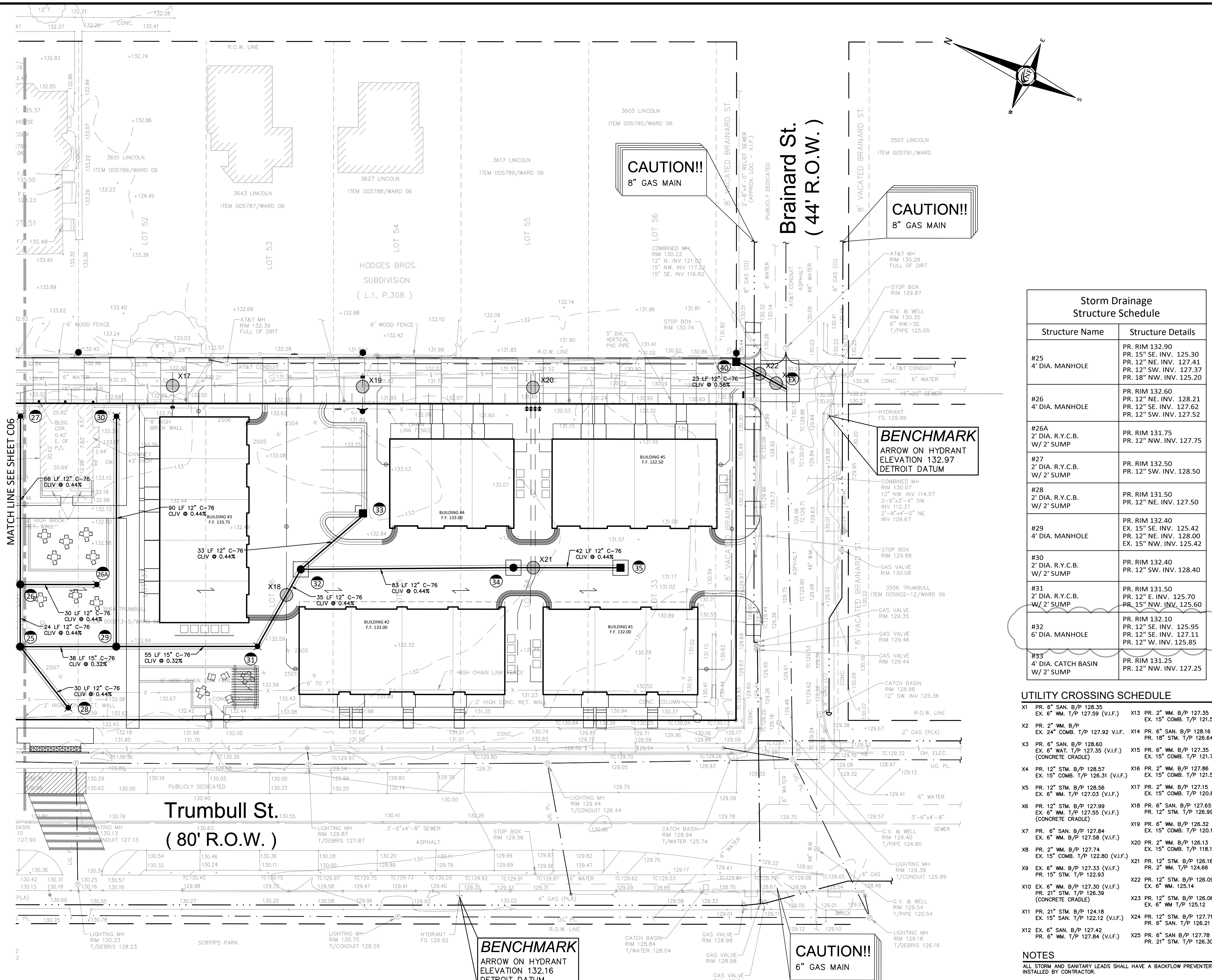
DESIGNED BY:
 B. Brickel

APPROVED BY:
 B. Brickel

DATE:
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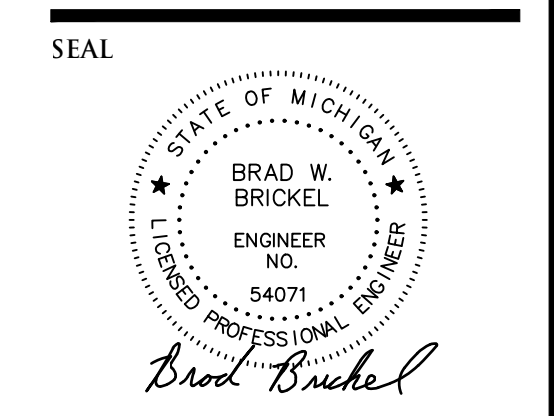
SCALE: 1" = 20'

NFE JOB NO. SHEET NO.
 L898 C05



NF ENGINEERS
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PROJECT LOCATION
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 Woodbridge Farm
 City of Detroit,
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SHEET
 Storm Drainage Plan
 (2 of 2)



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DRAWN BY:
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DESIGNED BY:
 B. Brickel

APPROVED BY:
 B. Brickel

DATE:
 September 10, 2020

SCALE: 1" = 20'

NFE JOB NO. **L898** SHEET NO. **C06A**

Storm Drainage Structure Schedule

Structure Name	Structure Details
#25 4' DIA. MANHOLE	PR. RIM 132.90 PR. 15" SE. INV. 125.30 PR. 12" NE. INV. 127.41 PR. 12" SW. INV. 127.37 PR. 18" NW. INV. 125.20
#26 4' DIA. MANHOLE	PR. RIM 132.60 PR. 12" NE. INV. 128.21 PR. 12" SW. INV. 127.52
#26A 2' DIA. R.Y.C.B. W/ 2' SUMP	PR. RIM 131.75 PR. 12" NW. INV. 127.75
#27 2' DIA. R.Y.C.B. W/ 2' SUMP	PR. RIM 132.50 PR. 12" SW. INV. 128.50
#28 2' DIA. R.Y.C.B. W/ 2' SUMP	PR. RIM 131.50 PR. 12" NE. INV. 127.50
#29 4' DIA. MANHOLE	PR. RIM 132.40 EX. 15" SE. INV. 125.42 PR. 12" NE. INV. 128.00 EX. 15" NW. INV. 125.42
#30 2' DIA. R.Y.C.B. W/ 2' SUMP	PR. RIM 132.40 PR. 12" SW. INV. 128.40
#31 2' DIA. R.Y.C.B. W/ 2' SUMP	PR. RIM 131.50 PR. 12" E. INV. 125.70 PR. 15" NW. INV. 125.60
#32 6' DIA. MANHOLE	PR. RIM 132.10 PR. 12" SE. INV. 125.95 PR. 12" NE. INV. 127.11 PR. 12" W. INV. 125.85
#33 4' DIA. CATCH BASIN W/ 2' SUMP	PR. RIM 131.25 PR. 12" NW. INV. 127.25

Storm Drainage Structure Schedule

Structure Name	Structure Details
#34 4' DIA. MANHOLE	PR. RIM 131.50 PR. 12" SE. INV. 126.32 PR. 12" NW. INV. 126.32
#35 4' DIA. CATCH BASIN W/ 2' SUMP	PR. RIM 130.50 PR. 12" NW. INV. 126.50
#40 2' DIA. CATCH BASIN W/ 2' SUMP	PR. RIM 130.35 PR. 12" S. INV. 126.35
#EX TAP & ADJUST EXISTING MANHOLE	PR. RIM 130.22 EX. 15" NW. INV. 117.22 PR. 12" N. INV. 126.22 PR. 12" SE. INV. 116.82

UTILITY CROSSING SCHEDULE

X1 PR. 6" SAN. B/P 128.35 EX. 6" WM. T/P 127.59 (V.I.F.)	X13 PR. 2" WM. B/P 127.35 EX. 15" COMB. T/P 121.55
X2 PR. 2" WM. B/P EX. 24" COMB. T/P 127.92 (V.I.F.)	X14 PR. 6" SAN. B/P 128.16 PR. 18" STM. T/P 126.64
X3 PR. 6" SAN. B/P 128.60 EX. 6" WAT. T/P 127.35 (V.I.F.) (CONCRETE CRADLE)	X15 PR. 6" WM. B/P 127.35 EX. 15" COMB. T/P 121.76
X4 PR. 12" STM. B/P 128.57 EX. 6" WM. T/P 126.31 (V.I.F.)	X16 PR. 2" WM. B/P 127.86 EX. 15" COMB. T/P 121.55 (V.I.F.)
X5 PR. 12" STM. B/P 128.56 EX. 6" WM. T/P 127.03 (V.I.F.)	X17 PR. 2" WM. B/P 127.15 EX. 15" COMB. T/P 120.83 (V.I.F.)
X6 PR. 12" STM. B/P 127.99 EX. 6" WM. T/P 127.55 (V.I.F.) (CONCRETE CRADLE)	X18 PR. 6" SAN. B/P 127.65 PR. 12" STM. T/P 126.99
X7 PR. 6" SAN. B/P 127.84 EX. 6" WM. B/P 127.59 (V.I.F.)	X19 PR. 6" WM. B/P 126.32 EX. 15" COMB. T/P 120.17 (V.I.F.)
X8 PR. 2" WM. B/P 127.74 EX. 15" COMB. T/P 122.80 (V.I.F.)	X20 PR. 2" WM. B/P 126.13 EX. 15" COMB. T/P 118.11 (V.I.F.)
X9 EX. 6" WM. B/P 127.33 (V.I.F.) PR. 15" STM. T/P 122.93	X21 PR. 12" STM. B/P 126.16 EX. 6" WM. T/P 124.66
X10 EX. 6" WM. B/P 127.30 (V.I.F.) PR. 21" STM. T/P 126.39 (CONCRETE CRADLE)	X22 PR. 12" STM. B/P 126.09 EX. 6" WM. T/P 125.14
X11 PR. 21" STM. B/P 124.18 EX. 15" SAN. T/P 122.12 (V.I.F.)	X23 PR. 12" STM. B/P 126.06 EX. 6" WM. T/P 125.12
X12 EX. 6" SAN. B/P 127.42 PR. 6" WM. T/P 127.84 (V.I.F.)	X24 PR. 12" STM. B/P 127.71 PR. 6" SAN. T/P 126.21
	X25 PR. 6" SAN. B/P 127.78 PR. 21" STM. T/P 126.30

UTILITY NOTES

ALL UTILITY CROSSINGS SHALL MAINTAIN 18" VERTICAL CLEARANCE BETWEEN UTILITIES.

LOWER WATER MAIN IF CROSSING CLEARANCE IS LESS THAN 18"

PROVIDE A MINIMUM OF 5.0 FEET SEPARATION BETWEEN DOMESTIC & FIRE SERVICE.

CONNECTION TO EXISTING WATER MAIN SHALL NOT BE MADE UNTIL AFTER SUCCESSFUL COMPLETION OF BACTERIOLOGICAL & PRESSURE TESTS.

HYDRANTS SHALL BE LOCATED A MINIMUM OF 5.0 FEET FROM THE BACK OF CURB, PROTECTIVE BOLLARDS SHOULD BE PROVIDED IN ALL LOCATIONS.

UTILITY CROSSING NOTE

AT LOCATIONS WHERE THERE ARE CROSSING WITH EXISTING UTILITIES AND THEIR DEPTHS ARE UNKNOWN, 18" VERTICAL SEPARATION WILL BE MAINTAINED WHENEVER POSSIBLE. IF THE 18" SEPARATION IS NOT OBTAINABLE, A CONCRETE ENCASEMENT WILL BE INSTALLED AT THE CROSSING.

CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE AND A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN UTILITIES, WHERE 10' SEPARATION CANNOT BE MAINTAINED, 18" VERTICAL CLEARANCE SHALL BE PROVIDED AND UTILITIES SHALL BE CONSTRUCTED IN SEPARATE TRENCHES.

CONTRACTOR SHALL FIELD VERIFY EXACT DEPTH OF EXISTING PIPE WHERE EXISTING CROSSES PROPOSED. CONTACT ENGINEER IF CONFLICT OCCURS.

ESTIMATED QUANTITIES - THIS SHEET

DESCRIPTION	QUANTITY	UNITS
12" C-76, CLASS IV, SEWER PIPE	469	L.F.
15" C-76, CLASS IV, SEWER PIPE	93	L.F.
4' DIA. R.Y.C.B. W/ 2' SUMP	1	EA.
2' DIA. R.Y.C.B.	4	EA.
4' DIA. MANHOLE	5	EA.
2' DIA. INLET	2	EA.
4' DIA. CATCH BASIN W/ 2' SUMP	1	EA.
2' DIA. CATCH BASIN W/ 2' SUMP	1	EA.

LEGEND

	EXISTING SANITARY SEWER
	SAN. CLEAN OUT
	EXISTING WATER MAIN
	EXISTING STORM SEWER
	EX. R. Y. CATCH BASIN
	EXISTING BURIED CABLES
	OVERHEAD LINES
	LIGHT POLE
	SIGN
	EXISTING GAS MAIN
	PR. SANITARY SEWER
	PR. WATER MAIN
	PR. STORM SEWER
	PR. R. Y. CATCH BASIN
	SAND BACKFILL (95% DENSITY)
	PROPOSED LIGHT POLE

NOTES

ALL STORM AND SANITARY LEADS SHALL HAVE A BACKFLOW PREVENTER INSTALLED BY CONTRACTOR.

REFER TO SHEET C07 FOR SEWER PROFILE PLAN.

REFER TO SHEETS C08-12 FOR ADDITIONAL PROJECT NOTES, DETAIL & CALCULATIONS (TYP)

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF DETROIT.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AND/OR UNDERGROUND UTILITIES WHICH MAY AFFECT THE CONSTRUCTION OF THIS JOB. OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF EXISTING UTILITIES.

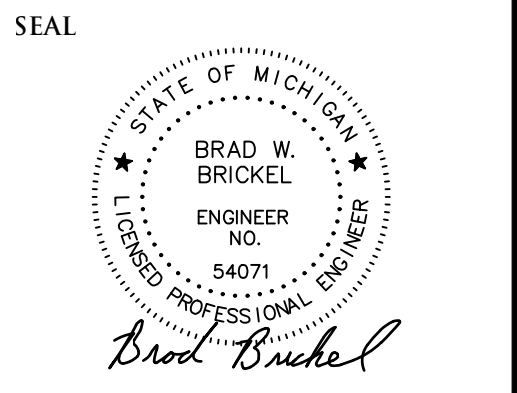
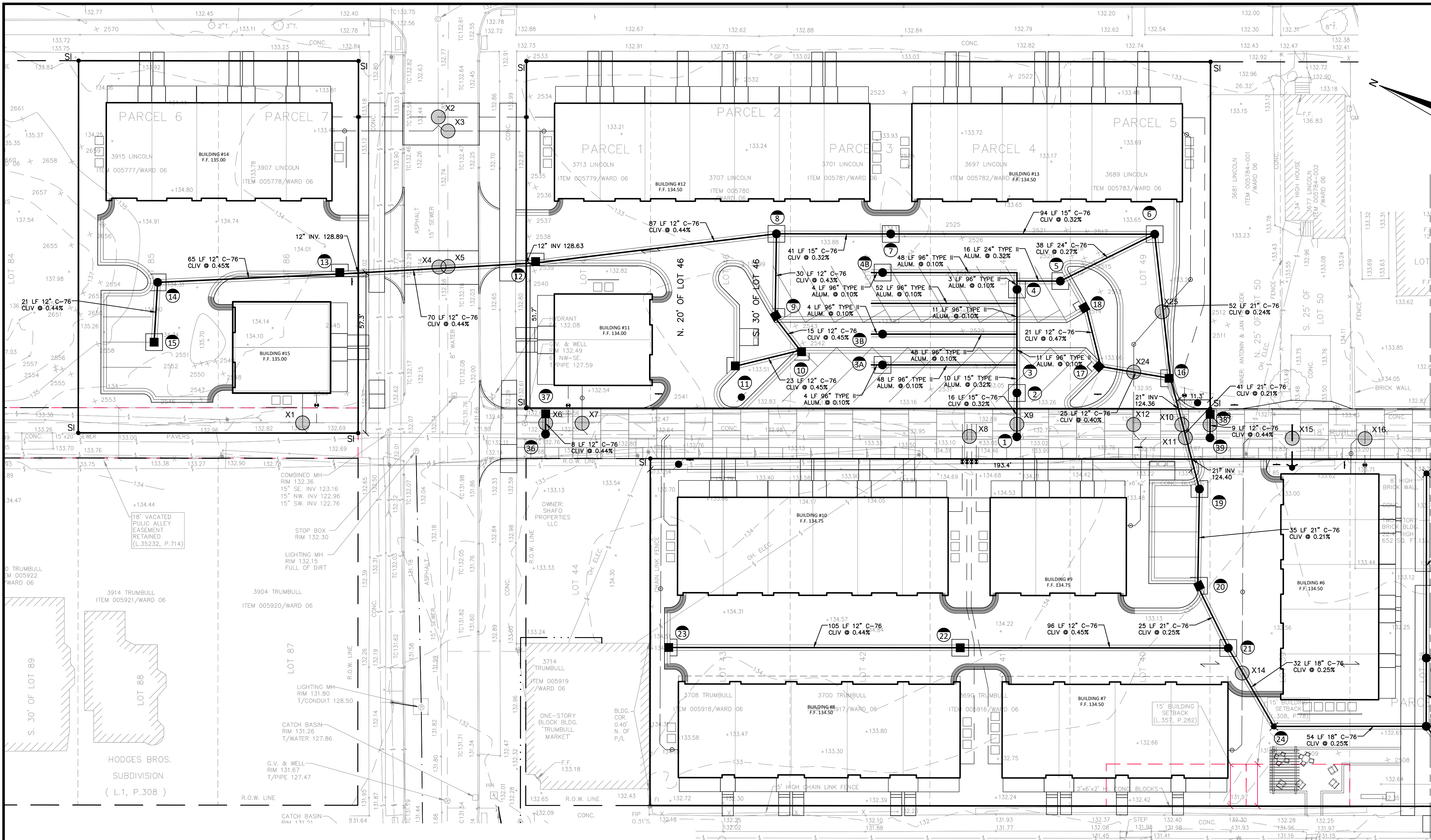
FOR UTILITY PROTECTION, 72 HOURS BEFORE YOU DIG, DIAL MISS DIG (800-482-7171).

TRENCHES BELOW THE PAVEMENT OR WITHIN 3 FEET BACK OF CURB SHALL STORM SEWER, SANITARY SEWER, WATER MAIN, AND BUILDING LEAD BE BACKFILLED WITH SAND COMPACTED TO A MINIMUM 95% PRIOR TO PLACEMENT OF PAVEMENT.

NOTIFY THE CITY OF DETROIT ENGINEERING DEPARTMENT, PHONE (224-3970), 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

ALL PROPERTIES OF FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION THE CONTRACTOR.

THE DESIGN WORKMANSHIP AND CONSTRUCTION MATERIALS SHALL BE IN GENERAL CONFORMANCE WITH THE CITY OF DETROIT WATER AND SEWAGE DEPARTMENT STORMWATER MANAGEMENT DESIGN MANUAL, LATEST ADDITION.



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SHEET
 Storm Drainage Plan
 (1 of 2)



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DRAWN BY:
 J. Lawrey
 DESIGNED BY:
 B. Brickel

APPROVED BY:
 B. Brickel

DATE:
 September 10, 2020

SCALE: 1" = 20'
 NFE JOB NO. SHEET NO.
L898 C06

UTILITY NOTES

ALL UTILITY CROSSINGS SHALL MAINTAIN 18" VERTICAL CLEARANCE BETWEEN UTILITIES.
 LOWER WATER MAIN IF CROSSING SEWER IS LESS THAN 18"
 PROVIDE A MINIMUM OF 5.0 FEET SEPARATION BETWEEN DOMESTIC & FIRE SERVICE.
 CONNECTION TO EXISTING WATER MAIN SHALL NOT BE MADE UNTIL AFTER SUCCESSFUL COMPLETION OF BACTERIOLOGICAL & PRESSURE TESTS.
 HYDRANTS SHALL BE LOCATED A MINIMUM OF 5.0 FEET FROM THE BACK OF CURB, PROTECTIVE BOLLARDS SHOULD BE PROVIDED IN ALL LOCATIONS.

UTILITY CROSSING NOTE

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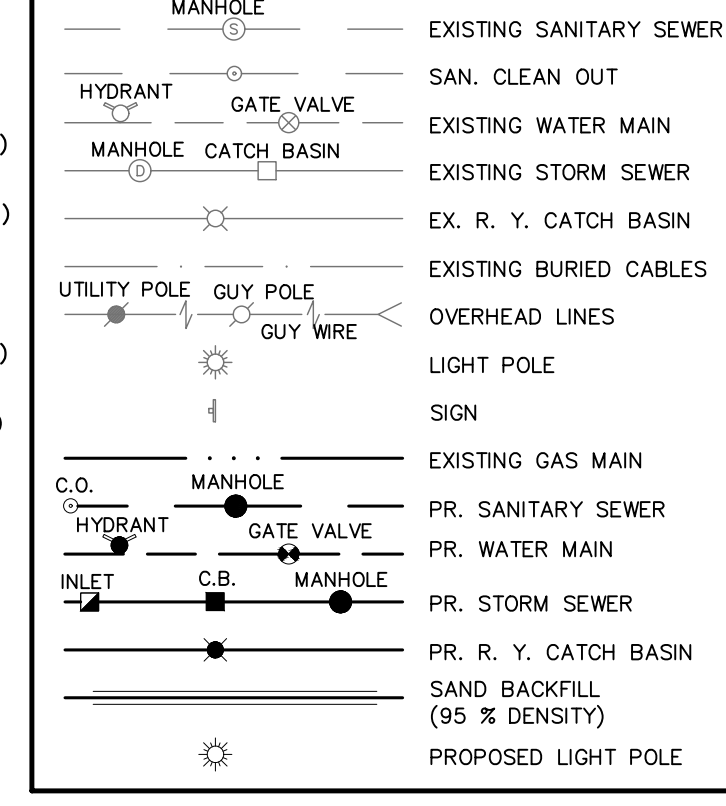
NOTES

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 REFER TO SHEETS C11, C13 AND C15 FOR ADDITIONAL PROJECT NOTES, DETAILS & CALCULATIONS.
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 FOR UTILITY PROTECTION, 72 HOURS BEFORE YOU DIG, DIAL MISS DIG (800-482-7171).
 TRENCHES BELOW THE PAVEMENT OR WITHIN 3 FEET BACK OF CURB SHALL STORM SEWER, SANITARY SEWER, WATER MAIN, AND BUILDING LEAD BE BACKFILLED WITH SAND COMPACTED TO A MINIMUM 95 PERCENT OF PLACEMENT OF PAVEMENT.
 NOTIFY THE CITY OF DETROIT ENGINEERING DEPARTMENT, PHONE (224-3970), 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
 ALL PROPERTIES OF FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION OF THE CONTRACTOR.
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ESTIMATED QUANTITIES - THIS SHEET

DESCRIPTION	QUANTITY	UNITS
12" C-76, CLASS IV, SEWER PIPE	569	L.F.
15" C-76, CLASS IV, SEWER PIPE	151	L.F.
18" C-76, CLASS IV, SEWER PIPE	83	L.F.
21" C-76, CLASS IV, SEWER PIPE	157	L.F.
24" C-76, CLASS IV, SEWER PIPE	38	L.F.
15" TYPE II, ALUMINUM, SEWER PIPE	10	L.F.
24" TYPE II, ALUMINUM, SEWER PIPE	16	L.F.
96" TYPE II, ALUMINUM, SEWER PIPE	233	L.F.
36" RISER	4	EA.
4' DIA. CATCH BASIN W/ 2' SUMP	6	EA.
4' DIA. MANHOLE	8	EA.
2' DIA. INLET	5	EA.
2' DIA. R.Y.C.B. W/ 2' SUMP	2	EA.
SEWER TAP/CONNECTION	2	EA.

LEGEND



UTILITY CROSSING SCHEDULE

X1 PR. 6" SAN. B/P 128.35 EX. 6" WM. T/P 127.59 (V.I.F.)	X13 PR. 2" WM. B/P 127.35 EX. 15" COMB. T/P 121.55
X2 PR. 2" WM. B/P EX. 24" COMB. T/P 127.92 (V.I.F.)	X14 PR. 6" SAN. B/P 128.16 PR. 18" STM. T/P 126.64
X3 PR. 6" SAN. B/P 128.60 EX. 6" WAT. T/P 127.25 (V.I.F.) (CONCRETE CRADLE)	X15 PR. 6" WM. B/P 127.35 EX. 15" COMB. T/P 121.76
X4 PR. 12" STM. B/P 128.57 EX. 15" COMB. T/P 126.31 (V.I.F.)	X16 PR. 2" WM. B/P 127.86 EX. 15" COMB. T/P 121.55 (V.I.F.)
X5 PR. 12" STM. B/P 128.56 EX. 6" WM. T/P 127.03 (V.I.F.)	X17 PR. 2" WM. B/P 127.15 EX. 15" COMB. T/P 120.83 (V.I.F.)
X6 PR. 12" STM. B/P 127.99 EX. 6" WM. T/P 127.55 (V.I.F.) (CONCRETE CRADLE)	X18 PR. 6" SAN. B/P 127.65 PR. 12" STM. T/P 126.99
X7 PR. 6" SAN. B/P 127.84 EX. 6" WM. B/P 127.58 (V.I.F.)	X19 PR. 6" WM. B/P 126.32 EX. 15" COMB. T/P 120.17 (V.I.F.)
X8 PR. 2" WM. B/P 127.74 EX. 15" COMB. T/P 122.80 (V.I.F.)	X20 PR. 2" WM. B/P 126.16 EX. 15" COMB. T/P 118.11 (V.I.F.)
X9 PR. 12" STM. B/P 127.33 (V.I.F.) PR. 15" STM. T/P 122.93	X21 PR. 12" STM. B/P 126.16 PR. 2" WM. T/P 124.66
X10 EX. 6" WM. B/P 127.33 (V.I.F.) PR. 21" STM. T/P 126.39	X22 PR. 12" STM. B/P 126.09 EX. 6" WM. 125.14
X11 PR. 21" STM. B/P 124.18 EX. 15" SAN. T/P 122.12 (V.I.F.)	X23 PR. 12" STM. B/P 126.06 EX. 6" WM. T/P 125.15
X12 EX. 6" SAN. B/P 127.42 PR. 6" WM. T/P 127.84 (V.I.F.)	X24 PR. 12" STM. B/P 127.71 PR. 6" SAN. T/P 126.21
	X25 PR. 6" SAN. B/P 127.78 PR. 21" STM. T/P 126.30

Storm Drainage Structure Schedule

Structure Name	Structure Details
#1 CONSTRUCT 4' DIA. MANHOLE OVER EX. COMBINED SEWER W/ TRAP	PR. RIM 133.10 PR. 15" NE. INV. 121.44 PR. 15" NW. INV. 121.17 PR. 15" SE. INV. 121.17
#2 6' DIA. OVERFLOW STRUCTURE W/ 2' SUMP & TRAP	PR. RIM 133.00 PR. 15" NE. INV. 121.49 PR. 15" SW. INV. 121.49
#3 96" x 96" x 15" TEE	PR. RIM 133.00 PR. 96" NE. INV. 121.52 PR. 96" NW. INV. 121.52 PR. 15" SW. INV. 121.52
#3A 36" ACCESS RISER	PR. RIM 132.90 PR. 96" NW. INV. 121.57
#3B 36" ACCESS RISER	PR. RIM 132.85 PR. 96" NW. INV. 121.58 PR. 96" SE. INV. 121.58
#4 36" ACCESS RISER	PR. RIM 132.85 PR. 96" NE. INV. 121.55 PR. 96" SW. INV. 121.55
#4B 36" ACCESS RISER	PR. RIM 133.00 PR. 96" NW. INV. 121.60 PR. 96" SE. INV. 121.60
#5 STORM WATER QUALITY STRUCTURE CDS2020-5-C - 687508-10	PR. RIM 133.00 PR. 24" SE. INV. 124.05 PR. 24" NW. INV. 123.95
#6 6' DIA. MANHOLE	PR. RIM 133.65 PR. 21" SW. INV. 124.25 PR. 15" NW. INV. 127.26 PR. 24" NW. INV. 124.15
#7 4' DIA. MANHOLE	PR. RIM 133.15 PR. 15" NW. INV. 127.66 PR. 15" SE. INV. 127.56

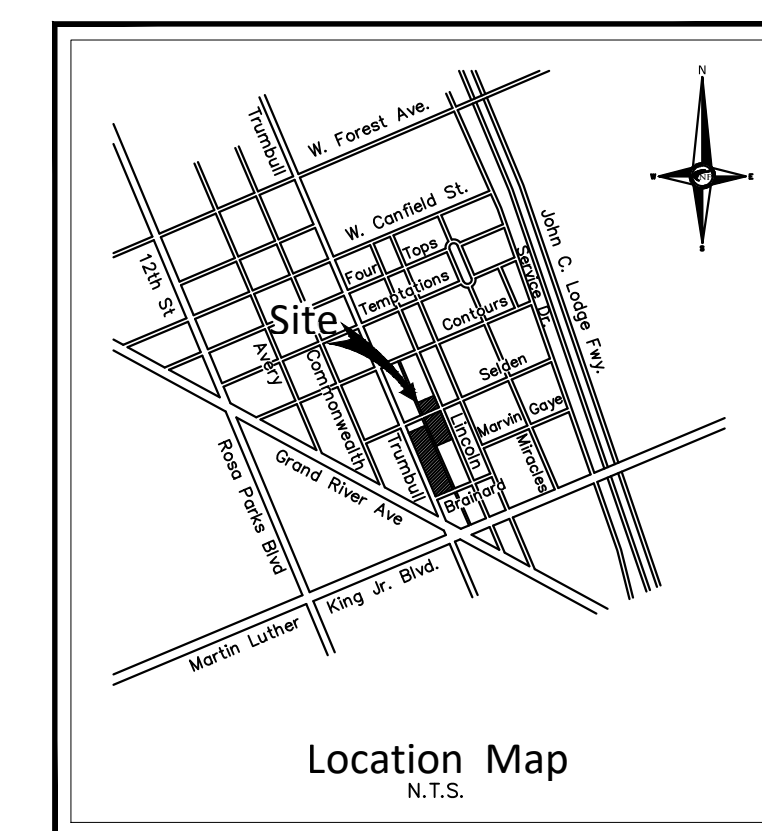
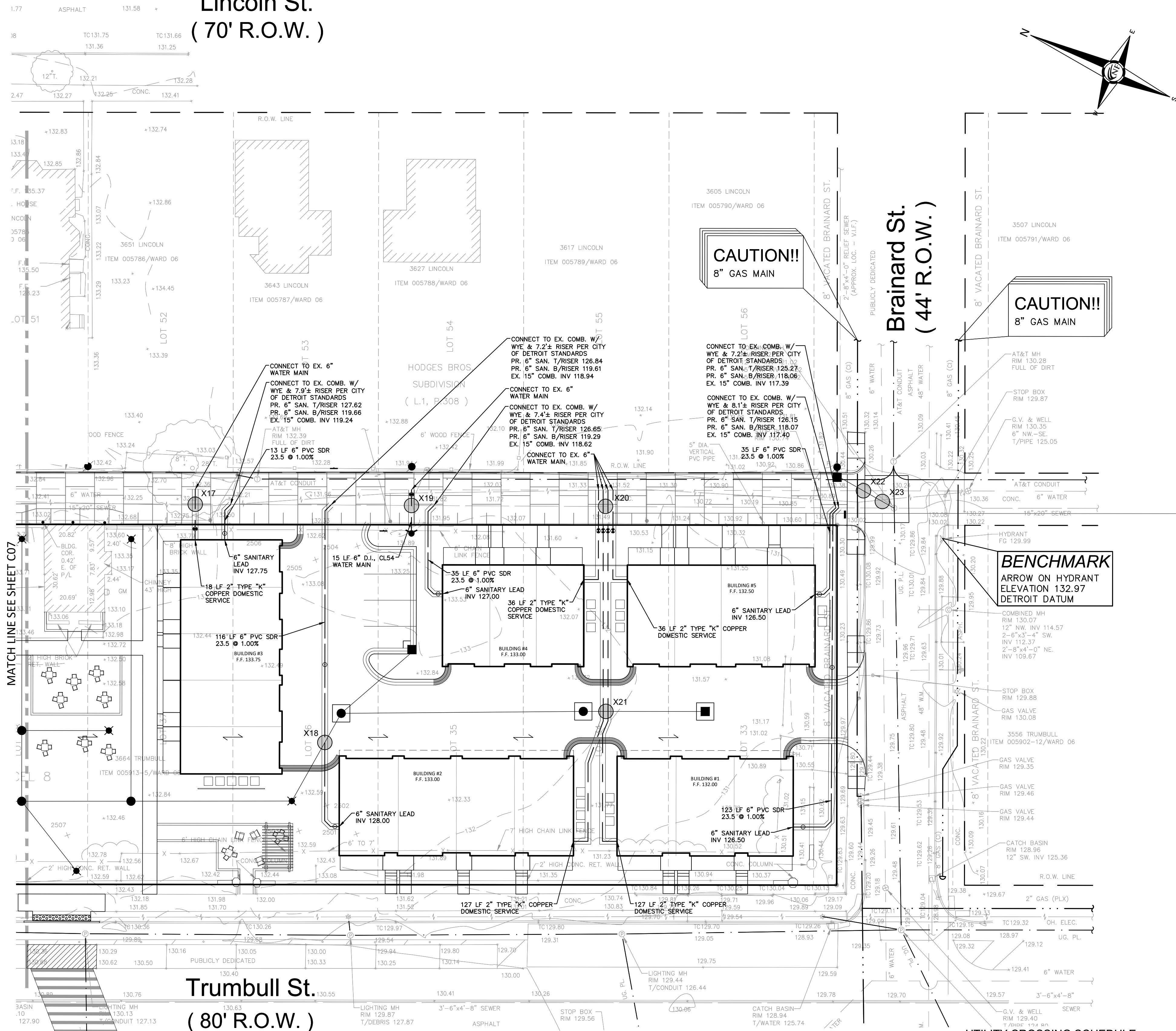
Storm Drainage Structure Schedule

Structure Name	Structure Details
#9 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 132.50 PR. 12" SW. INV. 128.12 PR. 12" NE. INV. 128.02
#10 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 132.50 PR. 12" NW. INV. 128.29 PR. 12" NE. INV. 128.19
#11 2' DIA. INLET W/ 2' SUMP	PR. RIM 132.40 PR. 12" SE. INV. 128.40
#12 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 132.50 PR. 12" NW. INV. 128.61 PR. 12" SE. INV. 128.51
#13 4' DIA. CATCH BASIN W/ 2' SUMP	PR. RIM 133.00 PR. 12" NW. INV. 129.02 PR. 12" SE. INV. 128.92
#14 4' DIA. MANHOLE	PR. RIM 133.85 PR. 12" W. INV. 129.41 PR. 12" SE. INV. 129.31
#15 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 133.50 PR. 12" E. INV. 129.50
#16 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 132.50 PR. 21" SW. INV. 124.37 PR. 12" N. INV. 127.95 PR. 21" NE. INV. 124.37
#17 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 132.50 PR. 12" NE. INV. 128.15 PR. 12" S. INV. 128.05
#18 2' DIA. INLET	PR. RIM 132.25 PR. 12" SW. INV. 128.25
#19 4' DIA. MANHOLE	PR. RIM 133.15 PR. 21" SW. INV. 124.56 PR. 21" NE. INV. 124.46

Storm Drainage Structure Schedule

Structure Name	Structure Details
#20 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 132.75 PR. 21" SW. INV. 124.73 PR. 21" NE. INV. 124.63
#21 4' DIA. MANHOLE	PR. RIM 133.40 PR. 18" SW. INV. 124.89 PR. 12" NW. INV. 128.11 PR. 21" NE. INV. 124.79
#22 4' DIA CATCH BASIN W/ 2' SUMP	PR. RIM 133.10 PR. 12" NW. INV. 128.64 PR. 12" SE. INV. 128.54
#23 4' DIA. CATCH BASIN W/ 2' SUMP	PR. RIM 133.10 PR. 12" SE. INV. 129.10
#24 2' DIA. R.Y.C.B. W/ 2' SUMP	PR. RIM 132.00 PR. 18" SE. INV. 125.06 PR. 18" NE. INV. 124.97
#36 CONSTRUCT 4' DIA. MANHOLE OVER EX. COMBINED SEWER	PR. RIM 132.45 PR. 12" NE. INV. 128.17 PR. 15" NW. INV. 122.66 PR. 15" SE. INV. 122.66
#37 2' DIA. CATCH BASIN W/ 2' SUMP & TRAP	EX. RIM 132.20 EX. 12" SW. INV. 128.20
#38 4' DIA. CATCH BASIN W/ 2' SUMP	PR. RIM 132.65 PR. 12" SW. INV. 128.65
#39 CONSTRUCT 4' DIA. MANHOLE OVER EX. COMBINED SEWER	PR. RIM 132.90 EX. 15" NW. INV. 120.56 PR. 12" NE. INV. 128.61 EX. 15" SE. INV. 120.56

Lincoln St.
(70' R.O.W.)



NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL

BRAD W. BRICKEL
ENGINEER
NO. 54071
STATE OF MICHIGAN
PROFESSIONAL ENGINEER

PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835
Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
Sanitary Sewer and
Water Main Plan
(2 of 2)

DATE	ISSUED/REVISED
08-27-21	ISSUED FOR ENGINEERING REVIEW
09-20-21	REVISED GRADING
12-01-21	REVISED PER CITY
01-05-22	REVISED PER CITY

DRAWN BY:
J. Lawrey

DESIGNED BY:
B. Brickel

APPROVED BY:
B. Brickel

DATE:
September 10, 2020

SCALE: 1" = 20'

NFE JOB NO. SHEET NO.
L898 C07A

UTILITY NOTES

ALL UTILITY CROSSINGS SHALL MAINTAIN 18" VERTICAL CLEARANCE BETWEEN UTILITIES.
LOWER WATER MAIN IF CROSSING SEWER IS LESS THAN 18"
PROVIDE A MINIMUM OF 5.0 FEET SEPARATION BETWEEN DOMESTIC & FIRE SERVICE.
CONNECTION TO EXISTING WATER MAIN SHALL NOT BE MADE UNTIL AFTER SUCCESSFUL COMPLETION OF BACTERIOLOGICAL & PRESSURE TESTS.
HYDRANTS SHALL BE LOCATED A MINIMUM OF 5.0 FEET FROM THE BACK OF CURB. PROTECTIVE BOLLARDS SHOULD BE PROVIDED IN ALL LOCATIONS.

UTILITY CROSSING NOTE

AT LOCATIONS WHERE THERE ARE CROSSING WITH EXISTING UTILITIES AND THEIR DEPTHS ARE UNKNOWN, 18" VERTICAL SEPARATION WILL BE MAINTAINED WHENEVER POSSIBLE. IF THE 18" SEPARATION IS NOT OBTAINABLE, A CONCRETE ENCASMENT WILL BE INSTALLED AT THE CROSSING.
CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE AND A MINIMUM OF 10" HORIZONTAL SEPARATION BETWEEN UTILITIES. WHERE 10" SEPARATION CANNOT BE MAINTAINED, 18" VERTICAL CLEARANCE SHALL BE PROVIDED AND UTILITIES SHALL BE CONSTRUCTED IN SEPARATE TRENCHES.
CONTRACTOR SHALL FIELD VERIFY EXACT DEPTH OF EXISTING PIPE WHERE EXISTING CROSSINGS PROPOSED. CONTACT ENGINEER IF CONFLICT OCCURS.

NOTES

ALL STORM AND SANITARY LEADS SHALL HAVE A BACKFLOW PREVENTER INSTALLED BY CONTRACTOR.
REFER TO SHEET C07 FOR SEWER PROFILE PLAN.
REFER TO SHEETS C08-12 FOR ADDITIONAL PROJECT NOTES, DETAIL & CALCULATIONS (TYP)
ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF DETROIT.
IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AND/OR UNDERGROUND UTILITIES WHICH MAY AFFECT THE CONSTRUCTION OF THIS JOB. OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF EXISTING UTILITIES.
FOR UTILITY PROTECTION, 72 HOURS BEFORE YOU DIG, DIAL MISS DIG (800-482-7171).
TRENCHES BELOW THE PAVEMENT OR WITHIN 3 FEET BACK OF CURB SHALL STORM SEWER, SANITARY SEWER, WATER MAIN, AND BUILDING LEAD BE BACKFILLED WITH SAND COMPACTED TO A MINIMUM 95 PERCENT TO PLACEMENT OF PAVEMENT.
NOTIFY THE CITY OF DETROIT ENGINEERING DEPARTMENT, PHONE (224-3970), 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
ALL PROPERTIES OF FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION THE CONTRACTOR.
THE DESIGN WORKMANSHIP AND CONSTRUCTION MATERIALS SHALL BE IN GENERAL CONFORMANCE WITH THE CITY OF DETROIT WATER AND SEWAGE DEPARTMENT STORMWATER MANAGEMENT DESIGN MANUAL, LATEST ADDITION.

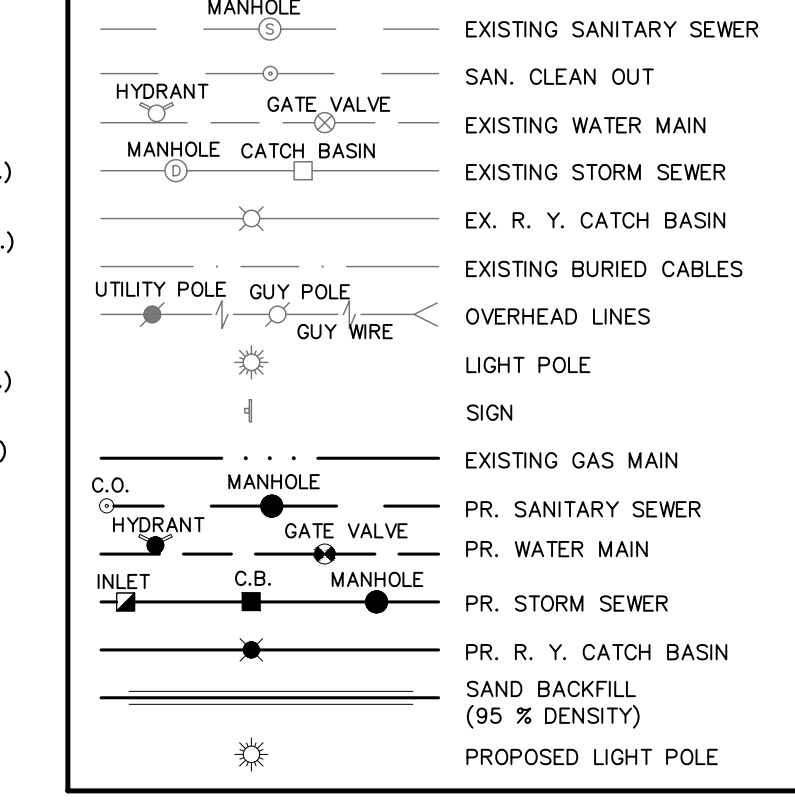
ESTIMATED QUANTITIES - THIS SHEET

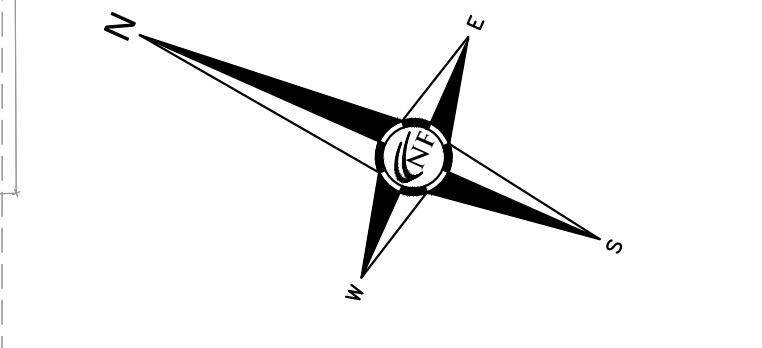
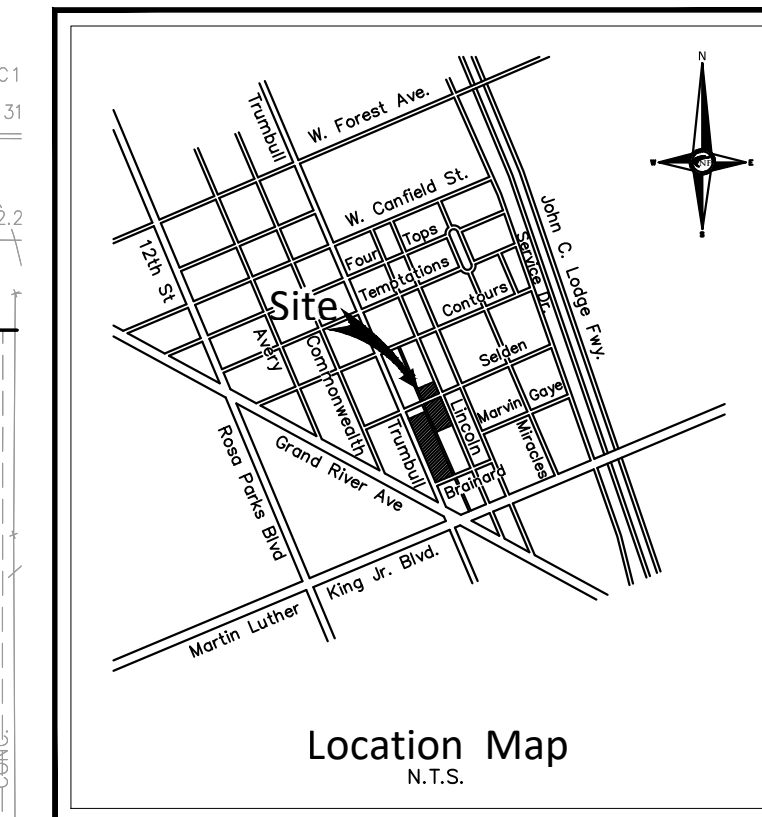
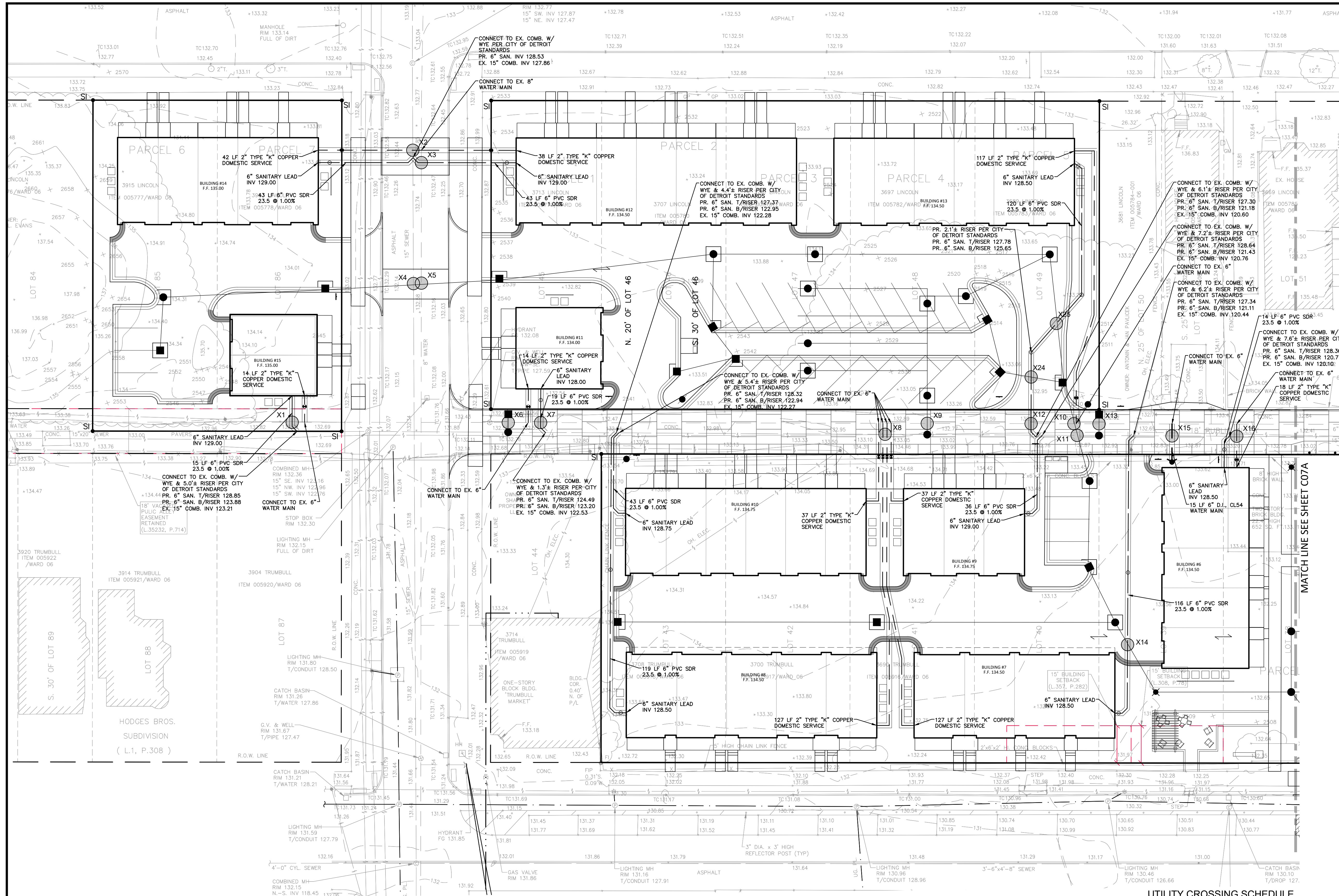
DESCRIPTION	QUANTITY	UNITS
6" PVC, SDR 23.5, BUILDING LEAD	322	L.F.
SEWER TAP/CONNECTION	5	EA.
WATER MAIN		
DESCRIPTION	QUANTITY	UNITS
6" D.I., CLASS 54, WATER MAIN	15	L.F.
2" K" COPPER BUILDING SERVICE	344	L.F.
6" HYDRANT ASSEMBLY	1	EA.
2" STOP BOX	5	EA.
WATER MAIN CONNECTION	6	EA.

UTILITY CROSSING SCHEDULE

X1 PR. 6" SAN. B/P 128.35 EX. 6" WM. T/P 127.58 (V.I.F.)	X13 PR. 2" WM. B/P 127.35 EX. 15" COMB. T/P 121.55
X2 PR. 2" WM. B/P EX. 24" COMB. T/P 127.92 (V.I.F.)	X14 PR. 6" SAN. B/P 128.16 PR. 18" STM. T/P 126.64
X3 PR. 6" SAN. B/P 128.60 EX. 6" WAT. T/P 127.35 (V.I.F.) (CONCRETE CRADLE)	X15 PR. 6" WM. B/P 127.35 EX. 15" COMB. T/P 121.76
X4 PR. 12" STM. B/P 128.57 EX. 6" WM. T/P 126.31 (V.I.F.)	X16 PR. 2" WM. B/P 127.86 EX. 15" COMB. T/P 121.55 (V.I.F.)
X5 PR. 12" STM. B/P 128.56 EX. 6" WM. T/P 127.03 (V.I.F.)	X17 PR. 2" WM. B/P 127.15 EX. 15" COMB. T/P 120.83 (V.I.F.)
X6 PR. 12" STM. B/P 127.99 EX. 6" WM. T/P 127.55 (V.I.F.) (CONCRETE CRADLE)	X18 PR. 6" SAN. B/P 127.65 PR. 12" STM. T/P 126.99
X7 PR. 6" SAN. B/P 127.84 EX. 6" WM. B/P 127.58 (V.I.F.)	X19 PR. 6" WM. B/P 126.32 EX. 15" COMB. T/P 120.17 (V.I.F.)
X8 PR. 2" WM. B/P 127.74 EX. 15" COMB. T/P 122.80 (V.I.F.)	X20 PR. 2" WM. B/P 126.13 PR. 2" WM. T/P 124.68
X9 EX. 6" WM. B/P 127.33 (V.I.F.) PR. 15" STM. T/P 122.93	X21 PR. 12" STM. B/P 126.16 PR. 2" WM. T/P 124.68
X10 EX. 6" WM. B/P 127.30 (V.I.F.) PR. 21" STM. T/P 126.39 (CONCRETE CRADLE)	X22 PR. 12" STM. B/P 126.09 EX. 6" WM. T/P 125.12
X11 PR. 21" STM. B/P 124.18 EX. 15" SAN. T/P 122.12 (V.I.F.)	X24 PR. 12" STM. B/P 127.71 PR. 6" SAN. T/P 126.21
X12 EX. 6" SAN. B/P 127.42 PR. 6" WM. T/P 127.84 (V.I.F.)	X25 PR. 6" SAN. B/P 127.76 PR. 21" STM. T/P 126.30

LEGEND





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 HYDRANTS SHALL BE LOCATED A MINIMUM OF 5.0 FEET FROM THE BACK OF CURB. PROTECTIVE BOLLARDS SHOULD BE PROVIDED IN ALL LOCATIONS.
 ALL DUCTILE IRON PIPE SHALL BE A MINIMUM OF CLASS 52 AND POLYETHYLENE WRAPPED.

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 THE DESIGN WORKMANSHIP AND CONSTRUCTION MATERIALS SHALL BE IN GENERAL CONFORMANCE WITH THE CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT STORMWATER MANAGEMENT DESIGN MANUAL, LATEST ADDITION.

ESTIMATED QUANTITIES - THIS SHEET

DESCRIPTION	QUANTITY	UNITS
6" PVC, SDR 23.5, BUILDING LEAD	562	L.F.
SEWER TAP/CONNECTION	10	EA.

DESCRIPTION	QUANTITY	UNITS
6" D.I., CLASS 54, WATER MAIN	15	L.F.
2" K" COPPER BUILDING SERVICE	571	L.F.
6" HYDRANT ASSEMBLY	1	EA.
2" STOP BOX	10	EA.
WATER MAIN CONNECTION	10	EA.

UTILITY CROSSING SCHEDULE

X1 PR. 6" SAN. B/P 128.35 EX. 6" WM. T/P 127.59 (V.I.F.)	X13 PR. 2" WM. B/P 127.35 EX. 15" COMB. T/P 121.55
X2 PR. 2" WM. B/P EX. 24" COMB. T/P 127.92 (V.I.F.)	X14 PR. 6" SAN. B/P 128.16 PR. 18" STM. T/P 126.64
X3 PR. 6" SAN. B/P 128.60 EX. 6" WAT. T/P 127.35 (V.I.F.) (CONCRETE CRADLE)	X15 PR. 6" WM. B/P 127.35 EX. 15" COMB. T/P 121.76
X4 PR. 12" STM. B/P 128.57 EX. 15" COMB. T/P 126.31 (V.I.F.)	X16 PR. 2" WM. B/P 127.86 EX. 15" COMB. T/P 121.55 (V.I.F.)
X5 PR. 12" STM. B/P 128.56 EX. 6" WM. T/P 127.03 (V.I.F.)	X17 PR. 2" WM. B/P 127.15 EX. 15" COMB. T/P 120.83 (V.I.F.)
X6 PR. 12" STM. B/P 127.99 EX. 6" WM. T/P 127.55 (V.I.F.) (CONCRETE CRADLE)	X18 PR. 6" SAN. B/P 127.65 PR. 12" STM. T/P 126.99
X7 PR. 6" SAN. B/P 127.84 EX. 6" WM. B/P 127.58 (V.I.F.)	X19 PR. 6" WM. B/P 126.32 EX. 15" COMB. T/P 120.17 (V.I.F.)
X8 PR. 2" WM. B/P 127.74 EX. 15" COMB. T/P 122.80 (V.I.F.)	X20 PR. 2" WM. B/P 126.13 EX. 15" COMB. T/P 118.11 (V.I.F.)
X9 EX. 6" WM. B/P 127.33 (V.I.F.) PR. 15" STM. T/P 122.93 (CONCRETE CRADLE)	X21 PR. 12" STM. B/P 126.16 PR. 2" WM. T/P 124.66
X10 EX. 6" WM. B/P 127.30 (V.I.F.) PR. 21" STM. T/P 126.39 (CONCRETE CRADLE)	X22 PR. 12" STM. B/P 126.09 EX. 6" WM. 125.14
X11 PR. 21" STM. B/P 124.18 EX. 15" SAN. T/P 122.12 (V.I.F.)	X23 PR. 12" STM. B/P 126.06 EX. 6" WM T/P 125.12
X12 EX. 6" SAN. B/P 127.42 PR. 6" WM. T/P 127.84 (V.I.F.)	X24 PR. 12" STM. B/P 127.71 PR. 6" SAN. T/P 126.21
	X25 PR. 6" SAN. B/P 127.78 PR. 21" STM. T/P 126.30

LEGEND

(Symbol)	MANHOLE	EXISTING SANITARY SEWER
(Symbol)	HYDRANT	SAN. CLEAN OUT
(Symbol)	MANHOLE	EXISTING WATER MAIN
(Symbol)	MANHOLE	EXISTING STORM SEWER
(Symbol)	UTILITY POLE	EX. R. Y. CATCH BASIN
(Symbol)	GUY POLE	EXISTING BURIED CABLES
(Symbol)	GUY WIRE	OVERHEAD LINES
(Symbol)	MANHOLE	LIGHT POLE
(Symbol)	HYDRANT	SIGN
(Symbol)	MANHOLE	EXISTING GAS MAIN
(Symbol)	GATE VALVE	PR. SANITARY SEWER
(Symbol)	C.B. MANHOLE	PR. WATER MAIN
(Symbol)	INLET	PR. STORM SEWER
(Symbol)		PR. R. Y. CATCH BASIN
(Symbol)		SAND BACKFILL (95% DENSITY)
(Symbol)		PROPOSED LIGHT POLE

UTILITY CROSSING SCHEDULE

DESCRIPTION	QUANTITY	UNITS
6" PVC, SDR 23.5, BUILDING LEAD	562	L.F.
SEWER TAP/CONNECTION	10	EA.

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UTILITY CROSSING SCHEDULE

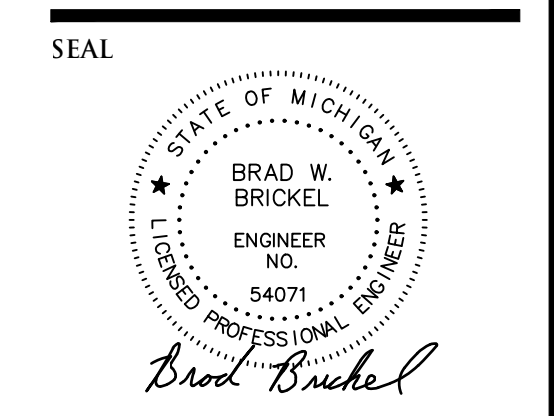
X1 PR. 6" SAN. B/P 128.35 EX. 6" WM. T/P 127.59 (V.I.F.)	X13 PR. 2" WM. B/P 127.35 EX. 15" COMB. T/P 121.55
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X3 PR. 6" SAN. B/P 128.60 EX. 6" WAT. T/P 127.35 (V.I.F.) (CONCRETE CRADLE)	X15 PR. 6" WM. B/P 127.35 EX. 15" COMB. T/P 121.76
X4 PR. 12" STM. B/P 128.57 EX. 15" COMB. T/P 126.31 (V.I.F.)	X16 PR. 2" WM. B/P 127.86 EX. 15" COMB. T/P 121.55 (V.I.F.)
X5 PR. 12" STM. B/P 128.56 EX. 6" WM. T/P 127.03 (V.I.F.)	X17 PR. 2" WM. B/P 127.15 EX. 15" COMB. T/P 120.83 (V.I.F.)
X6 PR. 12" STM. B/P 127.99 EX. 6" WM. T/P 127.55 (V.I.F.) (CONCRETE CRADLE)	X18 PR. 6" SAN. B/P 127.65 PR. 12" STM. T/P 126.99
X7 PR. 6" SAN. B/P 127.84 EX. 6" WM. B/P 127.58 (V.I.F.)	X19 PR. 6" WM. B/P 126.32 EX. 15" COMB. T/P 120.17 (V.I.F.)
X8 PR. 2" WM. B/P 127.74 EX. 15" COMB. T/P 122.80 (V.I.F.)	X20 PR. 2" WM. B/P 126.13 EX. 15" COMB. T/P 118.11 (V.I.F.)
X9 EX. 6" WM. B/P 127.33 (V.I.F.) PR. 15" STM. T/P 122.93 (CONCRETE CRADLE)	X21 PR. 12" STM. B/P 126.16 PR. 2" WM. T/P 124.66
X10 EX. 6" WM. B/P 127.30 (V.I.F.) PR. 21" STM. T/P 126.39 (CONCRETE CRADLE)	X22 PR. 12" STM. B/P 126.09 EX. 6" WM. 125.14
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X12 EX. 6" SAN. B/P 127.42 PR. 6" WM. T/P 127.84 (V.I.F.)	X24 PR. 12" STM. B/P 127.71 PR. 6" SAN. T/P 126.21
	X25 PR. 6" SAN. B/P 127.78 PR. 21" STM. T/P 126.30

LEGEND

(Symbol)	MANHOLE	EXISTING SANITARY SEWER
(Symbol)	HYDRANT	SAN. CLEAN OUT
(Symbol)	MANHOLE	EXISTING WATER MAIN
(Symbol)	MANHOLE	EXISTING STORM SEWER
(Symbol)	UTILITY POLE	EX. R. Y. CATCH BASIN
(Symbol)	GUY POLE	EXISTING BURIED CABLES
(Symbol)	GUY WIRE	OVERHEAD LINES
(Symbol)	MANHOLE	LIGHT POLE
(Symbol)	HYDRANT	SIGN
(Symbol)	MANHOLE	EXISTING GAS MAIN
(Symbol)	GATE VALVE	PR. SANITARY SEWER
(Symbol)	C.B. MANHOLE	PR. WATER MAIN
(Symbol)	INLET	PR. STORM SEWER
(Symbol)		PR. R. Y. CATCH BASIN
(Symbol)		SAND BACKFILL (95% DENSITY)
(Symbol)		PROPOSED LIGHT POLE



NOWAK & FRAUS ENGINEERS
 4677 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257
 WWW.NOWAKFRAUS.COM



PROJECT
 Scripps District
 3700 Trumbull

CLIENT
 3701 Lincoln, LLC
 6905 Telegraph Road,
 Bloomfield Hills, MI 48301

Contact: Tim Loughrin
 Phone: 248.282.1428
Contact: Jason Jones
 Phone: 313.575.6835
Contact: George Roberts
 Phone: 248.302.8662

PROJECT LOCATION
 Part of Hodges Bros.
 Subdivision of Outlots
 98, 99, 102 & 103
 Woodbridge Farm
 City of Detroit,
 Wayne County, Michigan

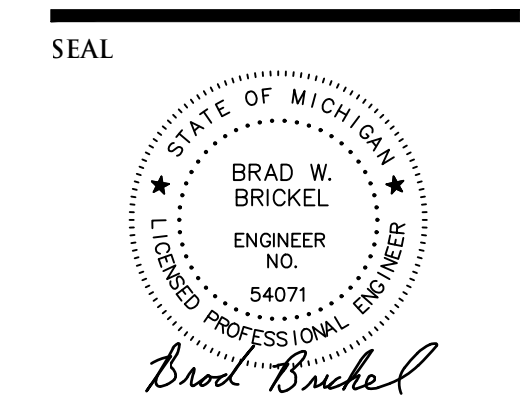
SHEET
 Sanitary Sewer and
 Water Main Plan
 (1 of 2)



DATE ISSUED/REVISED
 08-27-21 ISSUED FOR ENGINEERING REVIEW
 09-20-21 REVISED GRADING
 12-01-21 REVISED PER CITY
 01-05-22 REVISED PER CITY

DRAWN BY:
 J. Lawrey
DESIGNED BY:
 B. Brickel
APPROVED BY:
 B. Brickel

DATE:
 September 10, 2020
SCALE: 1" = 20'
 NFE JOB NO. SHEET NO.
L898 C07



PROJECT
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SHEET
 Storm Drainage
 Profile Plan



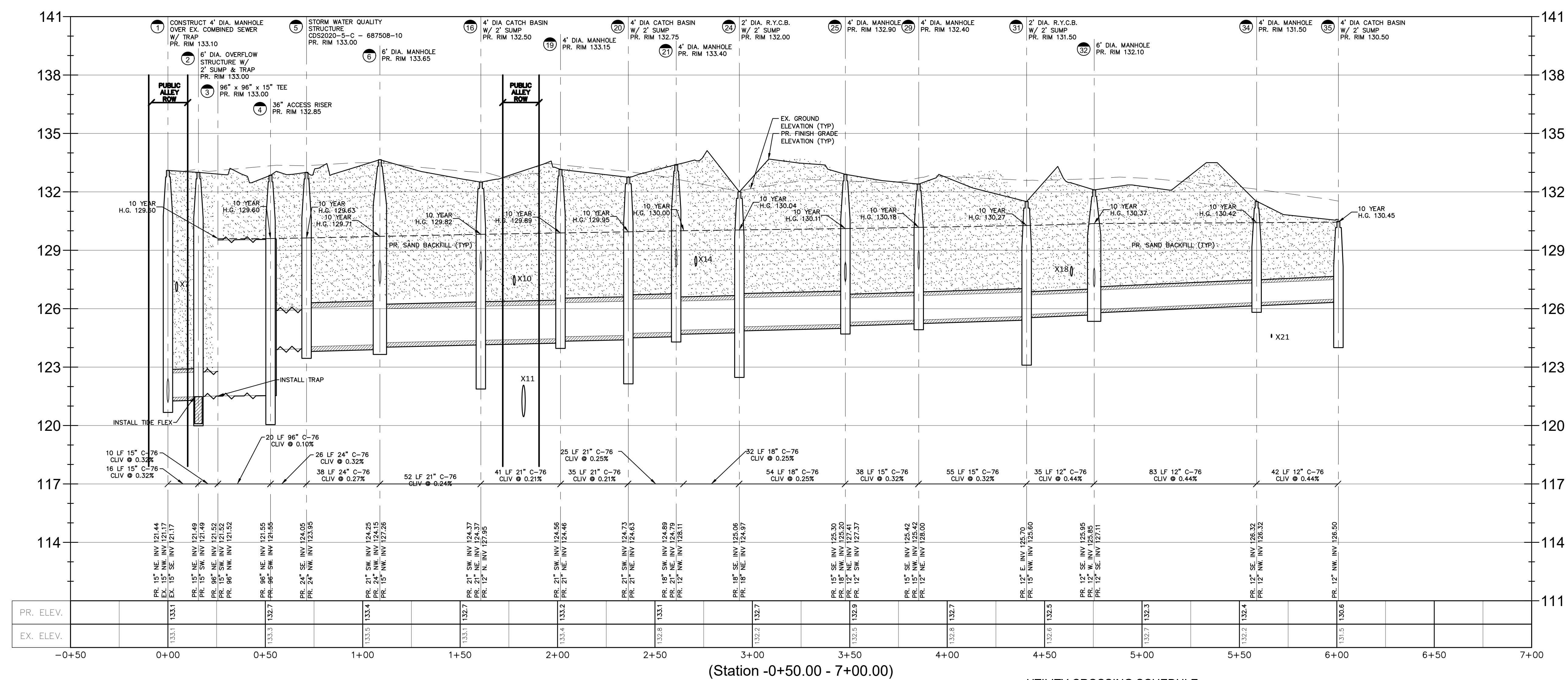
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 B. Brickel

DATE:
 September 10, 2020

SCALE: 1" = 30' / 1" = 3'

NFE JOB NO. SHEET NO.
L898 C08



(Station -0+50.00 - 7+00.00)

UTILITY CROSSING SCHEDULE

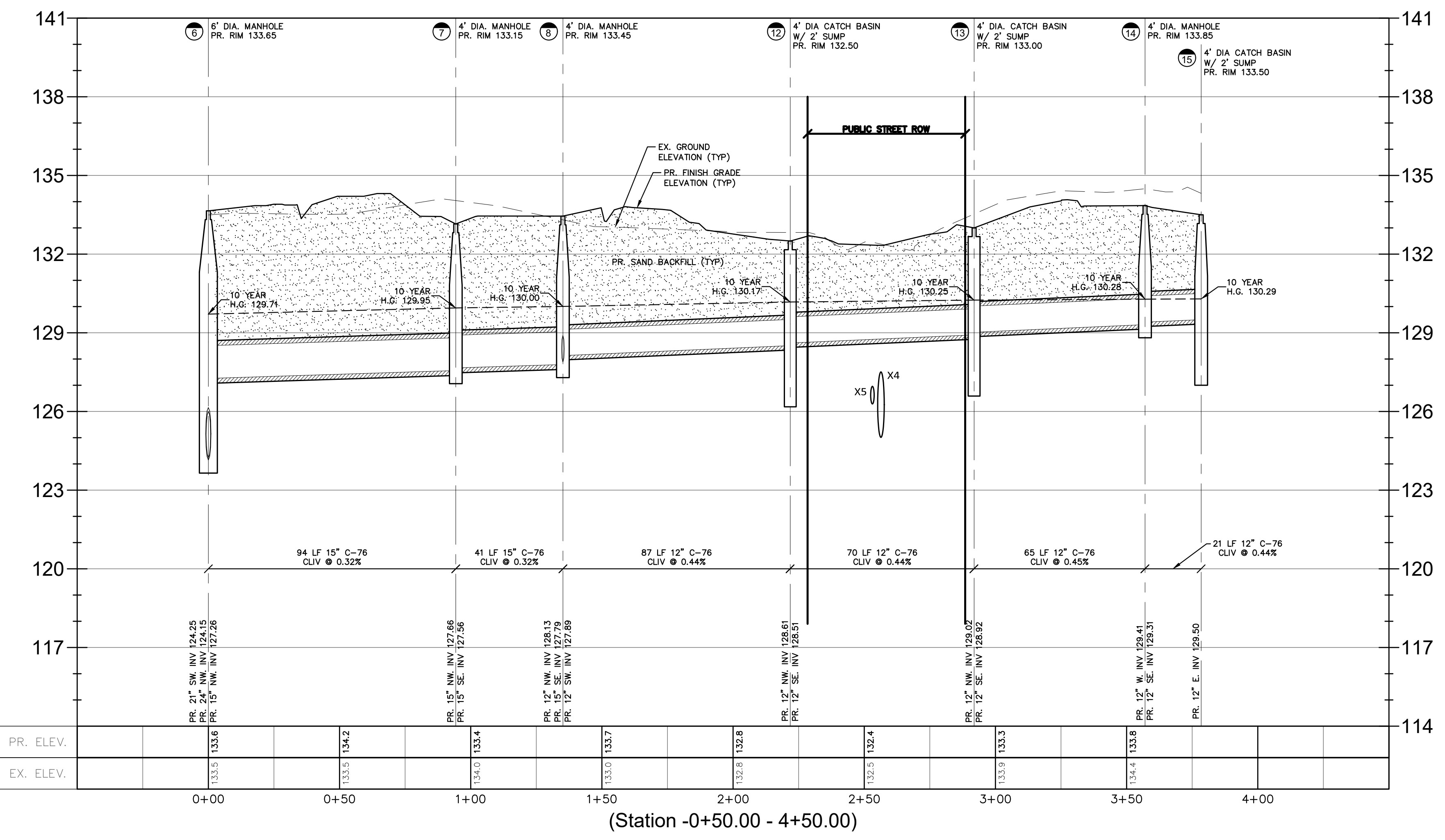
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X6 PR. 12" STM. B/P 127.99 EX. 6" WM. T/P 127.55 (V.I.F.) (CONCRETE CRADLE)	X18 PR. 6" SAN. B/P 127.65 PR. 12" STM. T/P 126.99
X7 PR. 6" SAN. B/P 127.84 EX. 6" WM. B/P 127.58 (V.I.F.)	X19 PR. 6" WM. B/P 126.32 EX. 15" COMB. T/P 120.17 (V.I.F.)
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	X25 PR. 6" SAN. B/P 127.78 PR. 21" STM. T/P 126.30

UTILITY CROSSING NOTE

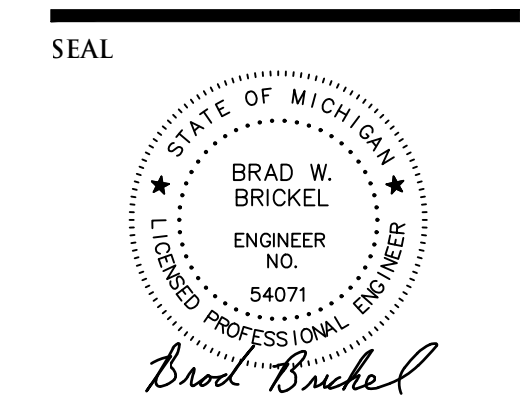
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(Station -0+50.00 - 4+50.00)



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SHEET
Storm Drainage
Profile Plan



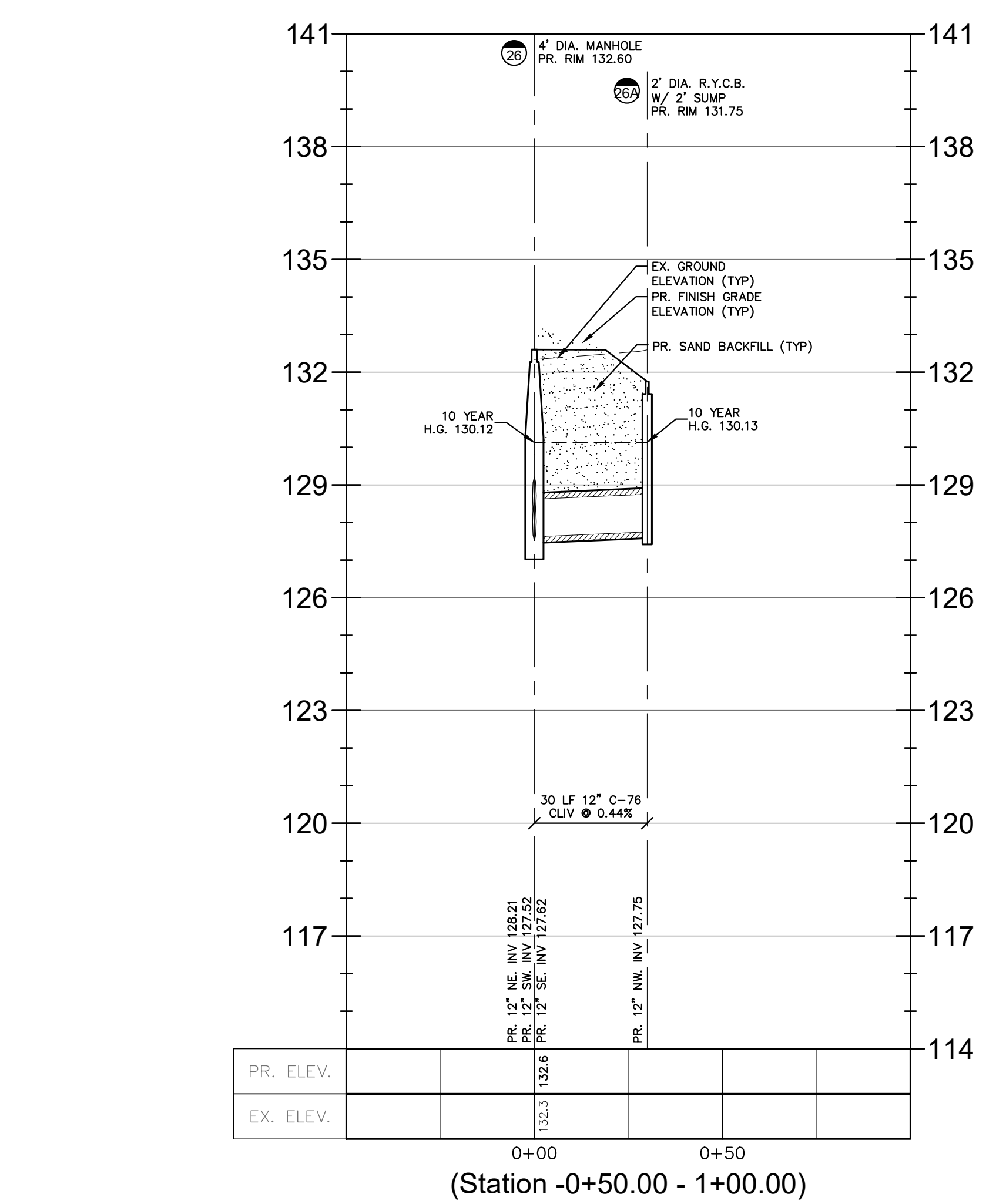
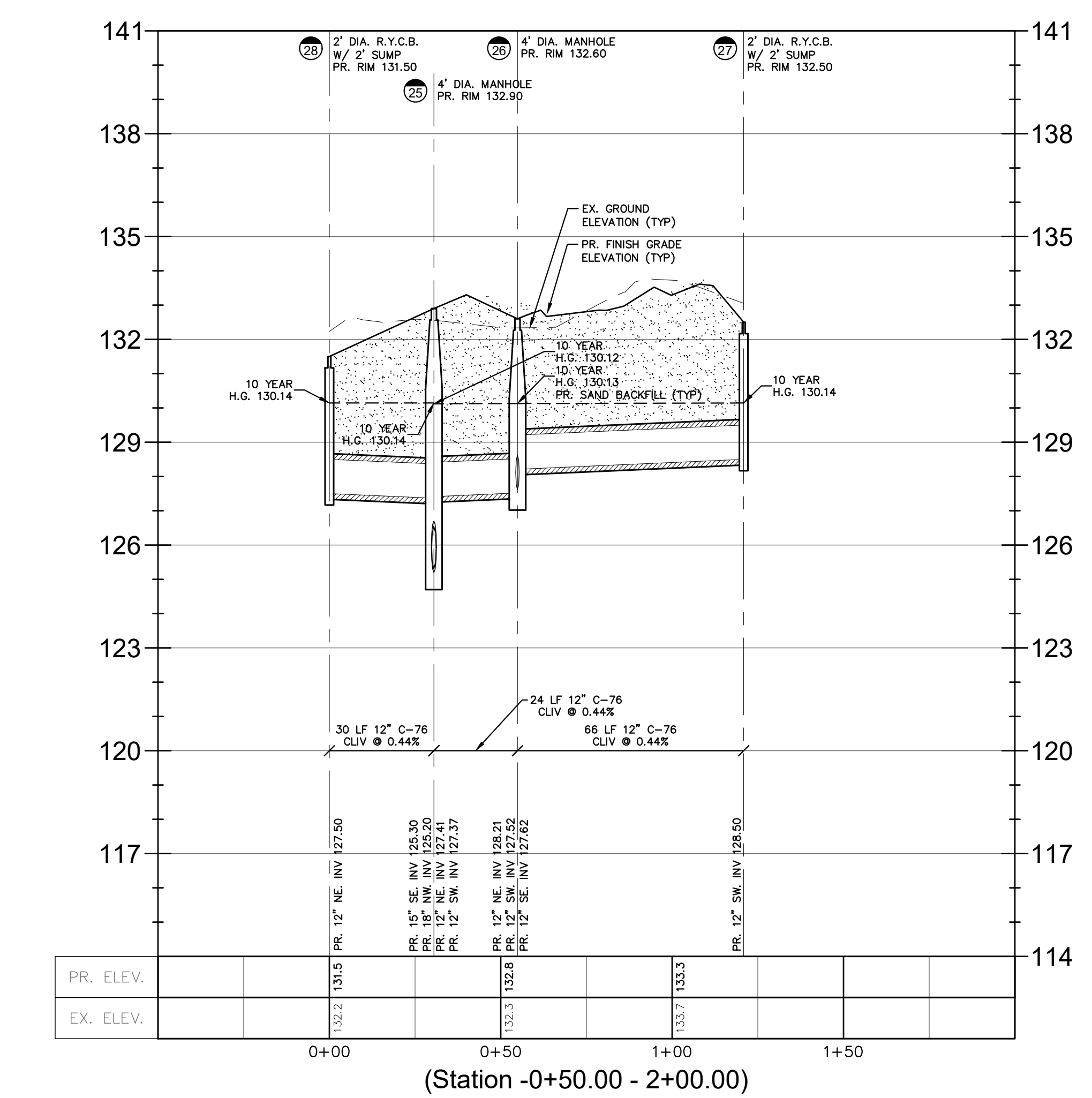
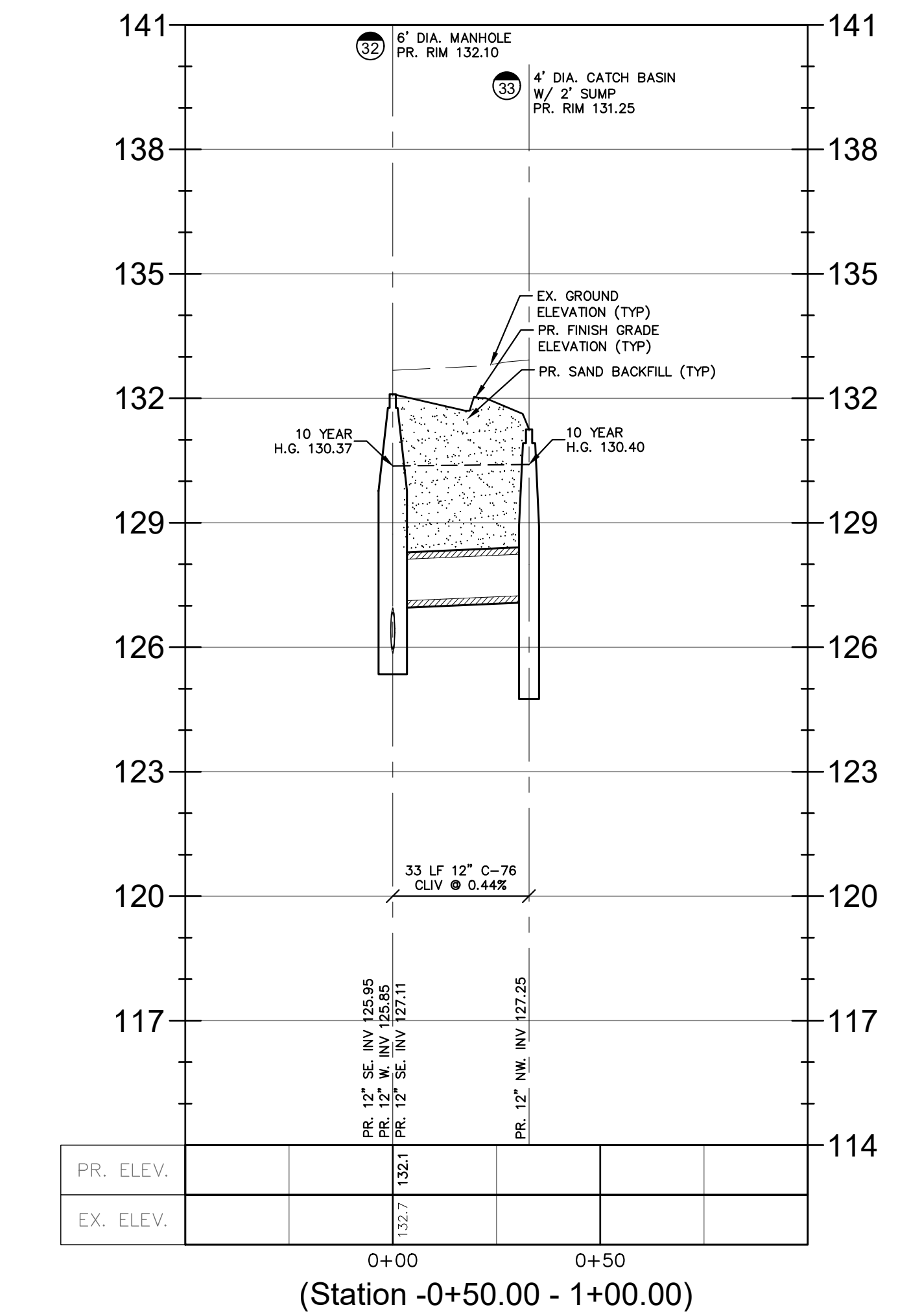
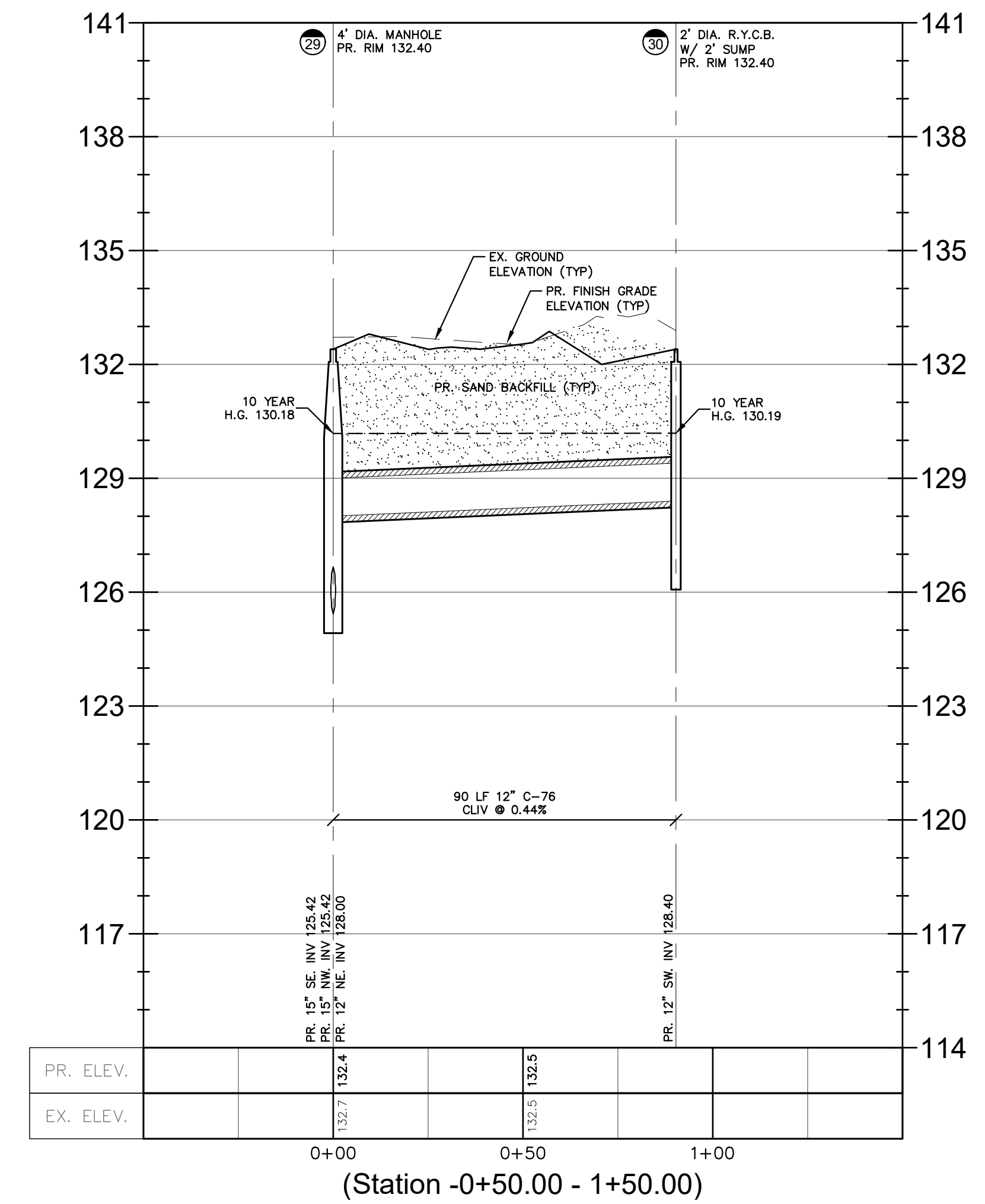
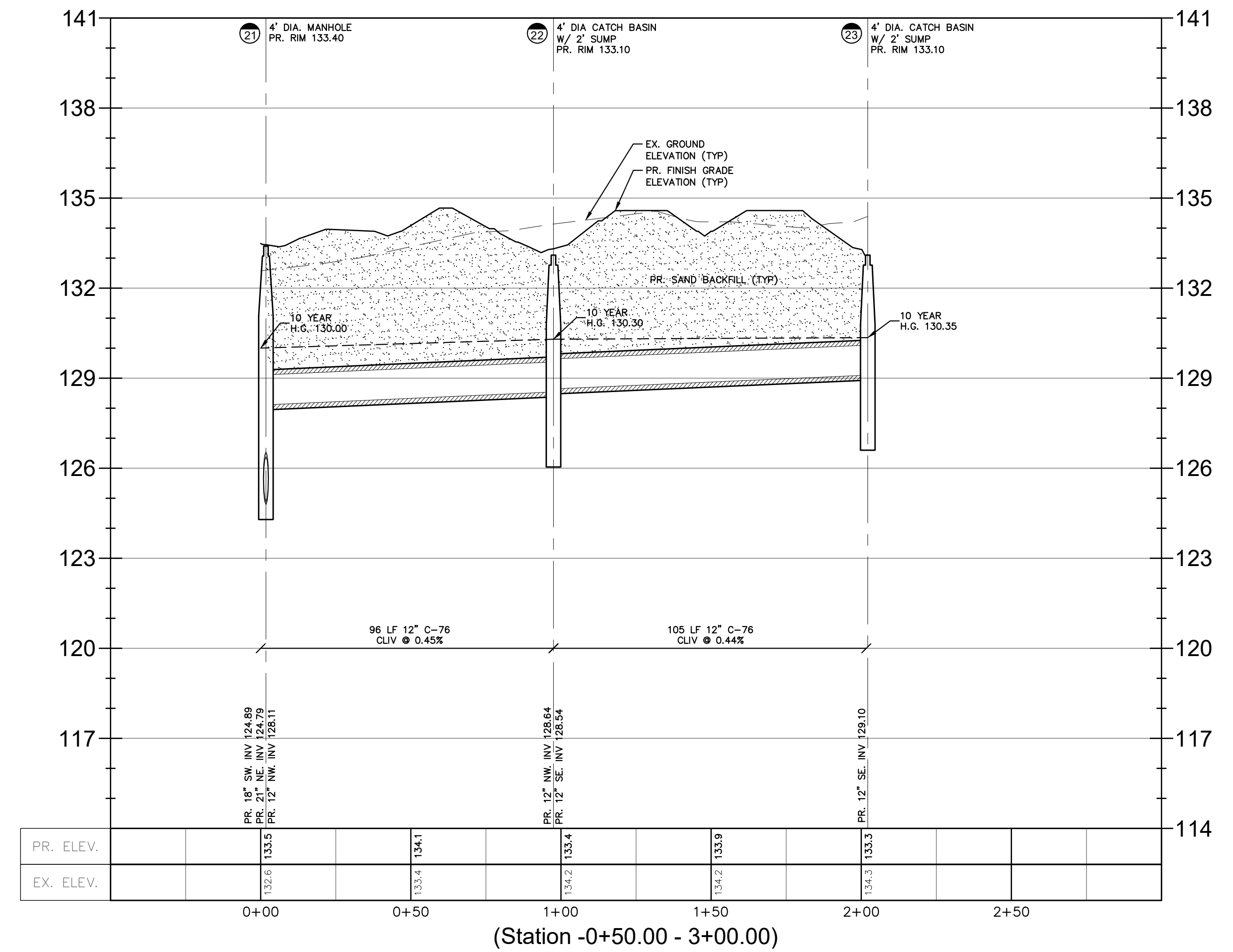
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08-27-21	ISSUED FOR ENGINEERING REVIEW
09-20-21	REVISED GRADING
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DRAWN BY:
J. Lawrey
DESIGNED BY:
B. Brickel
APPROVED BY:
B. Brickel

DATE:
September 10, 2020

SCALE: 1" = 30' / 1" = 3'

NFE JOB NO. SHEET NO.
L898 C09



UTILITY CROSSING SCHEDULE

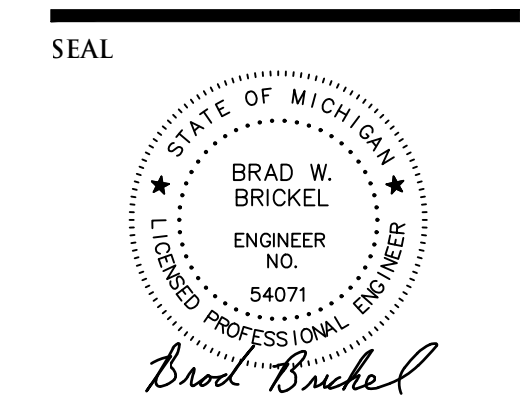
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SHEET
 Storm Drainage
 Profile Plan



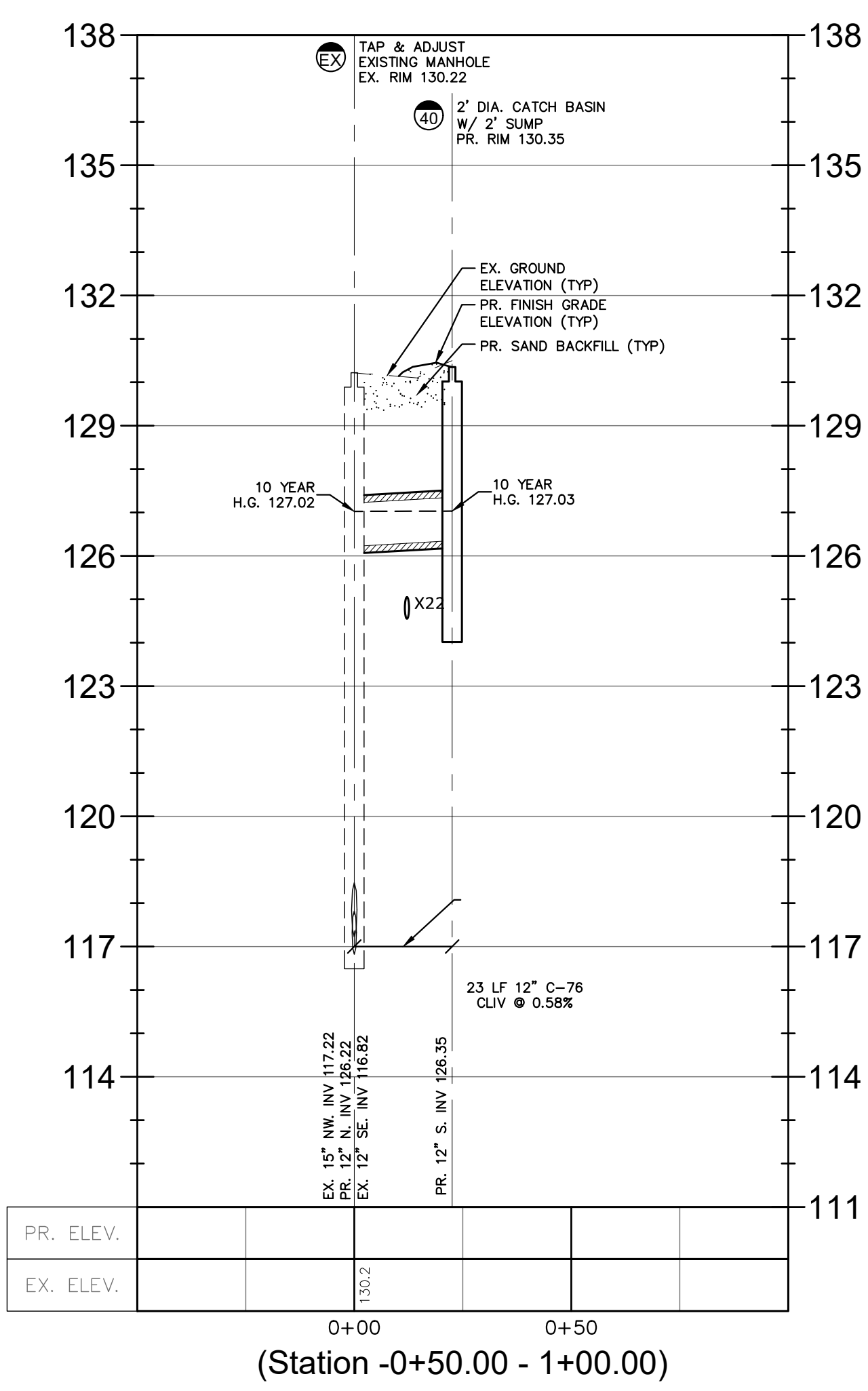
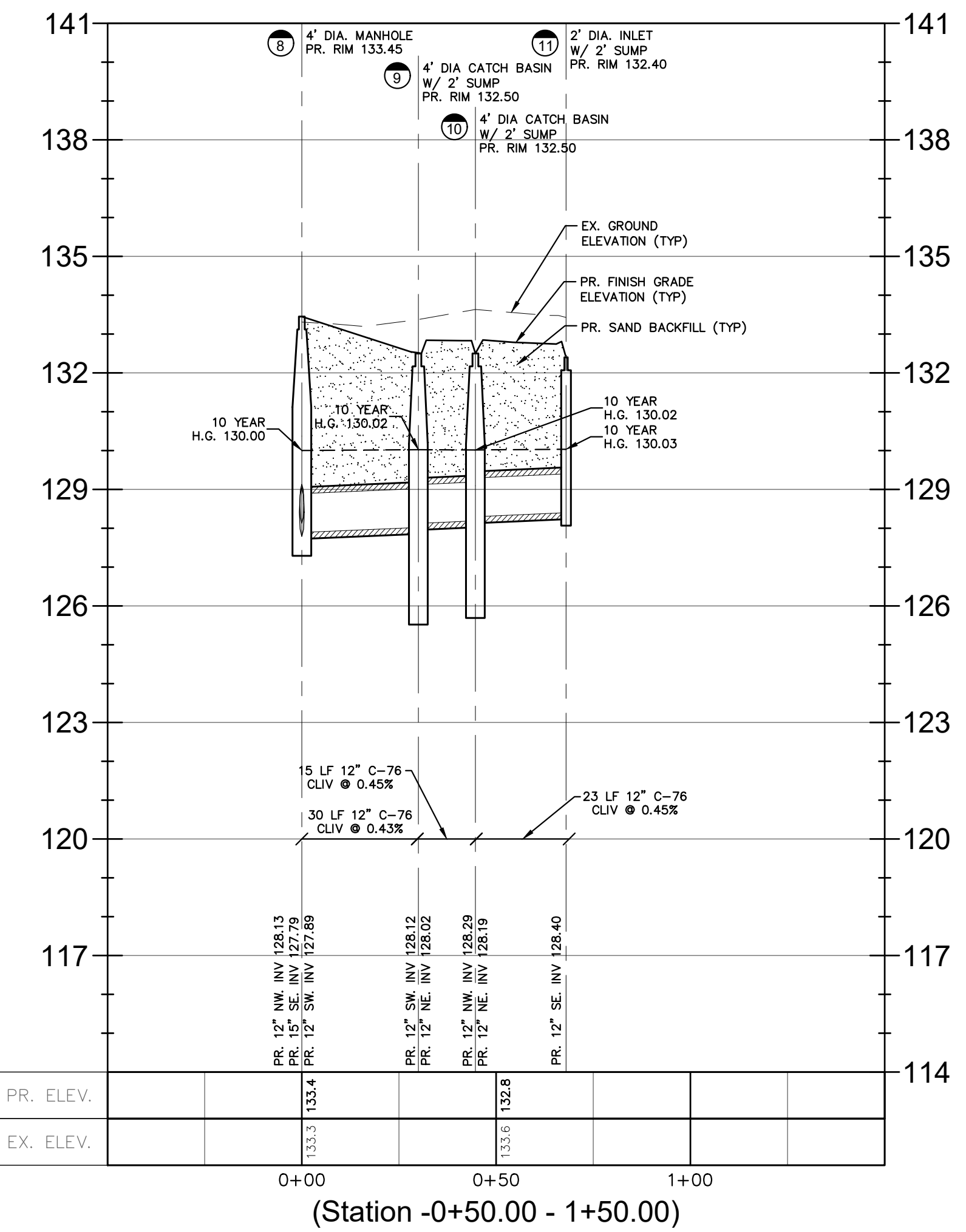
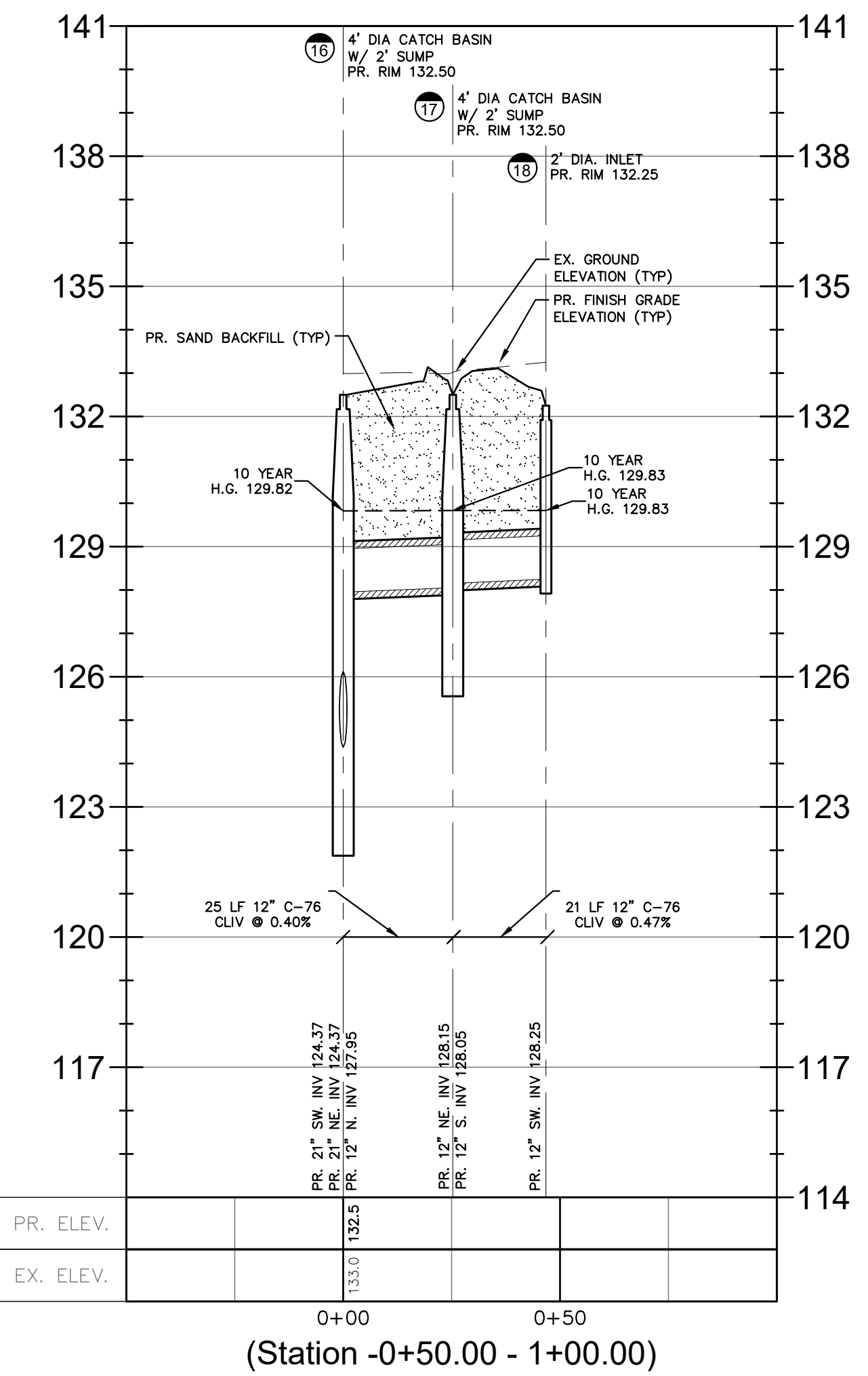
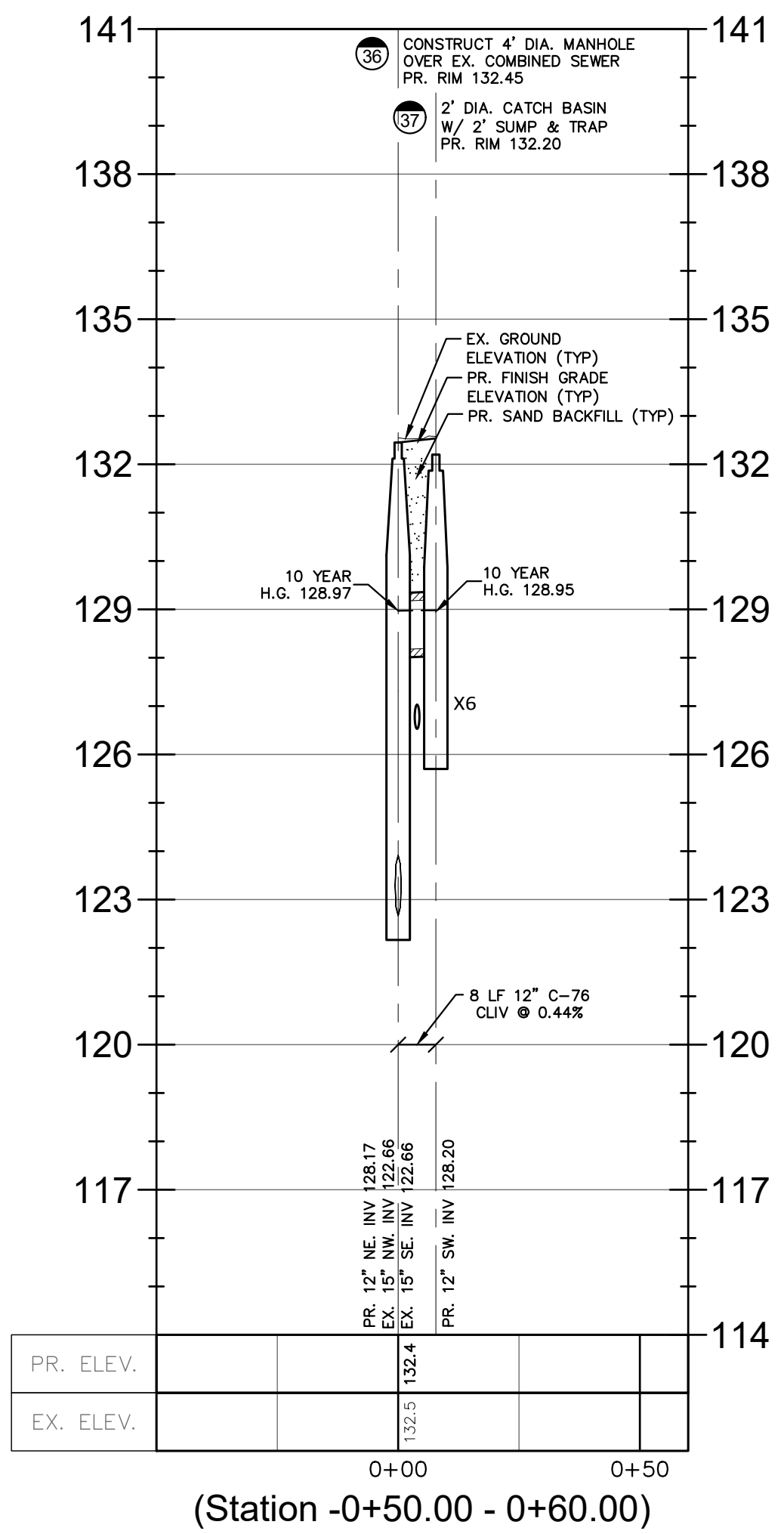
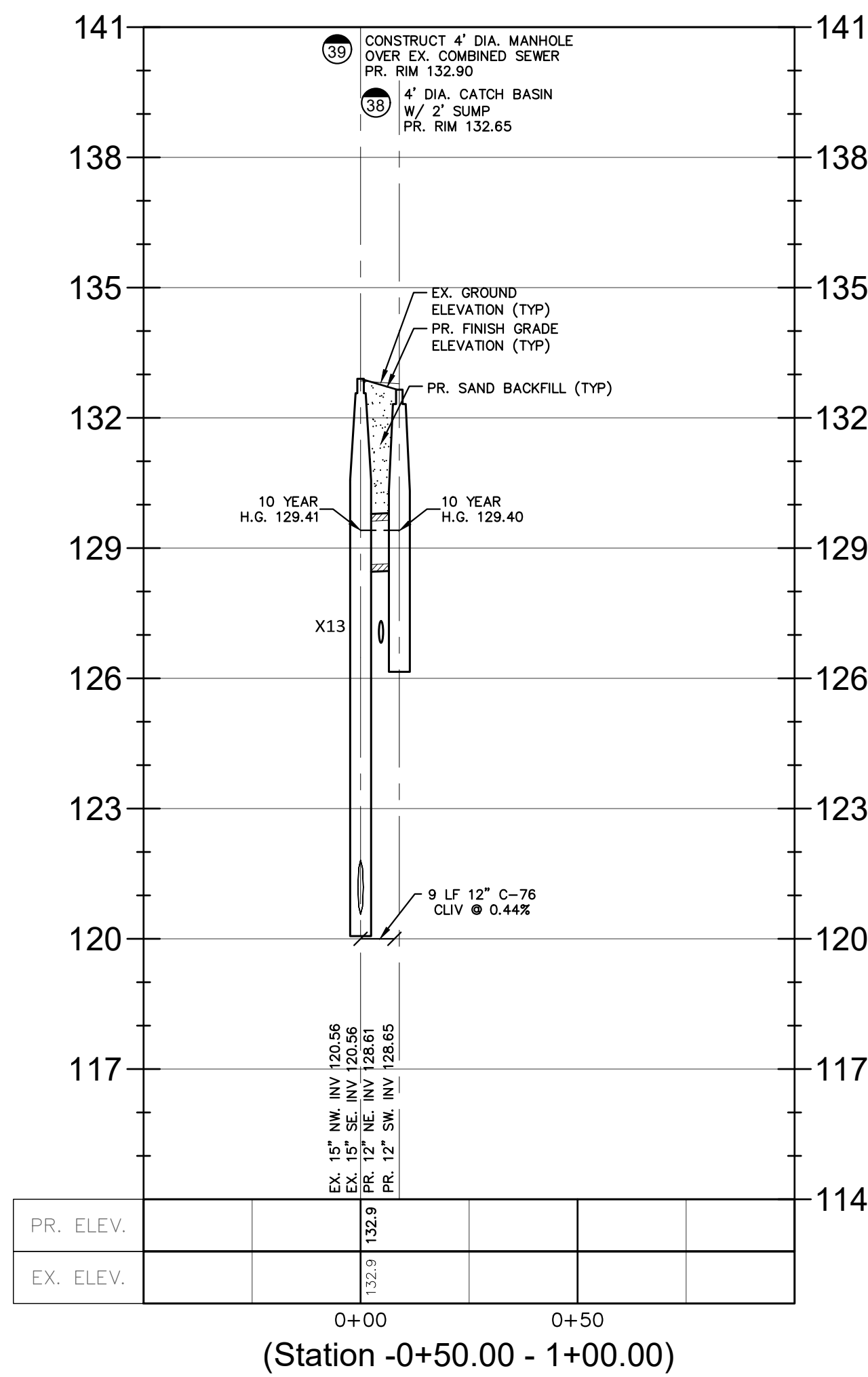
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DRAWN BY:
 J. Lawrey
 DESIGNED BY:
 B. Brickel
 APPROVED BY:
 B. Brickel

DATE:
 September 10, 2020

SCALE: 1" = 30' / 1" = 3'

NFE JOB NO. SHEET NO.
L898 C10



UTILITY CROSSING SCHEDULE

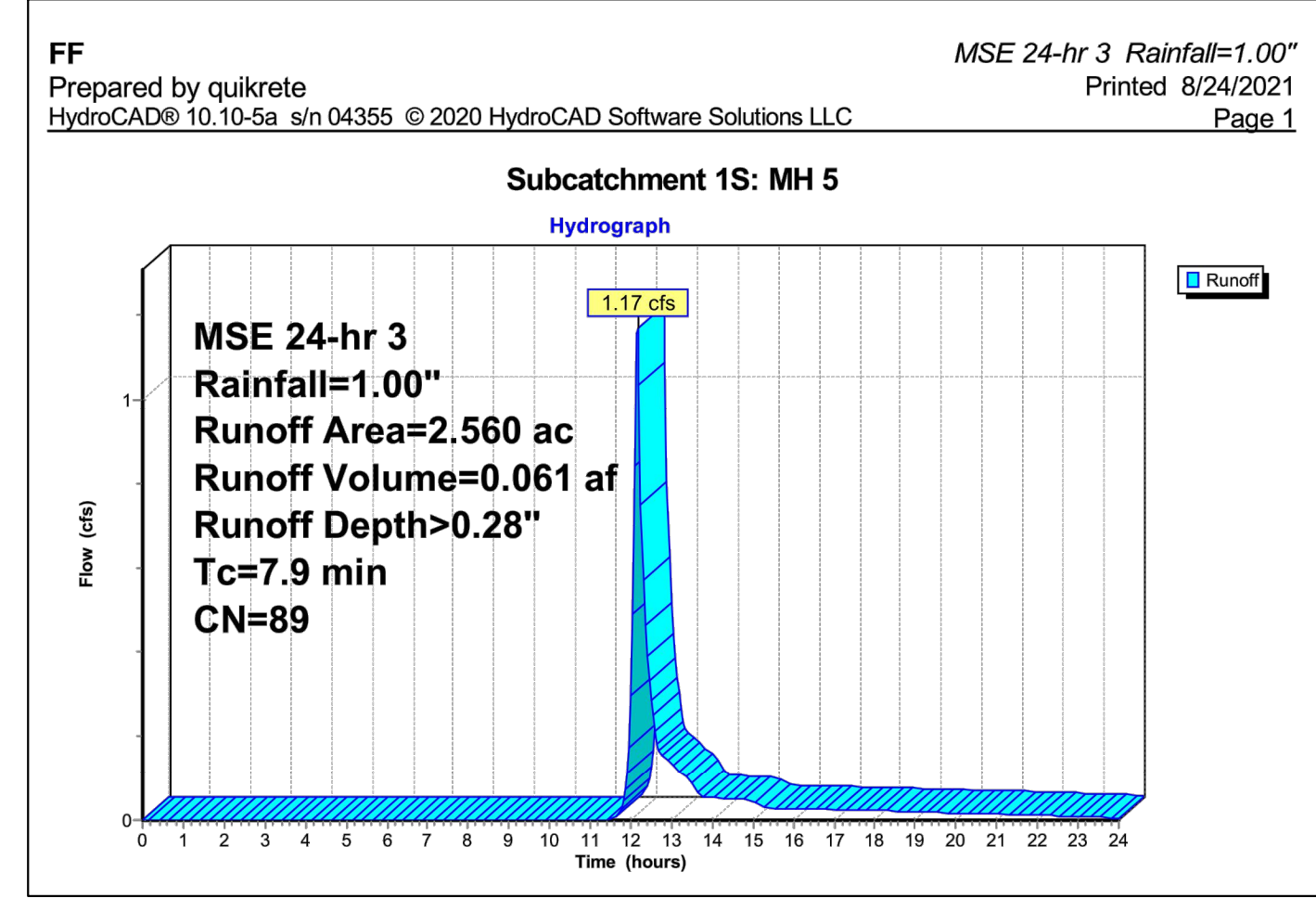
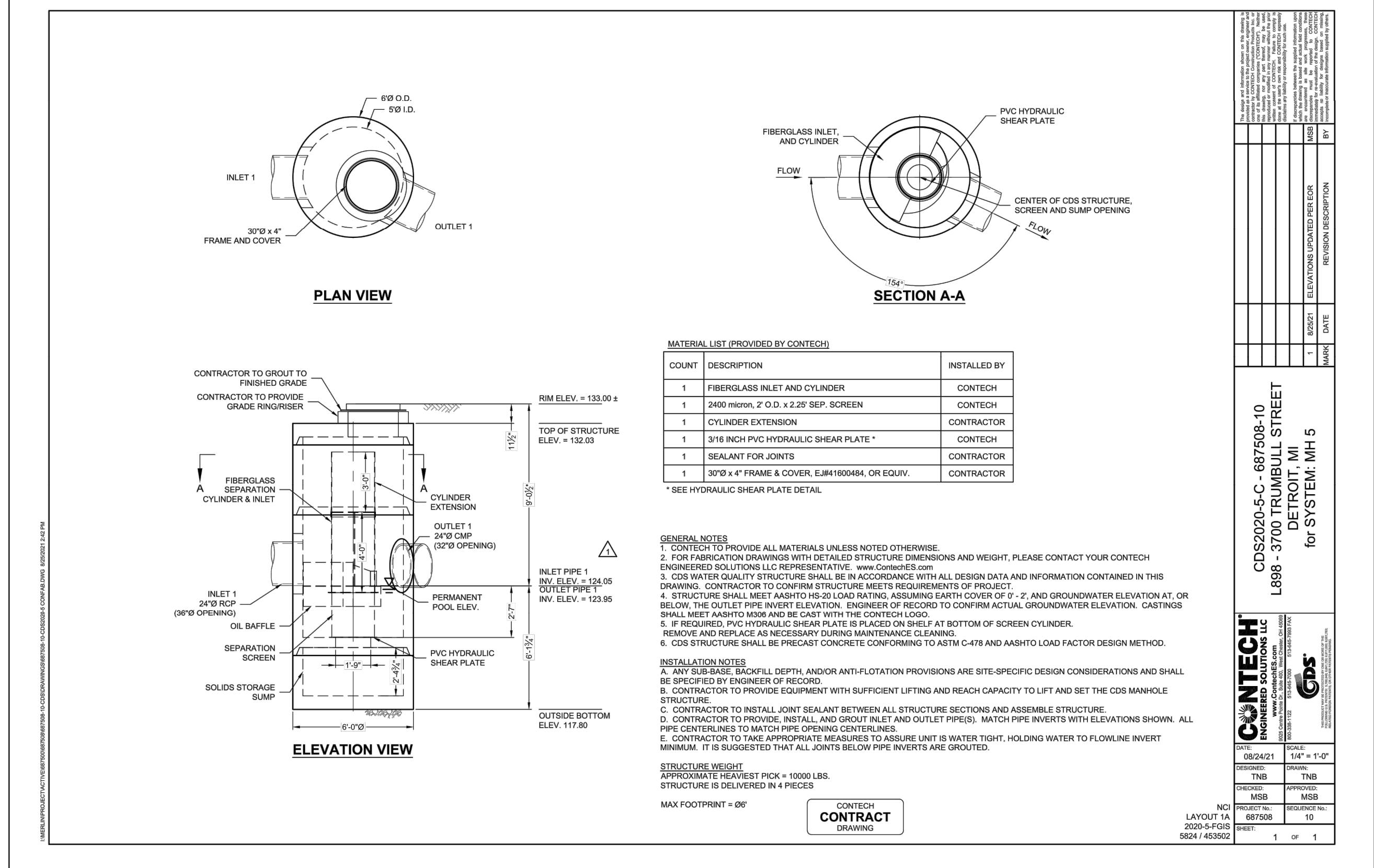
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Estimated Net Annual Solids Load Reduction
 Based on the Rational Rainfall Method

3700 Trumbull Street
 Detroit, MI
 Water Quality Unit

AREA (acres): 2.56
 WEIGHTED C: 0.80
 Tc (minutes): 7.9

CDS MODEL: 2020
 PARTICLE SIZE (µm): 110

Rainfall Intensity ¹ (in/hr)	Percent Rainfall Volume ¹	Cumulative Rainfall Volume	Total Flowrate (cfs)	Removal Efficiency (%)	Incremental Removal (%)
0.02	13.13%	13.1%	0.04	100.00	13.13
0.04	11.36%	24.5%	0.08	99.61	11.32
0.06	10.08%	34.6%	0.12	98.73	9.95
0.08	7.49%	42.1%	0.16	97.84	7.33
0.10	7.01%	49.1%	0.20	96.96	6.80
0.12	5.37%	54.4%	0.25	96.07	5.16
0.14	4.73%	59.2%	0.29	95.19	4.50
0.16	4.13%	63.3%	0.33	94.30	3.89
0.18	3.53%	66.8%	0.37	93.42	3.30
0.20	2.99%	69.8%	0.41	92.53	2.77
0.25	5.50%	75.3%	0.51	90.32	4.97
0.30	4.47%	79.8%	0.61	88.11	3.94
0.35	3.85%	83.6%	0.72	85.90	3.31
0.40	2.16%	85.8%	0.82	83.7	1.8
0.45	2.09%	87.9%	0.92	81.5	1.7
0.50	1.31%	89.2%	1.02	79.3	1.0
0.75	5.07%	94.3%	1.54	55.9	2.8
1.00	2.58%	96.9%	2.05	41.7	1.1
1.50	2.50%	99.4%	3.07	27.8	0.7
2.00	0.51%	99.9%	4.10	20.8	0.1
2.54	0.15%	100.0%	5.20	16.4	0.0
					89.63

Predicted % Annual Rainfall Treated = 95.3%
 Predicted Net Annual Load Removal Efficiency = 89.6%

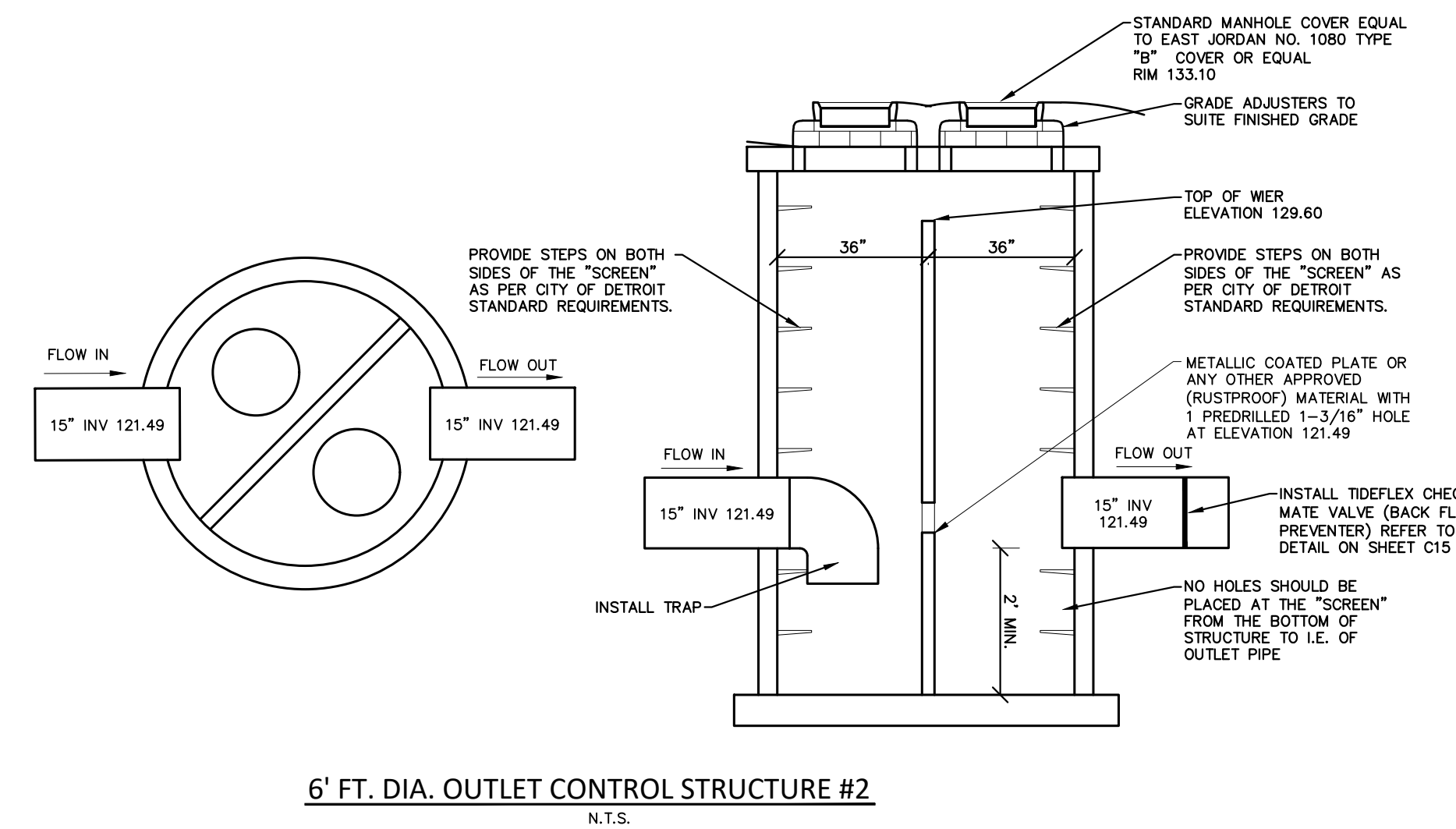
1 - Based on Rainfall Data from DETROIT METRO AP Station

City of Detroit, Wayne County, MI
 Storm Sewer Calculations

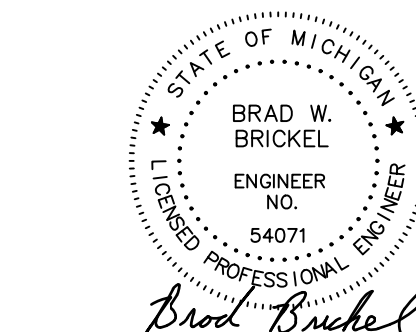
Project No: L898
 Project Name: Scripps District
 Location: 3700 Trumbull Townhomes
 Date: 08/19/21

T = 5 Minutes Time of Concentration
 I = 38.4164" 10 Year Storm Event Intensity
 n (Conc.) = 0.013 Manning's Roughness Coefficient
 n (Pvc) = 0.010 Manning's Roughness Coefficient

Drainage Area (Location)	From Manhole Number	To Manhole Number	Drainage Area (Acres)	Runoff Coefficient (C)	Equivalent Area (C*A)	Total Area (Sum C*A)	Time of Concentration (Minutes)	Rainfall Intensity (Inches/Hr)	Actual Discharge (CFS)	Pipe Size (Inches)	Pipe Slope (% Slope)	Pipe Length (Feet)	Flow Full Velocity (Ft/Sec)	Time of Flow (Minutes)	Full Pipe Capacity (CFS)	H. G. Elev. Upper End (Feet)	H. G. Elev. Lower End (Feet)	H. G. Slope	Theoretical Velocity (Ft/Sec)	Ground Elevation (Upper)	Change in Elevation (Feet)	Invert Elev. Upper End (Feet)	Invert Elev. Lower End (Feet)
A	35	34	0.200	0.80	0.160	0.160	5.00	5.644	0.903	12	0.44	42	3.009	0.23	2.36	130.45	130.42	0.064	1.150	130.50	0.18	126.50	126.32
---	34	32	0.000	0.80	0.000	0.160	5.23	5.581	0.893	12	0.44	83	3.009	0.46	2.36	130.42	130.37	0.063	1.137	131.50	0.37	126.32	125.95
B	33	32	0.230	0.80	0.184	0.184	5.00	5.644	1.039	12	0.44	33	3.009	0.18	2.36	130.40	130.37	0.085	1.322	131.25	0.15	127.25	127.10
---	32	31	0.000	0.80	0.000	0.344	5.69	5.461	1.879	12	0.44	35	3.009	0.19	2.36	130.37	130.28	0.278	2.392	132.00	0.15	125.85	125.70
C	31	29	0.170	0.80	0.136	0.480	5.89	5.412	2.598	15	0.32	55	2.978	0.31	3.65	130.28	130.19	0.162	2.117	131.50	0.18	125.60	125.42
D	30	29	0.050	0.80	0.040	0.040	5.00	5.644	0.226	12	0.44	90	3.009	0.50	2.36	130.19	130.19	0.004	0.287	132.40	0.40	128.40	128.00
---	29	25	0.000	0.80	0.000	0.520	6.19	5.337	2.775	15	0.32	38	2.978	0.21	3.65	130.19	130.12	0.185	2.261	132.40	0.12	125.42	125.30
E	28	25	0.080	0.80	0.064	0.064	5.00	5.644	0.361	12	0.44	30	3.009	0.17	2.36	130.14	130.14	0.010	0.460	131.50	0.13	127.50	127.37
F	27	26	0.050	0.80	0.040	0.040	5.00	5.644	0.226	12	0.44	66	3.009	0.37	2.36	130.14	130.14	0.004	0.287	132.50	0.29	128.50	128.21
G	26A	26	0.110	0.80	0.088	0.104	5.00	5.644	0.587	12	0.44	30	3.009	0.17	2.36	130.14	130.13	0.027	0.747	131.75	0.13	127.75	127.62
---	26	25	0.000	0.80	0.000	0.144	5.37	5.546	0.799	12	0.44	24	3.009	0.13	2.36	130.13	130.12	0.050	1.017	133.20	0.11	127.52	127.41
---	25	24	0.000	0.80	0.000	0.728	6.41	5.286	3.848	18	0.25	54	2.972	0.30	5.25	130.12	130.04	0.134	2.178	132.90	0.14	125.20	125.07
H	24	21	0.080	0.80	0.064	0.792	6.71	5.215	4.130	18	0.25	32	2.972	0.18	5.25	130.04	129.99	0.155	2.337	132.00	0.08	124.97	124.89
I	23	22	0.170	0.80	0.136	0.136	5.00	5.644	0.768	12	0.44	104	3.009	0.58	2.36	130.34	130.30	0.046	0.977	133.10	0.46	129.10	128.64
J	22	21	0.280	0.80	0.224	0.360	5.58	5.491	1.977	12	0.44	98	3.009	0.54	2.36	130.30	129.99	0.308	2.517	133.10	0.43	128.54	128.11
---	21	20	0.000	0.80	0.000	1.152	6.89	5.174	5.960	21	0.21	29	3.019	0.16	7.26	129.99	129.95	0.142	2.478	133.40	0.06	124.79	124.73
K	20	19	0.170	0.80	0.136	1.288	7.05	5.138	6.618	21	0.21	35	3.019	0.19	7.26	129.95	129.89	0.174	2.751	132.75	0.07	124.63	124.56
---	19	16	0.000	0.80	0.000	1.288	7.24	5.095	6.563	21	0.21	41	3.019	0.23	7.26	129.89	129.82	0.172	2.728	133.15	0.09	124.46	124.37
L	18	17	0.070	0.80	0.056	0.056	5.00	5.644	0.316	12	0.44	22	3.009	0.12	2.36	129.83	129.83	0.008	0.402	132.25	0.10	128.25	128.15
M	17	16	0.040	0.80	0.032	0.088	5.12	5.611	0.494	12	0.44	23	3.009	0.13	2.36	129.83	129.82	0.019	0.629	132.50	0.10	128.05	127.95
N	16	6	0.090	0.80	0.072	1.448	7.47	5.046	7.307	21	0.24	52	3.227	0.27	7.76	129.82	129.71	0.213	3.038	132.50	0.12	124.37	124.25
O	15	14	0.160	0.80	0.128	0.128	5.00	5.644	0.722	12	0.44	21	3.009	0.12	2.36	130.29	130.28	0.041	0.920	133.50	0.09	129.50	129.41
---	14	13	0.000	0.80	0.000	0.128	5.12	5.612	0.718	12	0.44	65	3.009	0.36	2.36	130.28	130.25	0.041	0.915	133.85	0.29	129.31	129.02
P	13	12	0.120	0.80	0.096	0.224	5.48	5.517	1.236	12	0.44	70	3.009	0.39	2.36	130.25	130.17	0.120	1.573	133.00	0.31	128.92	128.61
Q	12	8	0.080	0.80	0.064	0.288	5.86	5.418	1.560	12	0.44	87	3.009	0.48	2.36	130.17	130.00	0.192	1.987	132.50	0.38	128.51	128.13
R	11	10	0.090	0.80	0.072	0.072	5.00	5.644	0.406	12	0.44	24	3.009	0.13	2.36	130.02	130.02	0.013	0.517	132.40	0.11	128.40	128.29
S	10	9	0.050	0.80	0.040	0.112	5.13	5.608	0.628	12	0.44	15	3.009	0.08	2.36	130.02	130.02	0.031	0.800	132.50	0.07	128.19	128.12
T	9	8	0.050	0.80	0.040	0.152	5.22	5.586	0.849	12	0.44	30	3.009	0.17	2.36	130.02	130.00	0.057	1.081	132.50	0.13	128.02	127.89
---	8	7	0.000	0.80	0.000	0.440	6.35	5.300	2.332	15	0.32	41	2.978	0.23	3.65	130.00	129.95	0.130	1.900	133.45	0.13	127.79	127.66
U	7	6	0.220	0.80	0.176	0.616	6.58	5.246	3.232	15	0.32	94	2.978	0.53	3.65	129.95	129.71	0.250	2.633	133.15	0.30	127.56	127.26
---	6	5	0.000	0.80	0.000	2.064	7.74	4.989	10.298	24	0.30	38	3.944	0.16	12.39	129.71	129.63	0.207	3.278	133.65	0.11	124.16	124.05
---	5	4	0.000	0.80	0.000	2.064	7.90	4.956	10.229	24	0.30	16	3.944	0.07	12.39	129.63	129.60	0.204	3.256	133.00	0.05	123.95	123.90
---	4	3	0.000	0.80	0.000	2.064	7.97	4.942	10.201	96	0.10	33	5.738	0.10	288.42	129.60	129.60	0.000	0.203	132.85	0.03	121.55	121.52
---	3	2	0.000	0.80	0.000	2.064	8.06	4.923	10.160	15	0.32	10	2.978	0.06	3.65			2.474	8.279	133.00	0.03	121.52	121.49
---	2	1	0.000	0.80	0.000	2.064	8.12	4.911	10.137	15	0.32	16	2.978	0.09	3.65			2.463	8.260	133.10	0.05	121.49	121.44
V	37	36	0.060	0.95	0.057	0.057	5.00	5.644	0.322	12	0.32	8	2.566	0.05	2.02	128.98	128.97	0.008	0.410	132.20	0.03	128.20	128.17
W	38	39	0.060	0.95	0.057	0.057	5.00	5.644	0.322	12	0.44	9	3.009	0.05	2.36	129.41	129.41	0.008	0.410	132.20	0.04	128.65	128.61
Y	40	EX	0.130	0.95	0.124	0.124	5.00	5.644	0.697	12	0.58	23	3.455	0.11	2.71	127.03	127.02	0.038	0.888	132.65	0.13	126.35	126.22



SEAL



PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835
Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
Storm Water Management
Plan



Know what's below
Call before you dig.

DATE ISSUED/REVISED
08-27-21 ISSUED FOR ENGINEERING REVIEW
09-20-21 REVISED GRADING
12-01-21 REVISED PER CITY
01-05-22 REVISED PER CITY

DRAWN BY:
J. Lawrey

DESIGNED BY:
B. Brickel

APPROVED BY:
B. Brickel

DATE:
September 10, 2020

SCALE: N.T.S.

Project Name & Location: L898- 3700 Trumbull Street, Detroit, MI

Water Quality Calculations - City of Detroit Methodology

Calculate Post-Development Runoff Coefficient
Runoff Coefficients ("C" Factors) Per DWSD Design Manual, Table 4-8

C-Pervious (Natural, Lawn, Landscape)	0.30
C-Impervious (Roofs & Pavements)	0.95
Total Site Area ("A")	2.39 acres
Area Pervious	0.52 acres
Area Impervious	1.87 acres
Weighted Runoff Coefficient "C"	0.81

Calculate Water Quality Volumes (DWSD SMDM Table 4-5)
Calculate Water Quality Volume (V_{wq}) - "Retention Volume" (1" Storm Event Volume)

V_{wq} = 3630 * C * A (Ref. Detroit Stormwater Design Manual Eqn. 4.11)
V_{wq} = **7015.0 cubic feet**

Calculate Extended Detention Volume (V_{ed}) - "Alternative Compliance for Retention"

V_{ed} = 6897 * C * A (Ref. Detroit Stormwater Design Manual Eqn. 4.12)
V_{ed} = **13328.5 cubic feet**

Proposed Water Quality Statement:
Water quality requirements for this site are proposed to be met via installation of a manufactured treatment device below the "at-grade" parking area for this development. The treatment device shall be sized to remove a minimum of 80% of the total suspended solids (TSS) per New Jersey Dept. of Environmental Protection (NJDEP) standards compared to uncontrolled runoff. An Alternative Compliance is requested from D.W.S.D. to provide extended detention instead of on-site retention/infiltration due to the proposed development's adjacent building has a basement and low infiltration rate. In addition, the infiltration rate of 0.00 in/day was provided by the geotech report.

Project Name & Location: L898- 3700 Trumbull Street, Detroit, MI

Channel / Infrastructure Protection Calculations - City of Detroit Methodology

Calculate Pre-Development Peak flow for 2-year, 24-hour storm event:

Calculate Difference in Pre- and Post-Development Runoff Coefficient
Runoff Coefficients ("C" Factors) Per DWSD Design Manual, Table 4-8

C-Pervious (Natural, Lawn, Landscape)	0.30
C-Impervious (Roofs & Pavements)	0.95

Pre-Development Site

Total Site Area ("A")	2.39 acres
Area Pervious	2.34 acres
Area Impervious	0.05 acres

Pre-Development C **0.31**

Post-Development Site

Total Site Area ("A")	2.39 acres
Area Pervious	0.52 acres
Area Impervious	1.87 acres

Post-Development C **0.81**

ΔC (Post Dev - Pre-Dev) **0.495**

Since Post-Development conditions increase the overall C-factor, calculate 2-yr, 24-hr volume for peak flow control

V_{2-yr} = 6897 * ΔC * A (DWSD Design Manual Pg. 2-41) **8159.2 cubic feet**

Apply Rational Method to Determine pre-development peak flow runoff rate (Q_c = C * I * A)
Calculate 2-yr, Rainfall Intensity "i" at Peak Flow Condition

i = (38.4164 * T^{0.2082}) / (12.3258 + D) * 0.8405 (Ref. Detroit Stormwater Design Manual Eqn. 4.1)
T = return period 2 years
D = Storm Duration (minutes) 5.00 minutes (default T_c for sites <5 acres)
i = design rainfall intensity = **4.037 in/hr**
Q_{pre-2-yr} = C * I * A **3.026 cfs**

Channel Protection & Pre-Development Peak Flow Rate Statement:
Since the post-development condition will increase the site runoff coefficient, this site is being designed to detain the 2-year storm volume based on the increased run-off coefficient. This required detention volume will be included in the total detention volume proposed for the site (to meet volume control and extended detention requirements). The post-development outlet rate will meet the maximum 0.15 cfs/acre requirement for outlet to combined sewer systems, which will also ensure the post-development site outlet rate is less than the pre-development peak flow rate calculated for the 2-year, 24-hour storm.

Project Name & Location: L898- 3700 Trumbull Street, Detroit, MI

10 Year Detention / Flood Control Calculations - City of Detroit Methodology

Post-Development Site

Total Site Area ("A")	2.39 acres
-----------------------	------------

Post-Development C **0.81**

Calculate Critical Storm Duration for 10 year event (D₁₀):

Q_p = peak allowable discharge per acre = 0.15 cfs/acre
C = Rational Coefficient = 0.81
D₁₀ = 30.9 * (Q_p/C) ^ 0.979 (Ref. Detroit Stormwater Design Manual Eqn. 4.7)
D₁₀ = **160.8 min**

Calculate Design Rainfall Intensity (i):

T = return period 10 years
D = critical storm duration = D₁₀ = 160.8 min
i = (38.42 * T^{0.2082}) / (12.33 + D) * 0.841 (Ref. Detroit Stormwater Design Manual Eqn. 4.1)
i = design rainfall intensity = **0.81 in/hr**

Calculate Required Storage Volume (V_n):

A = tributary drainage area = 2.39 acre
C = Rational Coefficient = 0.809
D_n = critical storm duration = D₁₀ = 160.8 min
I = rainfall intensity based on D_n = 0.81 in/hr
Q_p = peak allowable discharge per acre = 0.15 cfs/acre
V_n = 60.5 * D_n * C * A * I - 60 * D_n * Q_p * A (Ref. Detroit Stormwater Design Manual Eqn. 4.9)
V_n = req'd detention volume (10 year) = **11825.6 cubic feet**

Note: Extended detention is being proposed as a method of on-site alternative compliance for retention volume. The calculated volume for extended detention exceeds the calculated volume for the 10-year storm and will be used as the required volume for the site.

V_{ed} = V (required) = **13328.5 cubic feet**

Calculate Orifice Size (for Extended Detention):

Top of Storage Elevation at Outlet Control Structure = T_s = 129.50
Center of Orifice Elevation = Center_{orifice} = 121.39
Tributary Drainage Area = A = 2.39 ac
Q_p = peak allowable discharge per acre = 0.15 cfs/acre
Q_{ult} = allowable discharge for site = Q_p * A = 0.36 cfs
Q_{ext} = ext. det. discharge rate to provide 48-hour drawdown 0.08 cfs
C_{orifice} (per table 7-3) = 0.614 circular
g = gravitational constant = 32.20 ft/s²
h (ave) = T_s - Center_{orifice} * 0.5 = hyd. head for 50% of detention 4.055 ft
Area_{orifice} = Q_{ext} / (C * (2 * g * h) ^ 0.5) = 0.0078 sft
Diameter of Orifice = 1.1939 in
Therefore, use a **1.19 inch diameter hole in weir wall. (1-3/16")**

Calculate Dewatering Time (for Extended Detention):

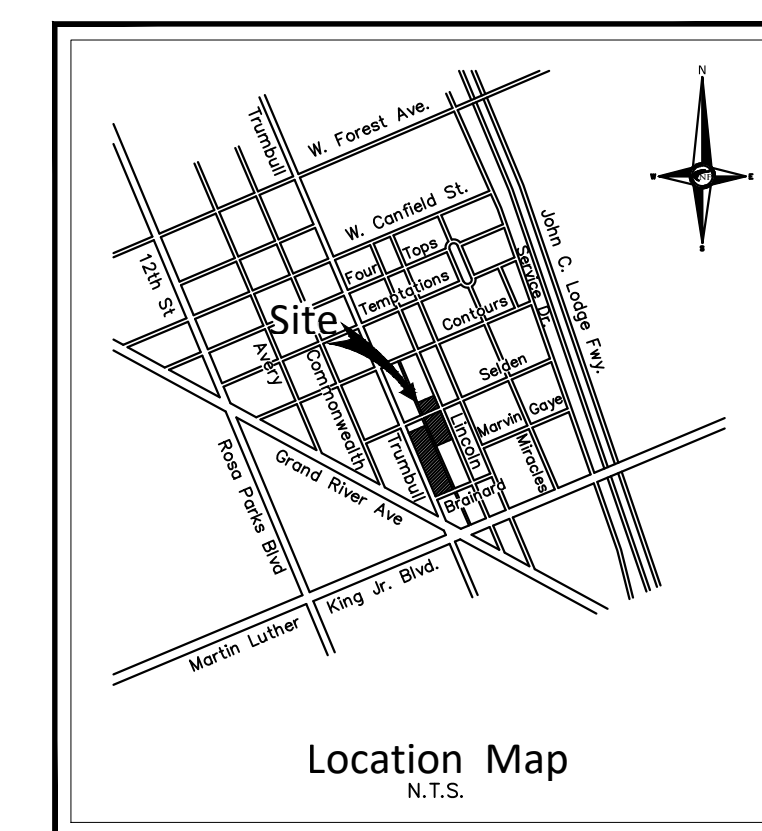
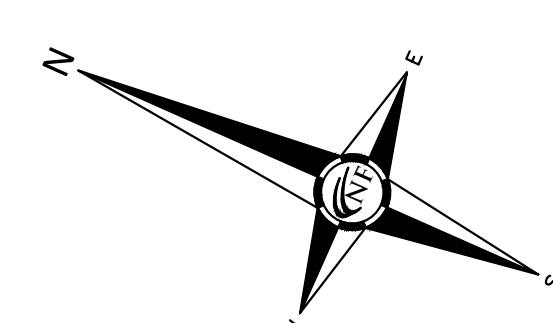
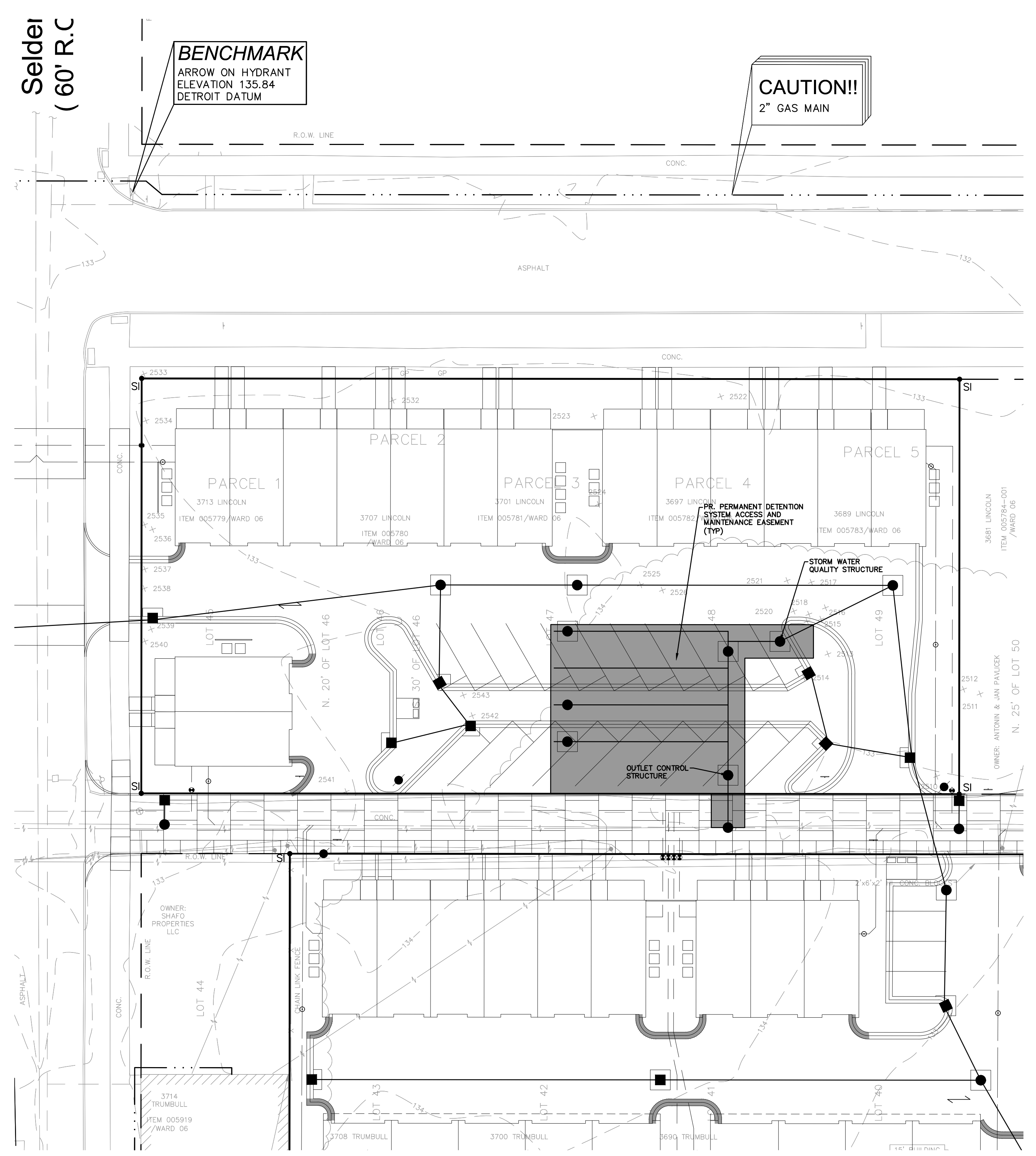
Actual Outlet Size = 0.008 Sft
Q_{act} = actual discharge for site = 0.077 cfs
De-Watering Volume (Volume Ext. Det.) = 13328.5 cubic feet
Actual De-Watering Time = **47.87 hours**

PROVIDED DETENTION VOLUME CALCULATIONS - U.G. DETENTION
Calculate Provided Detention Volume in Underground (U.G.) Detention System

U.G. DETENTION SYSTEM - DETERMINE STORAGE VOLUME PROVIDED	
Total Linear Feet of Proposed U.G. Detention Pipe	233.0 feet
Calculate Pipe Cross-Sectional Storage Area	
Proposed Pipe Diameter	96 inches
Proposed Pipe Cross-Sectional Area	50.27 square feet
Total Storage Provided in Pipe	11,712 cubic feet
Calculate Porous Stone Trench Storage Area	
Proposed Porous Stone Trench Width	11.00 feet
Proposed Porous Stone Trench Height (Above Pipe Invert)	8.00 feet
Cross-Sectional Area of Trench	88.00 square feet
Subtract Pipe Cross-Sectional Area	-50.27 square feet
Net Cross-Sectional Porous Stone Trench Area	37.73 square feet
Minimum Stone Trench Backfill Porosity (%)	25 %
Effective Storage Provided in Trench Backfill Cross-Section	9.43 square feet
Total Storage Provided in Porous Stone Trench	2,198 cubic feet
TOTAL DETENTION VOLUME PROVIDED (U.G. DETENTION)	13,910 CUBIC FEET

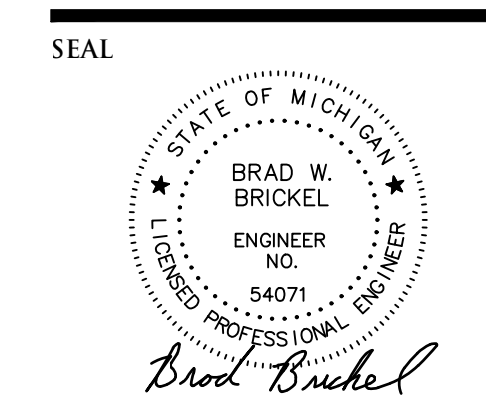
Table 1 - Site Conditions Summary

Criteria	Value	Unit
New or Replaced Impervious Area	1.87	Acres
Construction Activity Area	2.39	Acres
Measured Infiltration Rate	0	In/Hr
Existing Site Runoff Coefficient	0.31	unitless
Proposed Site Runoff Coefficient	0.81	unitless
Regulated Area	2.39	Acres



NF ENGINEERS
 CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS
 46777 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257
 WWW.NOWAKFRAUS.COM



**TABLE 1
 STORM WATER MANAGEMENT SYSTEM LONG-TERM MAINTENANCE SCHEDULE**

MAINTENANCE ACTIVITIES	SYSTEM COMPONENTS					FREQUENCY
	Storm Collection System (Sewers, Storms, Catch Basins, Manholes)	Manufactured Treatment System	Inlets to Treatment & Detention Systems	Underground Detention System	Flow Restrictor Structure & Outlet Pipe	
Monitoring/Inspection						
Inspect for Sediment Accumulation		X	X	X	X	2-4 times/year*
Inspect for Floatables, Dead Vegetation & Debris	X	X	X	X	X	2-4 times/year & After Major Events
Inspect for Integrity of System	X	X	X	X	X	2-4 times/year & After Major Events
Inspect All Components During Wet Weather & Compare to As-Built Plans	X	X	X	X	X	2-4 times/year
Ensure Maintenance Access Remain Open/Clear	X	X	X	X	X	2-4 times/year
Inspect Tideflex Checkmate Check Valve (remove hood and enter manhole)					X	Annually
Preventative Maintenance						
Remove Accumulated Sediments	X	X	X	X	X	As needed*
Remove Floatables, Invasive & Dead Vegetation & Debris	X	X	X	X	X	As Needed
Sweeping of Paved Surfaces					X	As Needed
Replace StormFilter Cartridges		X				Every 1-5 years, depending on sediment loading**
Remedial Actions						
Repair/Stabilize Areas of Erosion	X					Annually, or as needed
Structural Repairs	X	X	X	X	X	As Needed
Make Adjustments/Repairs to Ensure Proper Functioning	X	X	X	X	X	As Needed
Manage Nuisance Wildlife		X		X		Biweekly, or as needed

NOTES: *Manufactured Treatment System & underground detention system to be cleaned whenever sediments accumulate to a depth of 6-12 inches, or if sediment resuspension is observed. **Refer to manufacturer's O&M guidelines for additional maintenance considerations

PROPERTY OWNER: 3700 Trumbull Street Detroit, MI 48208	PROPERTY OWNER: Robertson Brothers Co. 6905 Telegraph Road Suite 200 Bloomfield Hills, MI 48301 Mr. Tim Loughrin 248-649-6320 248-649-0775 Fax	ENGINEER: Nowak & Fraus Engineers 46777 Woodward Ave. Pontiac, MI 48342 Contact: Brad Brickel Phone: (248) 332-7931
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SEAL

PROJECT
 Scripps District
 3700 Trumbull

CLIENT
 3701 Lincoln, LLC
 6905 Telegraph Road,
 Bloomfield Hills, MI 48301

Contact: Tim Loughrin
 Phone: 248.282.1428

Contact: Jason Jones
 Phone: 313.575.6835

Contact: George Roberts
 Phone: 248.302.8662

PROJECT LOCATION
 Part of Hodges Bros.
 Subdivision of Outlots
 98, 99, 102 & 103
 Woodbridge Farm
 City of Detroit,
 Wayne County, Michigan

SHEET
 Post-Construction Storm
 Water Management Plan



DATE	ISSUED/REVISED
08-27-21	ISSUED FOR ENGINEERING REVIEW
09-20-21	REVISED GRADING
12-01-21	REVISED PER CITY
01-05-22	REVISED PER CITY

DRAWN BY:
J. Lawrey

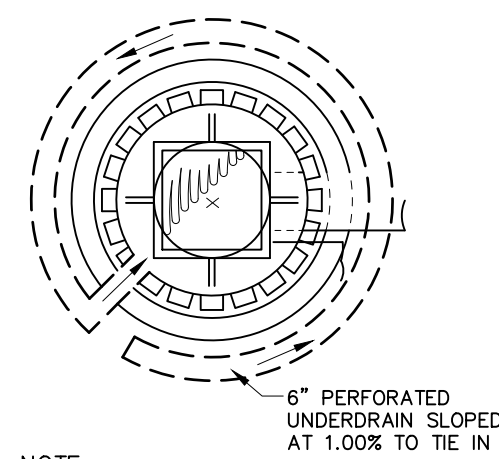
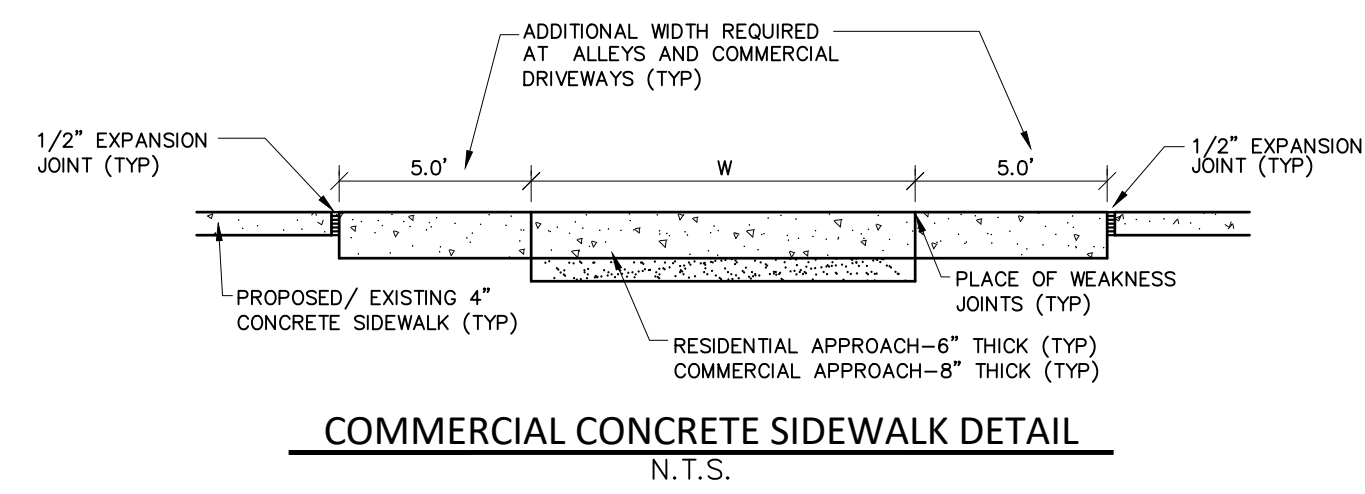
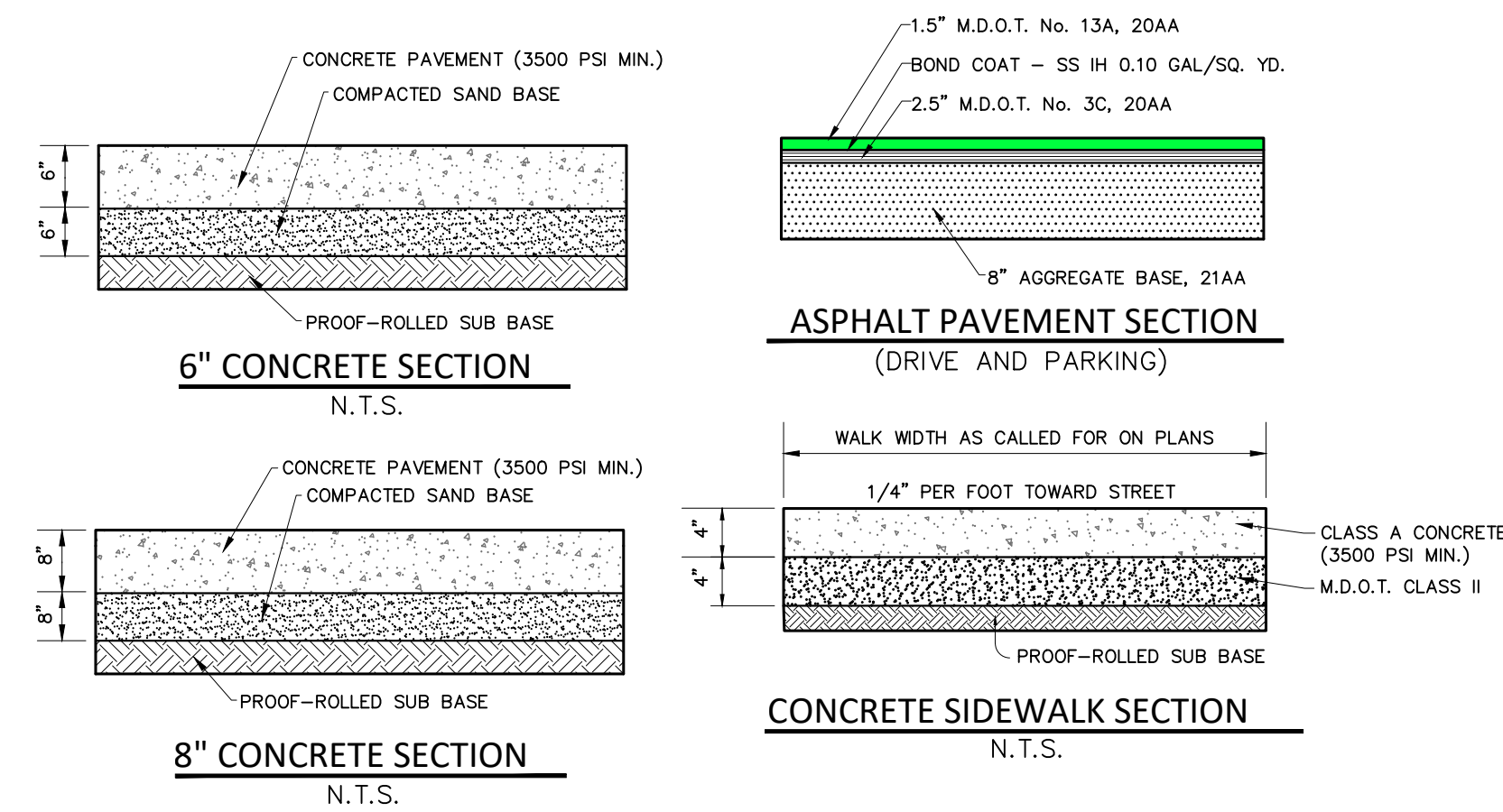
DESIGNED BY:
B. Brickel

APPROVED BY:
B. Brickel

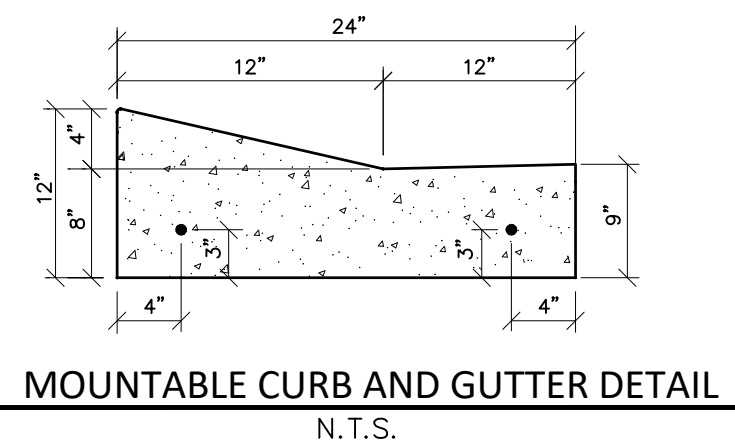
DATE:
September 10, 2020

SCALE: 1" = 30'

NFE JOB NO. SHEET NO.
L898 C14



UNDERDRAIN DETAIL
N.T.S.



MOUNTABLE CURB AND GUTTER DETAIL
N.T.S.

DETAIL NOTE

THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT DWS STANDARD SPECIFICATIONS AND DETAILS.

GENERAL PAVING NOTES

PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:

- CONCRETE: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES.
- ASPHALT: BASE COURSE - MDOT BITUMINOUS MIXTURE NO. 1100L, 20AA; SURFACE COURSE - MDOT BITUMINOUS MIXTURE NO. 1100T, 20AA; ASPHALT CEMENT PENETRATION GRADE 85-100, BOND COAT - MDOT SS-1H EMULSION AT 0.10 GALLON PER SQUARE YARD; MAXIMUM 2 INCH LIFT.

PAVEMENT BASE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.

ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.

ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-5164.

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.

ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.

ALL SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.

CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.

FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL INSPECTION.

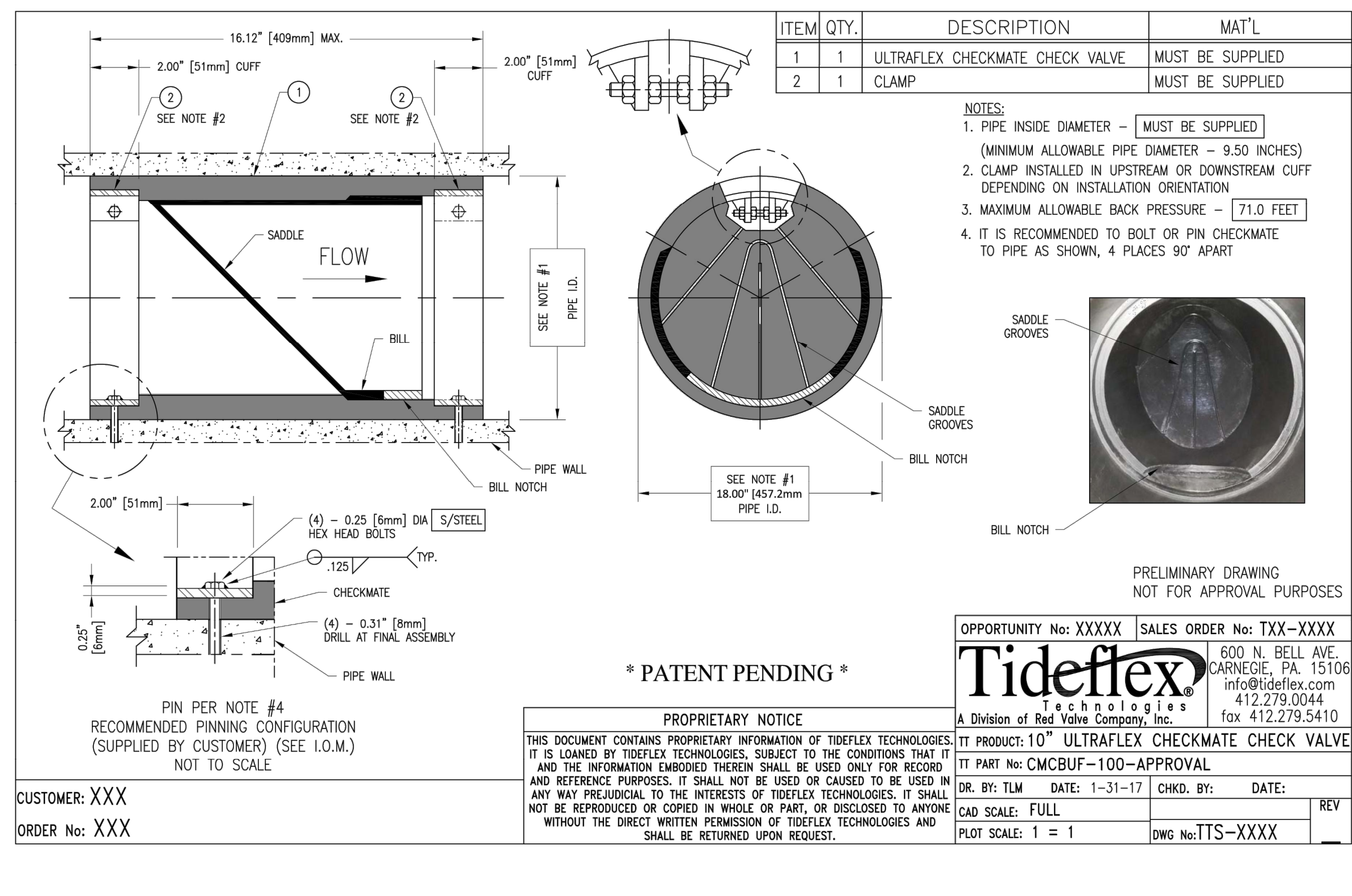
EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS.

EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RADII.

SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.

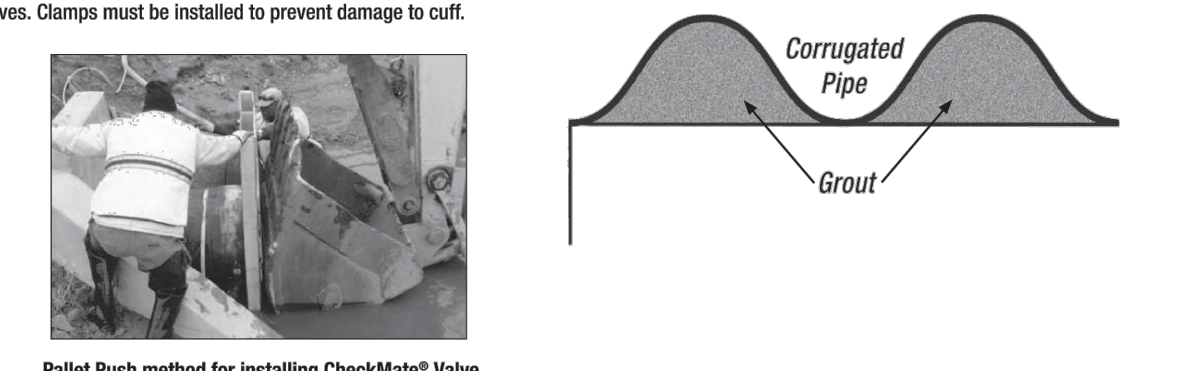
ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.

FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 98% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.



11. Pallet Push for Larger CheckMate® Valves
Larger CheckMate® valves can be pushed into the pipe utilizing the shipping pallet. The pallet should be placed perpendicular to the valve being inserted into the pipe. Then, with assistance from an excavator, push with consistent even force against the shipping pallet to insert the CheckMate® valve into the pipe.

12. Corrugated Pipe and Smooth Wall (PVC, HDPE) Pipe Installation
For installation on corrugated pipe, it is recommended that the corrugations be filled with hydraulic cement (or similar material) that will provide a smooth I.D.
For smooth wall pipe, it is recommended that the valve be pinned.



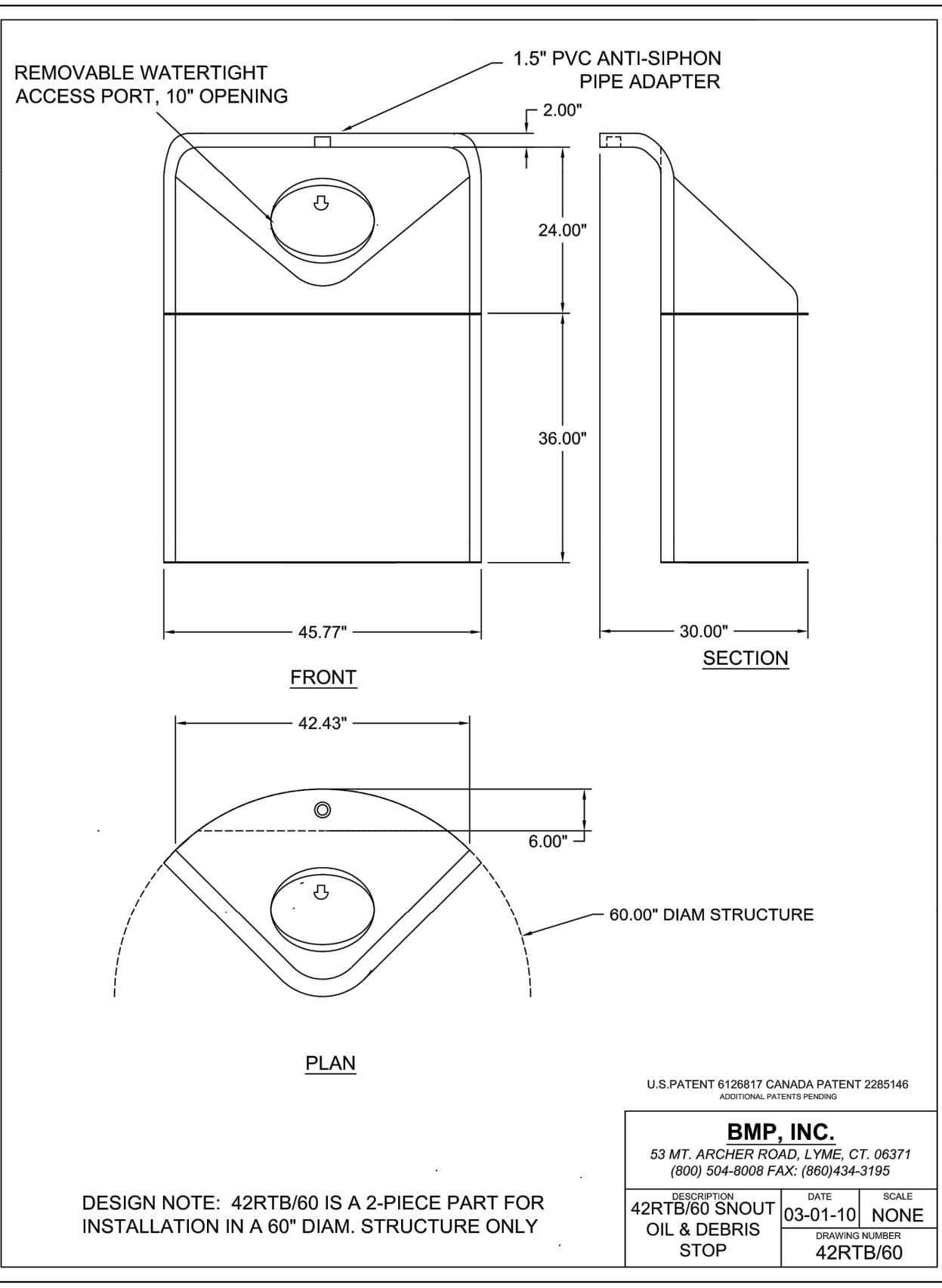
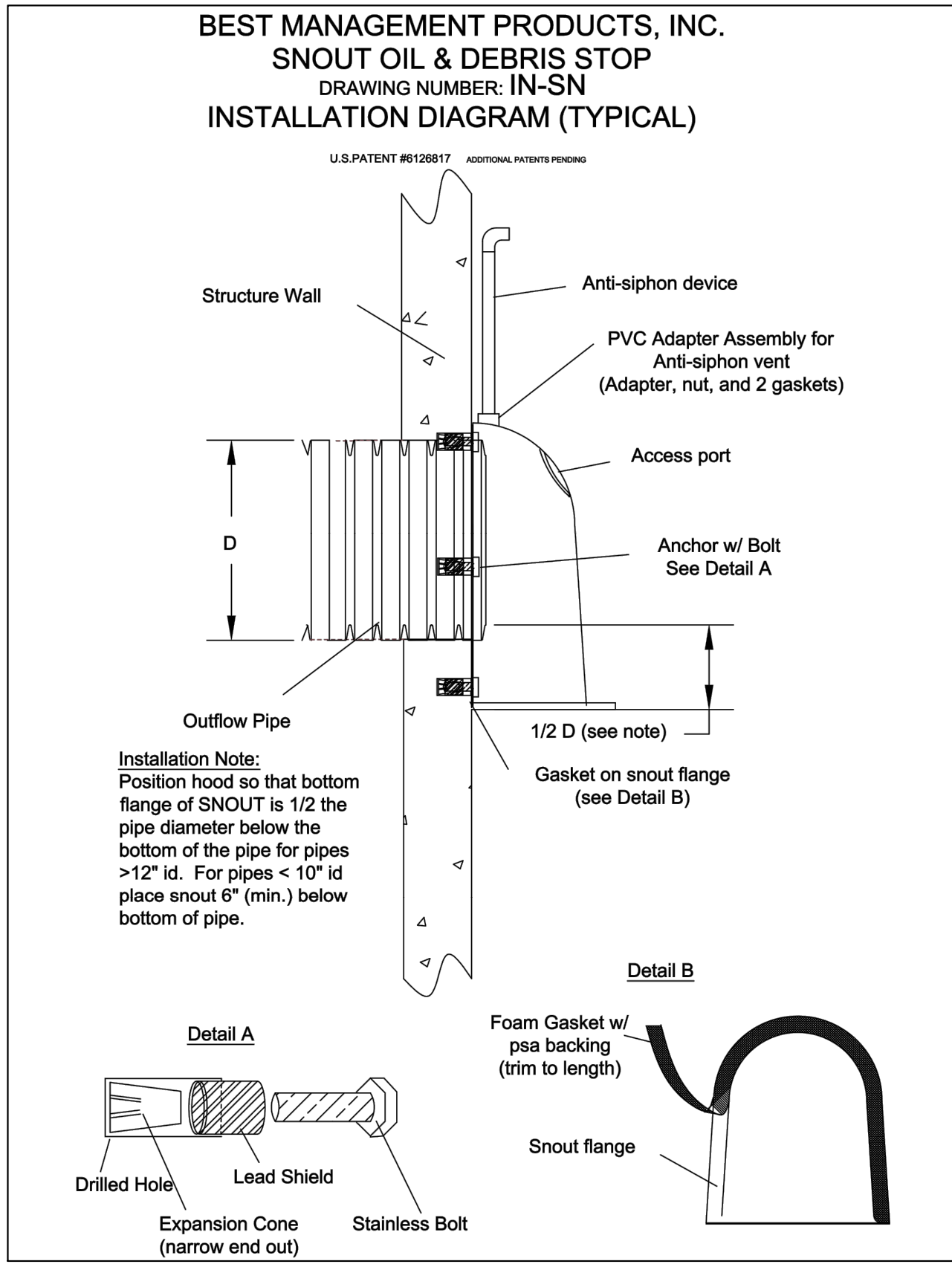
Pallet Push method for installing CheckMate® Valve

CheckMate® can be made for any pipe I.D. Built to fit in sizes from 3" to 78".

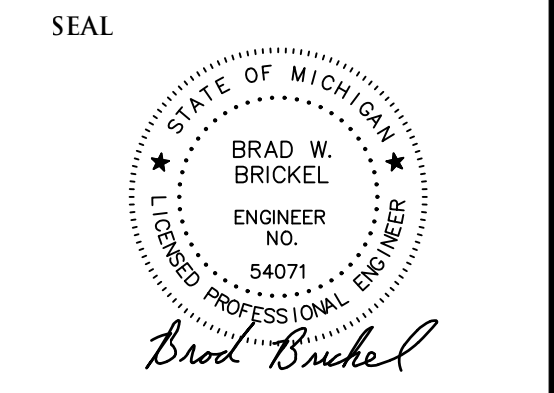
Flange shape and bolt pattern can be customized. Flangeless thimble inserts are available.

NOMINAL PIPE SIZE I.D.	OVERALL LENGTH		NUMBER OF CLAMPS	CUFF DEPTH		BACK PRESSURE RATING		WEIGHT	
	Inches	Millimeters		Inches	Millimeters	Feet	Meters	Lbs	Kg
3	75	5.1	130	1	1.5	38	5	1.5	0.7
4	100	7.9	201	1	1.5	38	5	1.5	0.7
5	125	9.5	241	1	1.5	38	85	26.0	3
6	150	11.0	279	1	2.0	51	83	25.3	4
7	175	12.8	325	1	2.0	51	79	24.1	11
8	200	15.2	386	1	2.0	51	79	24.1	13
9	225	15.4	391	1	2.0	51	75	22.9	17
10	250	16.1	409	1	2.0	51	71	21.6	20
12	300	19.8	503	1	2.0	51	68	20.1	27
14	350	25.8	655	1	4.0	102	64	20.0	110
16	400	28.8	726	1	4.0	102	60	18.3	133
18	450	31.0	767	1	4.0	102	56	17.1	143
20	500	42.1	1069	2	8.0	203	53	16.2	223
24	600	47.5	1207	2	8.0	203	45	13.7	304
30	750	54.9	1395	2	8.0	203	38	11.6	500
36	900	62.3	1562	2	8.0	203	30	9.1	608
42	1050	70.6	1793	2	8.0	203	26	7.9	1423
48	1200	78.9	2007	2	8.0	203	23	7.0	1801
54	1350	88.4	2156	2	8.0	203	17	5.2	2700
60	1500	96.8	2459	2	9.0	229	15	4.6	3315
72	1800	118.0	3023	3	12.0	305	13	4.0	6100
78	1950	119.0	3023	3	12.0	305	13	4.0	7000

Shorter lengths available. *Back pressure measured from pipe invert. Higher back pressure ratings available. Consult factory.



NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM



PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835
Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
Additional Details

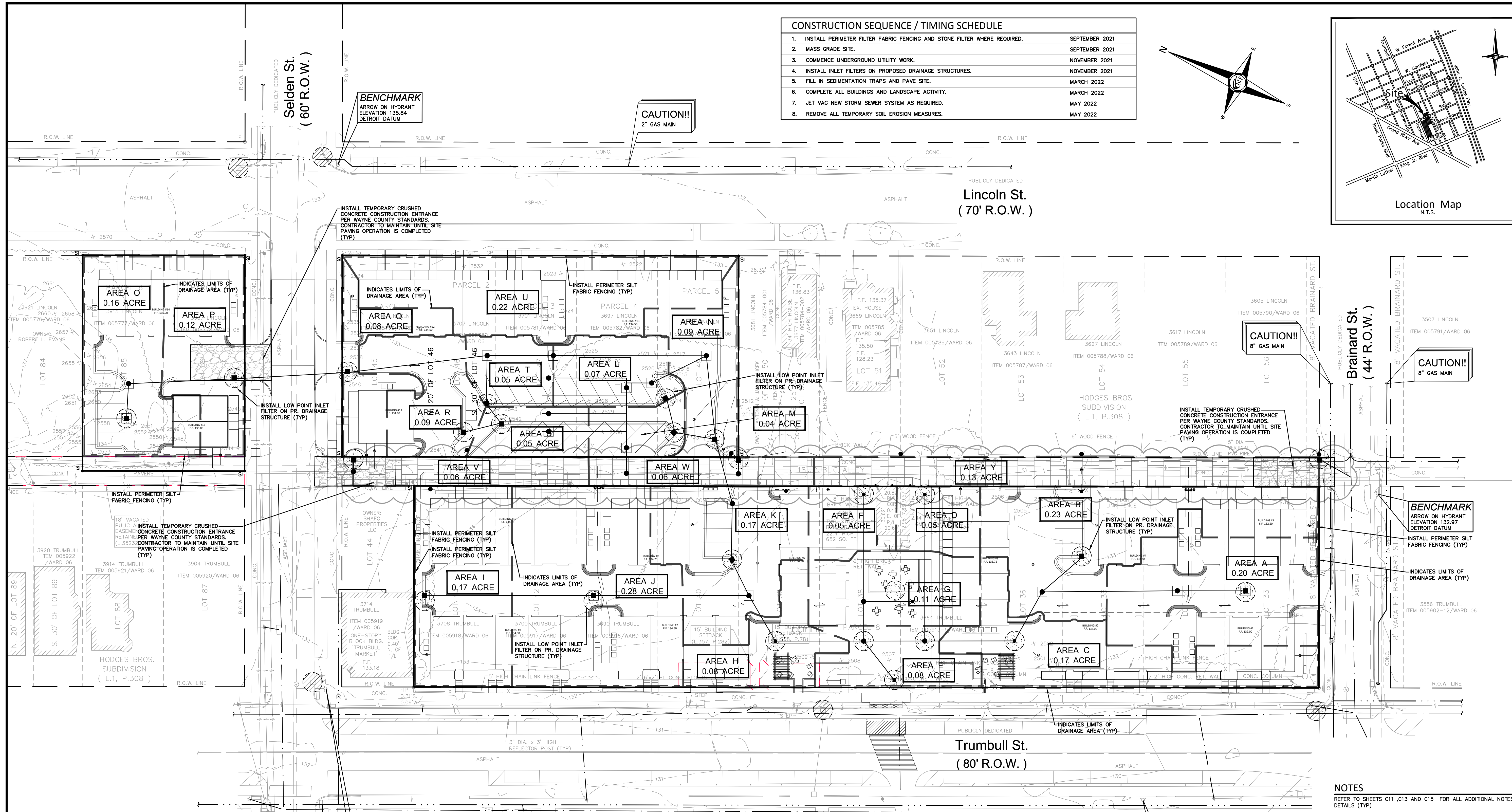


DATE ISSUED/REVISED
08-27-21 ISSUED FOR ENGINEERING REVIEW
09-20-21 REVISED GRADING
12-01-21 REVISED PER CITY
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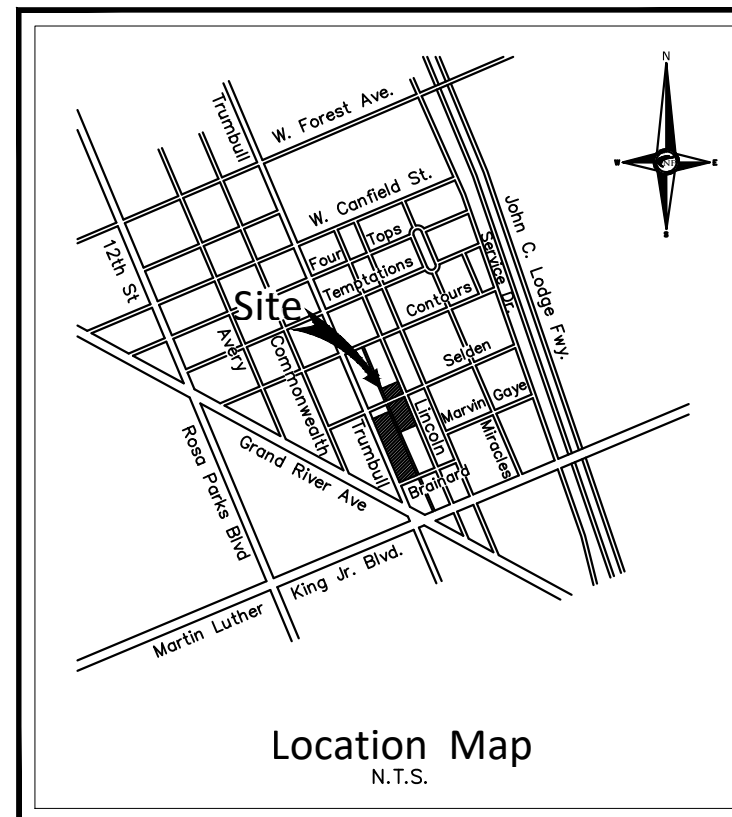
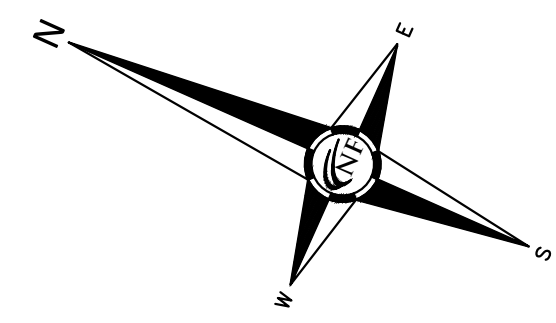
BMP, INC.
53 MT. ARCHER ROAD, LYME, CT, 06371
(800) 504-8008 FAX: (860) 434-3195

DESCRIPTION	DATE	SCALE
42RTB/60 SNOUIT OIL & DEBRIS STOP	03-01-10	NONE
DESIGNED BY	DATE	SCALE
42RTB/60		

DRAWN BY:
J. Lawrey
DESIGNED BY:
B. Brickel
APPROVED BY:
B. Brickel
DATE:
September 10, 2020
SCALE: N.T.S.



CONSTRUCTION SEQUENCE / TIMING SCHEDULE	
1. INSTALL PERIMETER FILTER FABRIC FENCING AND STONE FILTER WHERE REQUIRED.	SEPTEMBER 2021
2. MASS GRADE SITE.	SEPTEMBER 2021
3. COMMENCE UNDERGROUND UTILITY WORK.	NOVEMBER 2021
4. INSTALL INLET FILTERS ON PROPOSED DRAINAGE STRUCTURES.	NOVEMBER 2021
5. FILL IN SEDIMENTATION TRAPS AND PAVE SITE.	MARCH 2022
6. COMPLETE ALL BUILDINGS AND LANDSCAPE ACTIVITY.	MARCH 2022
7. JET VAC NEW STORM SEWER SYSTEM AS REQUIRED.	MAY 2022
8. REMOVE ALL TEMPORARY SOIL EROSION MEASURES.	MAY 2022



NF ENGINEERS
 CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS

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 46777 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257
 WWW.NOWAKFRAUS.COM

SEAL

BRAD W. BRICKEL
 ENGINEER
 NO. 54071
 STATE OF MICHIGAN
 PROFESSIONAL ENGINEER

PROJECT
 Scripps District
 3700 Trumbull

CLIENT
 3701 Lincoln, LLC
 6905 Telegraph Road,
 Bloomfield Hills, MI 48301

Contact: Tim Loughrin
 Phone: 248.282.1428

Contact: Jason Jones
 Phone: 313.575.6835

Contact: George Roberts
 Phone: 248.302.8662

PROJECT LOCATION
 Part of Hodges Bros.
 Subdivision of Outlots
 98, 99, 102 & 103
 Woodbridge Farm
 City of Detroit,
 Wayne County, Michigan

SHEET
 Soil Erosion Control /
 Drainage Area Plan

811
 Know what's below
 Call before you dig.

NOTES AND PERFORMANCE REQUIREMENTS

ALL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CANTON TOWNSHIP AND THE WAYNE COUNTY EROSION CONTROL MANUAL.

DAILY INSPECTION SHALL BE MADE BY THE SUBCONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.

EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.

EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENTATION CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.

SUBCONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED.

PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGES HAVE BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASED, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED, UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.

ALL MUD/DIRT TRACKED ONTO EXISTING CITY/COUNTY ROADS FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE SUBCONTRACTOR/BUILDER.

MAINTENANCE REQUIREMENTS SHALL BE AS FOLLOWS:
 STREET SCRAPING - DAILY
 STREET SWEEPING - WEEKLY MINIMUM
 STRUCTURAL SEDIMENT CONTROLS - 48 HOURS AFTER STORM EVENT (WEEKLY MINIMUM)
 SEDIMENT BASIN CLEANOUT - ANNUALLY MINIMUM

RESTORATION REQUIREMENTS AND FINAL INSPECTION REQUIREMENTS SHALL BE AS FOLLOWS:
 DISTURBED EARTH MUST BE PERMANENTLY STABILIZED WITH VEGETATION OR HARD SURFACE
 ACCUMULATED SEDIMENT MUST BE REMOVED FROM STORM SEWER SYSTEM
 REMOVE ALL THE TEMPORARY CONTROLS AFTER GETTING APPROVAL BY THE WAYNE COUNTY SOIL EROSION INSPECTOR.

NOTIFY WAYNE COUNTY SOIL EROSION OFFICE 48 HOURS BEFORE WORK IS TO BEGIN. (734) 326-3936.

TIMING AND SEQUENCE OF CONSTRUCTION OPERATIONS

INSTALL FILTER FABRIC FENCE AS SHOWN ON THE PLANS. INSTALL CONSTRUCTION ACCESS DRIVE AS SHOWN ON THE PLANS. (DAY 1)

MASS GRADE SITE. IF CALLED FOR ON THE PLANS, DETENTION OR RETENTION BASINS SHALL BE CONSTRUCTED PRIOR TO ANY OTHER CONSTRUCTION FOR ALL PROJECTS LOCATED WITHIN THE MUNICIPALITY IMMEDIATELY FOLLOWING CONSTRUCTION OF THE BASIN. SUITABLE GROUND COVER SHALL BE ESTABLISHED, WEATHER CONDITIONS PREVAILING. ALL DENuded AREAS ARE TO BE PROTECTED FROM EROSION BY AN APPROVED METHOD CONSISTENT WITH THE GROWING SEASON.

A. DETENTION/SEDIMENT BASIN TIMING REQUIREMENTS:
 APPROVED OUTLET INSTALLED - WITHIN 5 DAYS OF EXCAVATING BASIN
 PERMANENTLY STABILIZED WITH SEED AND MULCH BLANKET-WITHIN 5 DAYS OF FINAL GRADE

B. CRITICAL SLOPES/CHANNELS/SWALES TIMING REQUIREMENTS:
 TEMPORARY STABILIZATION - WITHIN 15 DAYS OF EARTH DISTURBANCE
 PERMANENT STABILIZATION - WITHIN 5 DAYS OF FINAL GRADE

C. COMMON AREAS - TEMPORARY STABILIZATION WITHIN 5 DAYS OF COMPLETING UTILITY WORK

D. REPAIR - WITHIN 24 HOURS OF PLACING OUTLET/CULVERT

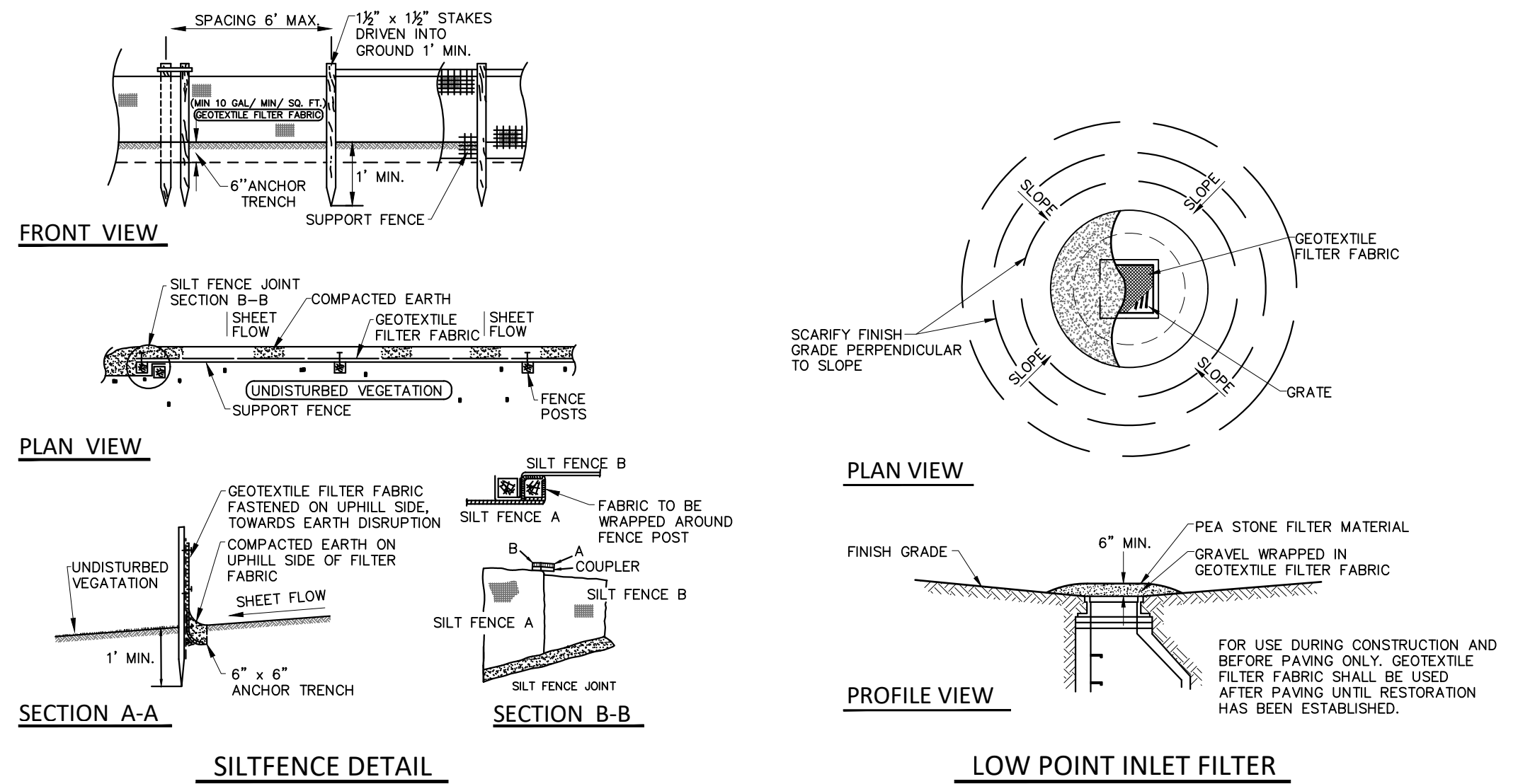
COMMENCE UNDERGROUND UTILITY WORK. PROMPTLY UPON BACKFILLING OF CATCH BASINS AND INLETS, INSTALL INLET FILTERS AS SHOWN ON THE PLANS.

BEGIN PAVING OPERATIONS. INLETS, CATCH BASINS, ETC. ARE TO BE PROTECTED FROM ERODING EARTH AND SEDIMENT AT ALL TIMES.

GRADE, SEED AND MULCH ALL DISTURBED AREAS OR LANDSCAPE PER LANDSCAPE PLAN.

ADDITIONAL EROSION CONTROL MEASURES WILL BE PROVIDED DURING THE COURSE OF CONSTRUCTION WHERE DETERMINED NECESSARY BY THE TOWNSHIP ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.

REMOVE ALL SOIL EROSION AND SEDIMENTATION MEASURES AFTER COMPLETION OF SITE CONSTRUCTION.



NOTES

REFER TO SHEETS C11, C13 AND C15 FOR ALL ADDITIONAL NOTES & DETAILS (TYP)

A WAYNE COUNTY SOIL EROSION PERMIT IS REQUIRED FOR THIS PROJECT.

NO WETLANDS OR FLOODPLAINS ARE ON THE SITE.

STORAGE OF TOPSOIL MUST BE INSIDE PROJECT LIMITS.

FOR PAVED INLET PROTECTION, USE WOVEN MONOFLAMMENT GEOTEXTILE/100 gsm PER SQUARE FT. OR APPROVED EQUAL.

NO SILT FENCE, BURLAP, OR STONE TO BE USED AS FILTERS.

SITE IS APPROXIMATELY 11.50 MILES FROM THE DETROIT RIVER.

THE TOTAL AREA OF EARTH DISRUPTION IS 2.57 ACRES.

SOIL DATA

THIS SITE CONSISTS OF SHEBEN-URBAN LAND COMPLEX, 0 TO 4 PERCENT SLOPES, BASED ON DATA PROVIDED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE.

ESTIMATED QUANTITIES

SOIL EROSION

DESCRIPTION	QUANTITY	UNITS
SILT FABRIC FENCING	1,666	L.F.
INLET FILTER	25	E.A.
SILT SACK OR EQUAL	2	E.A.

LEGEND

- INDICATES LIMITS OF SILT FABRIC FENCE
- INDICATES LIMITS OF DRAINAGE DISTRICT AREA
- INDICATES LIMITS OF SOIL DISRUPTION
- INDICATES LOW POINT INLET FILTER OR PROPOSED DRAINAGE STRUCTURE
- INDICATES SILT SACK OR EQUAL ON EXISTING DRAINAGE STRUCTURE
- INDICATES DRAINAGE DISTRICT AREA

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DRAWN BY:
 J. Lawrey

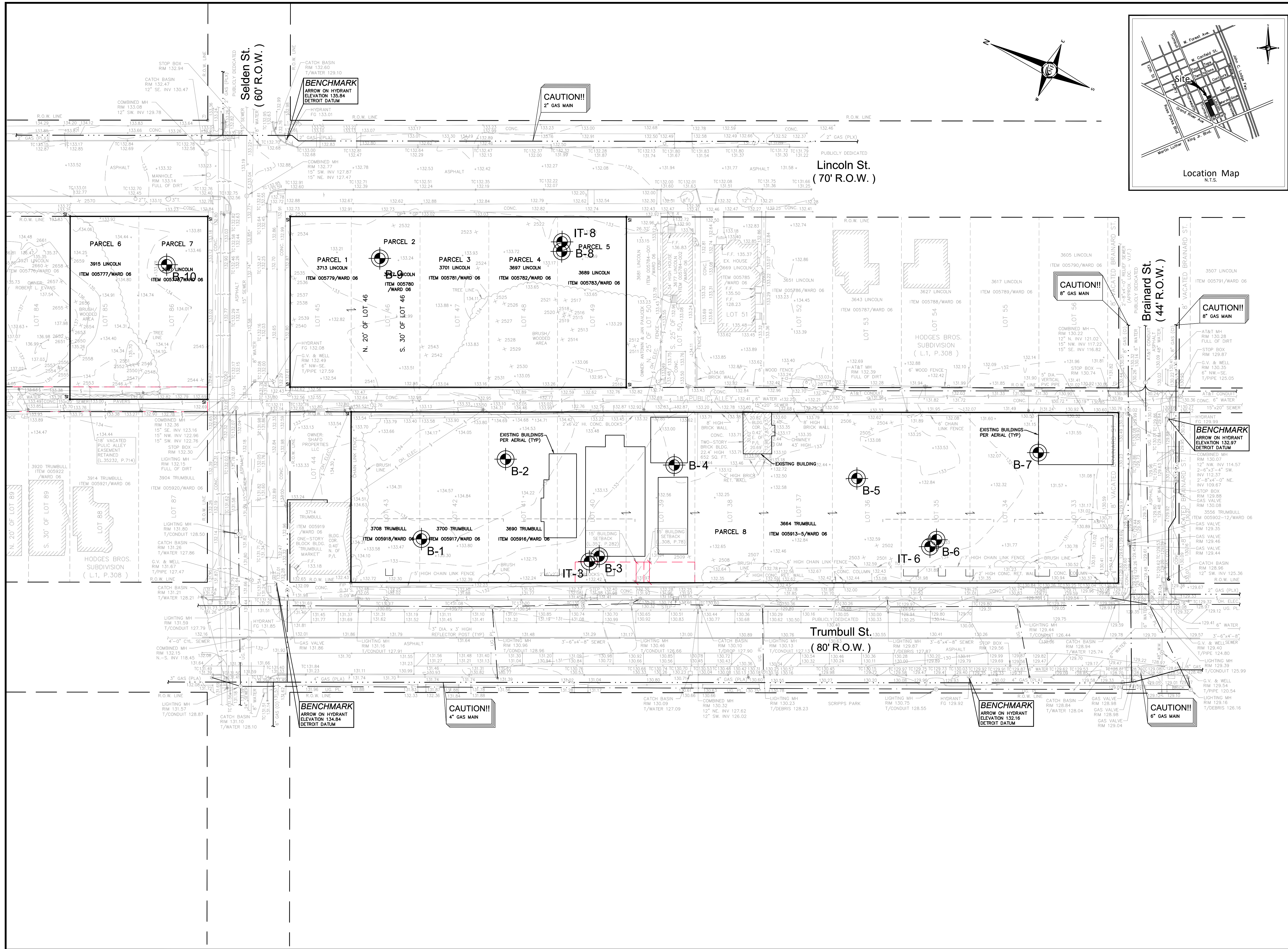
DESIGNED BY:
 B. Brickel

APPROVED BY:
 B. Brickel

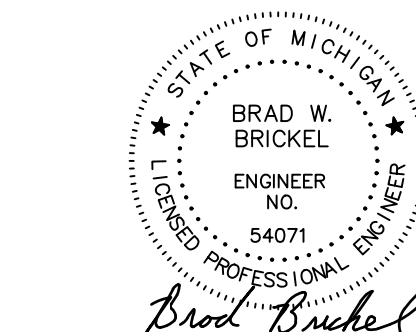
DATE:
 September 10, 2020

SCALE: 1" = 30'

NFE JOB NO. SHEET NO.
L898 C16



SEAL



PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835

Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
Soil Boring Logs



Know what's below
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J. Lawrey

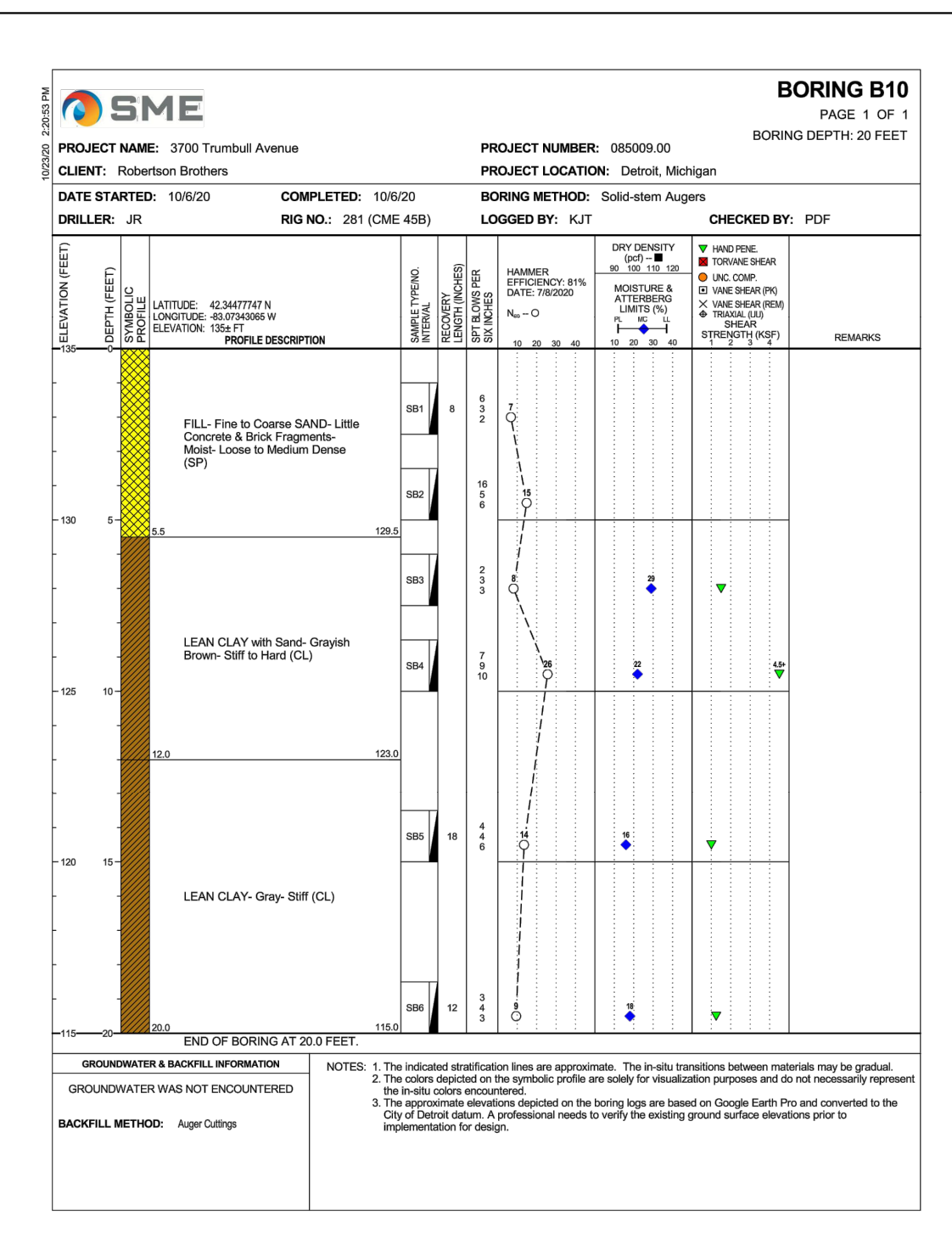
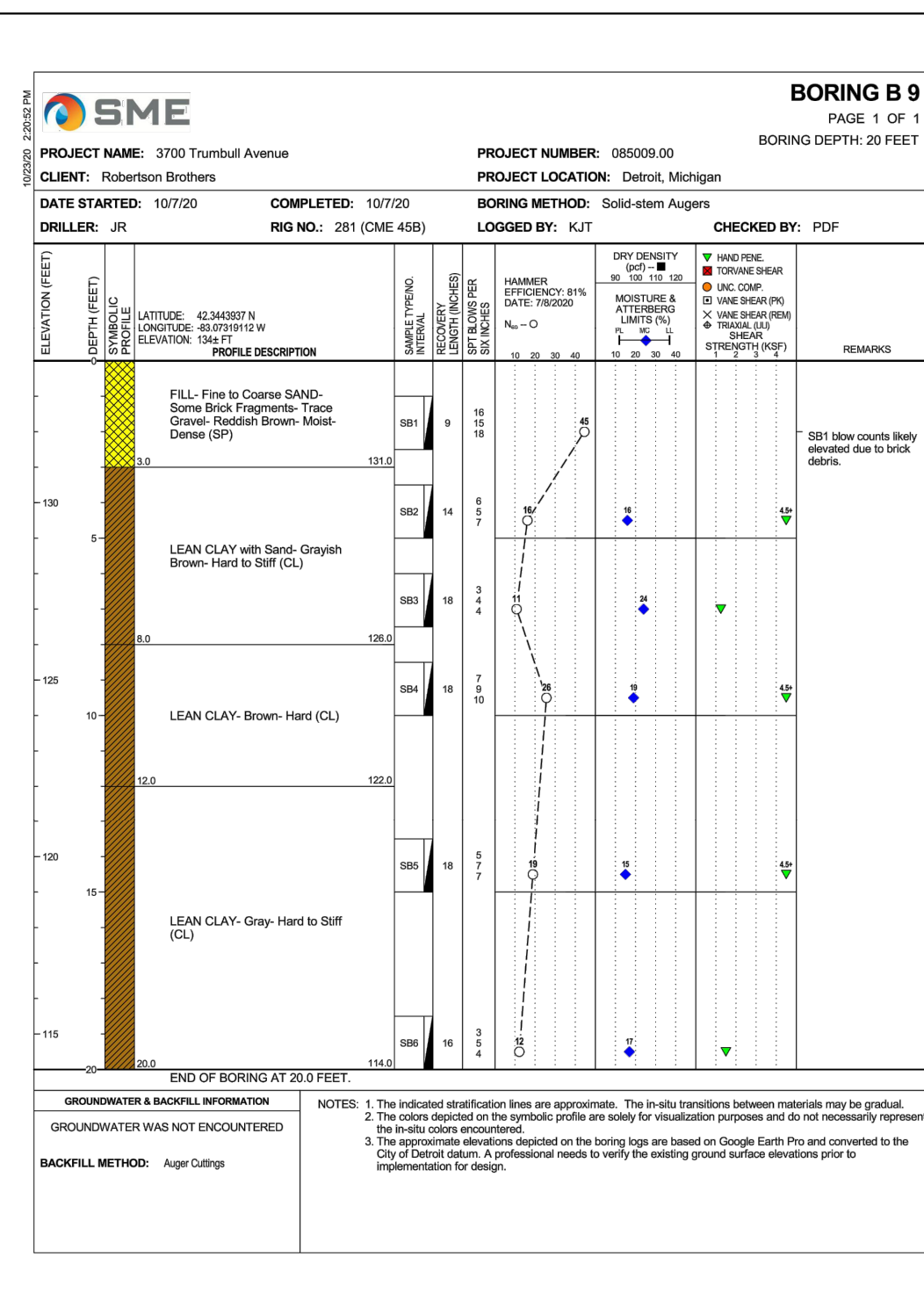
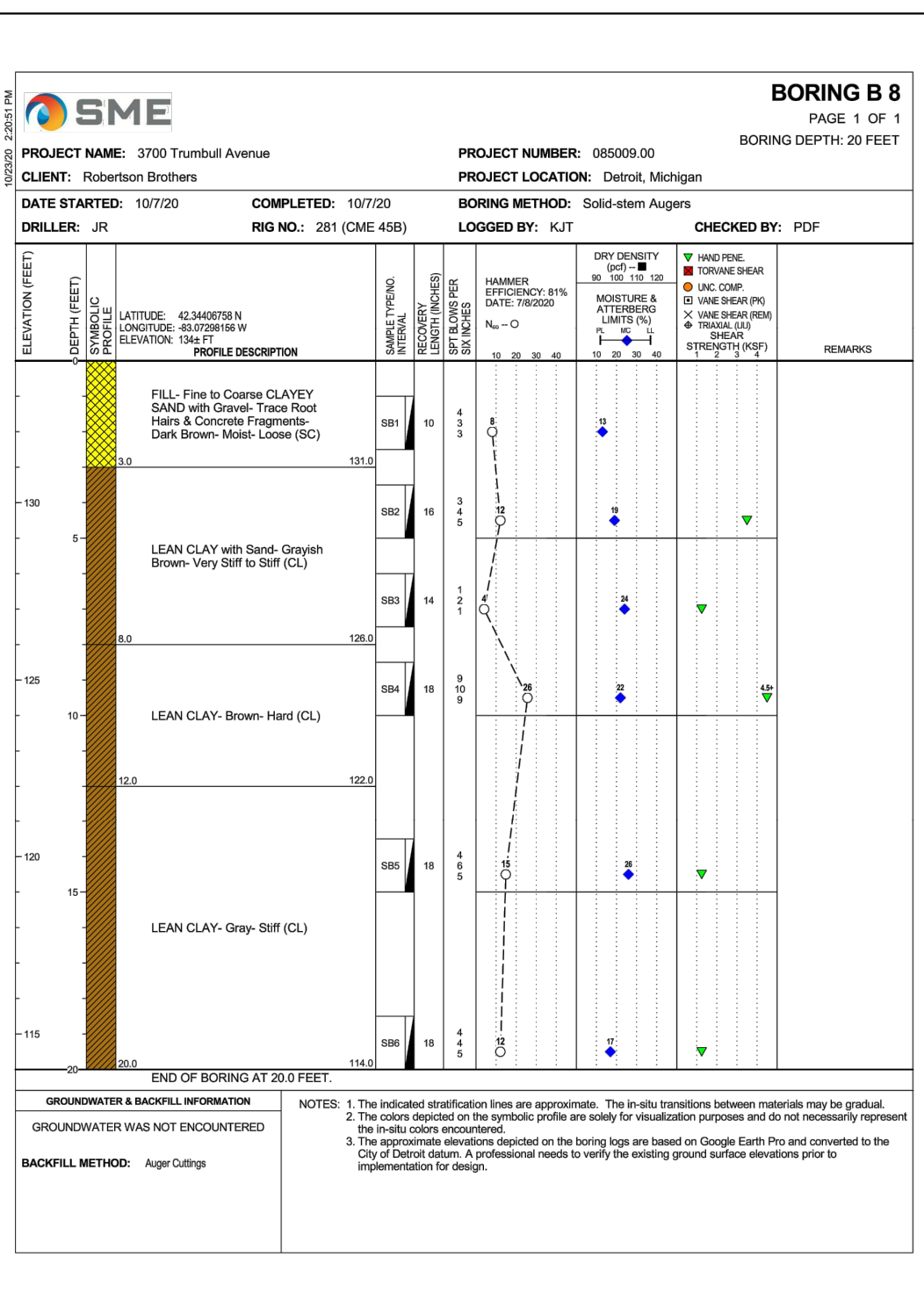
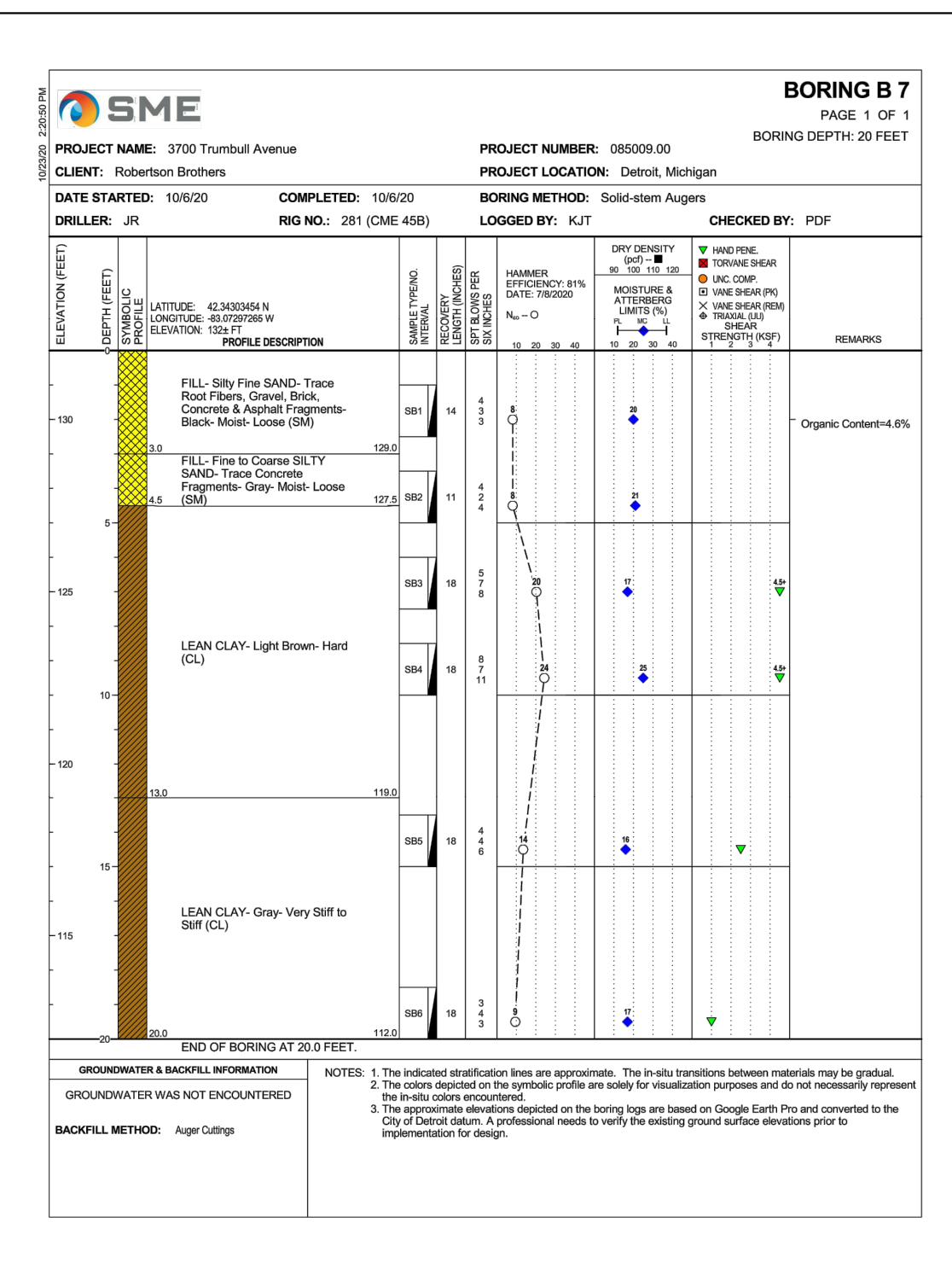
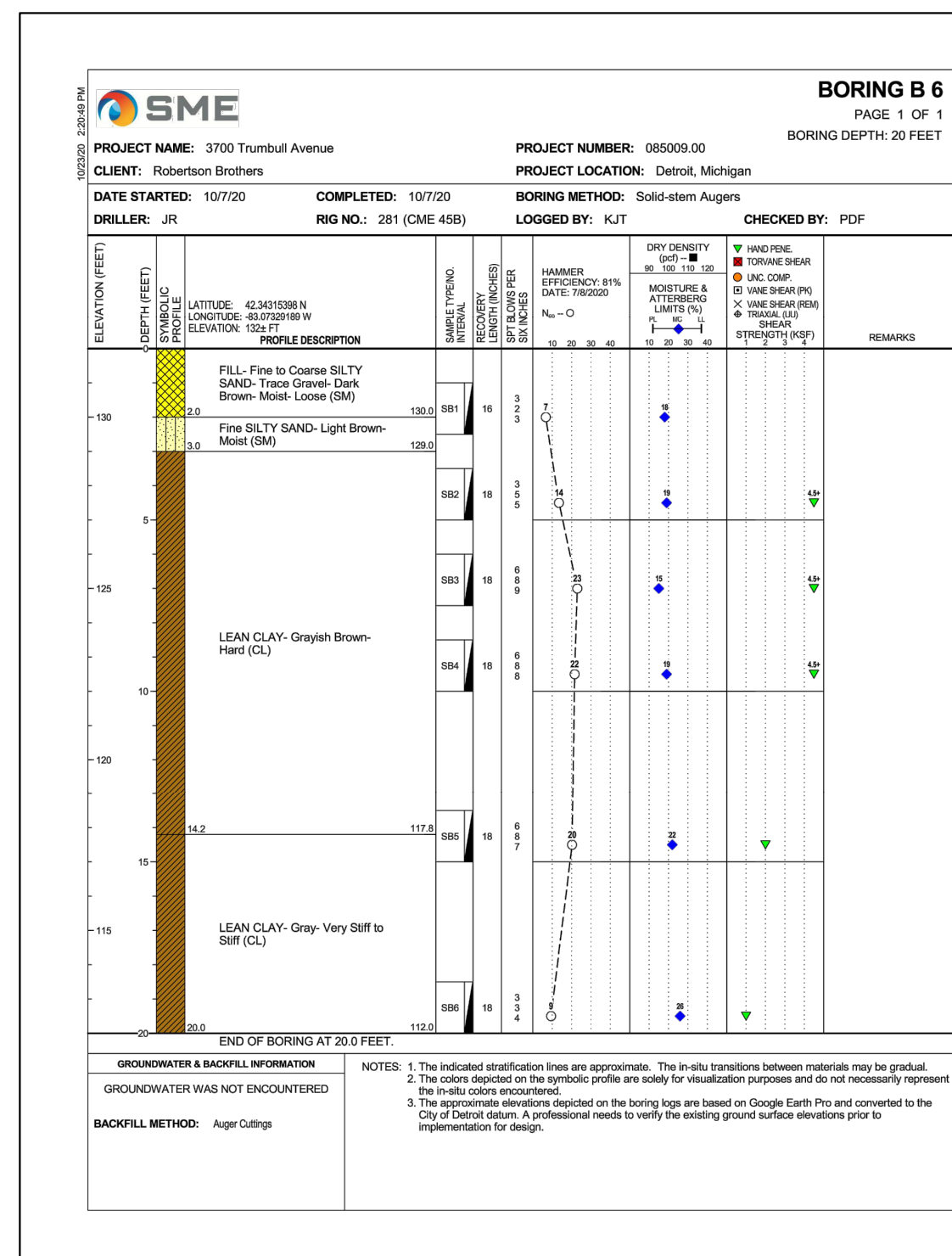
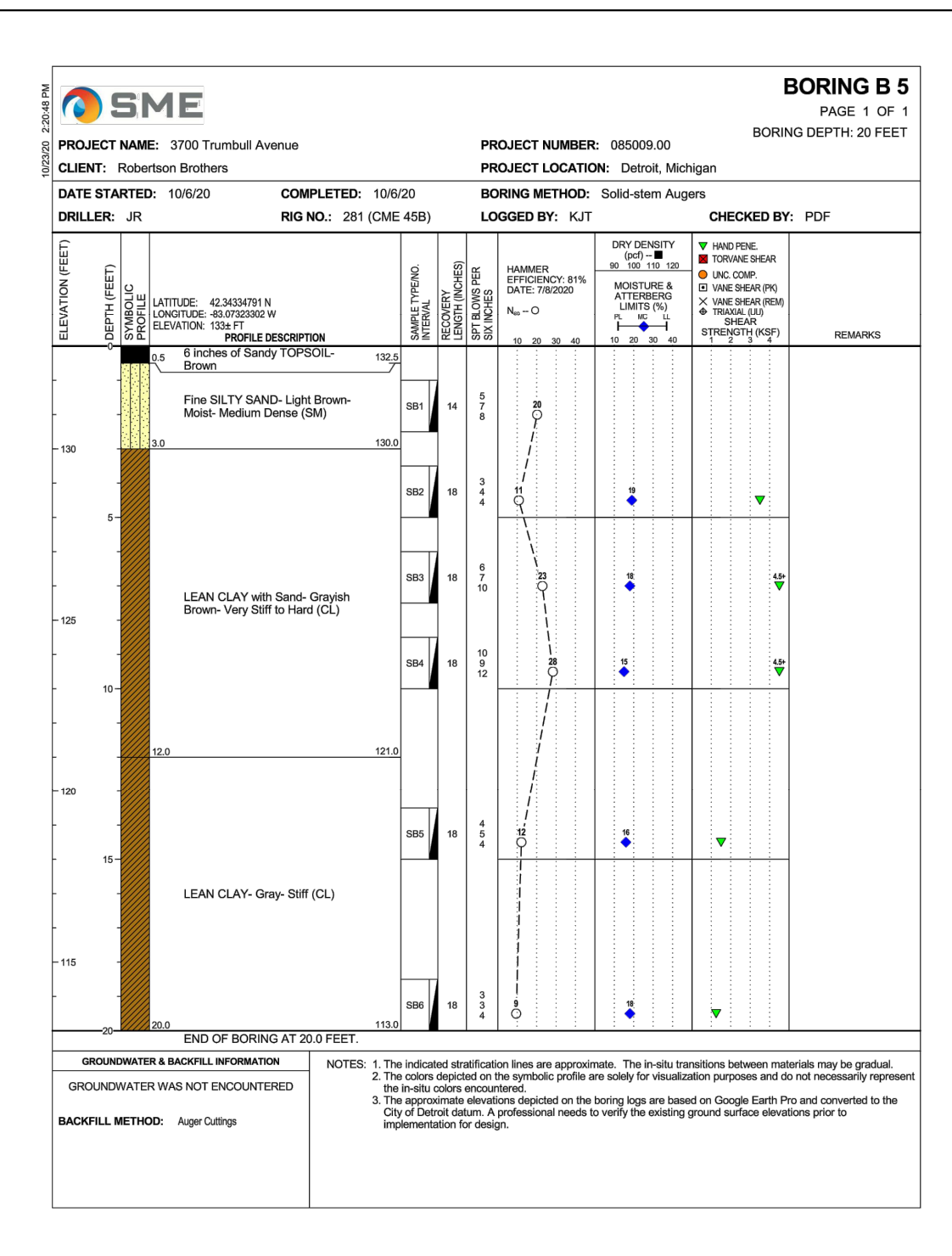
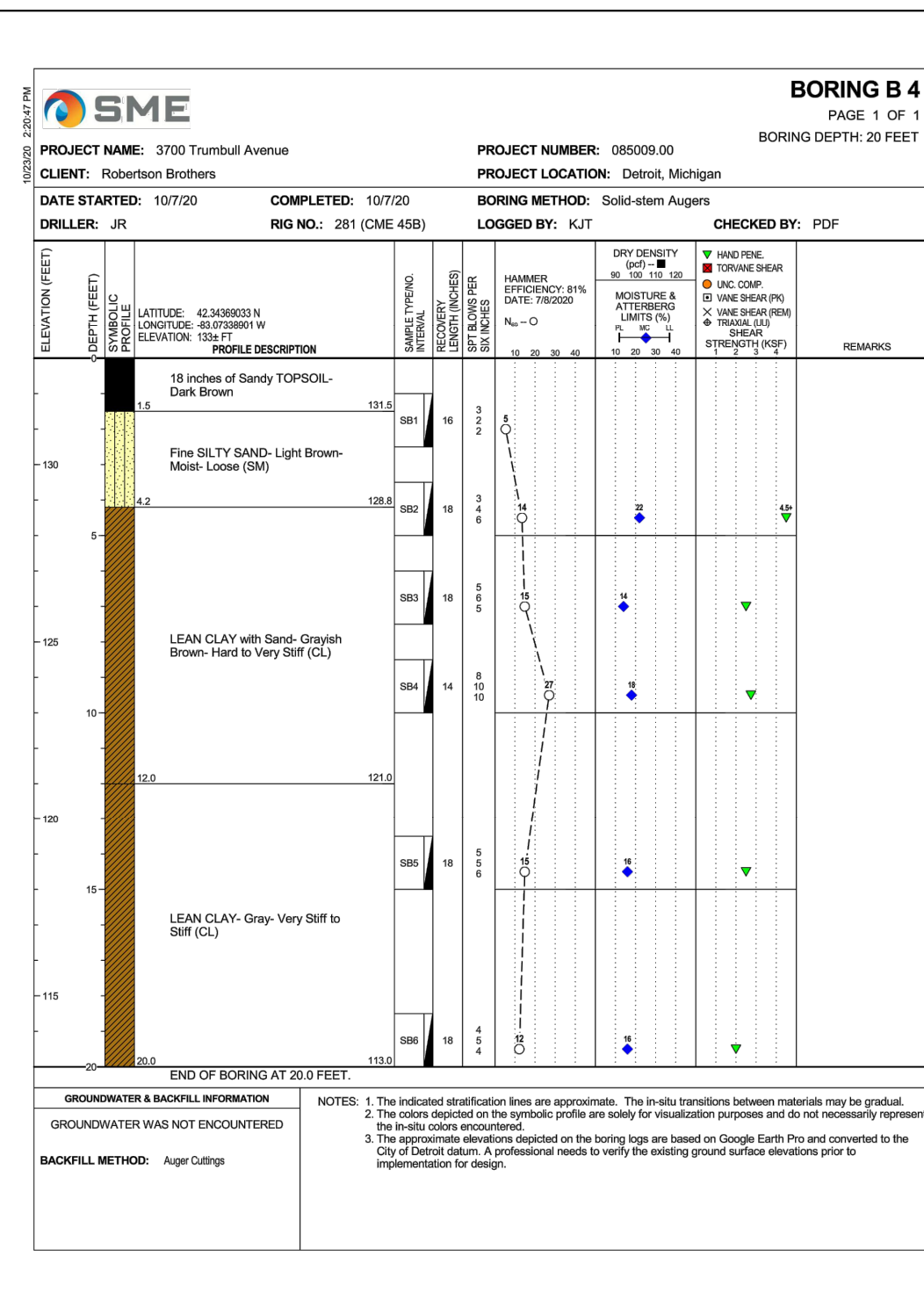
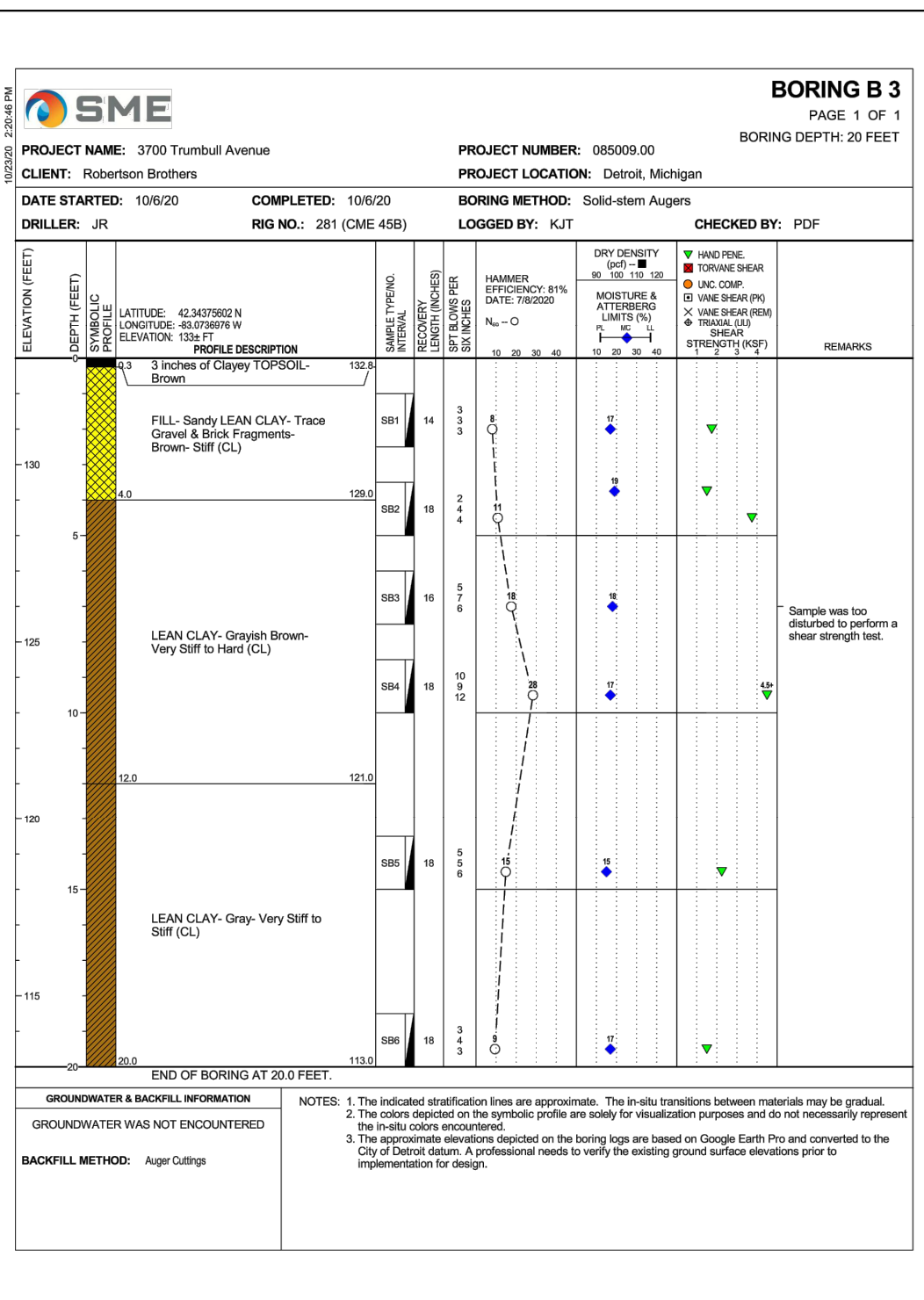
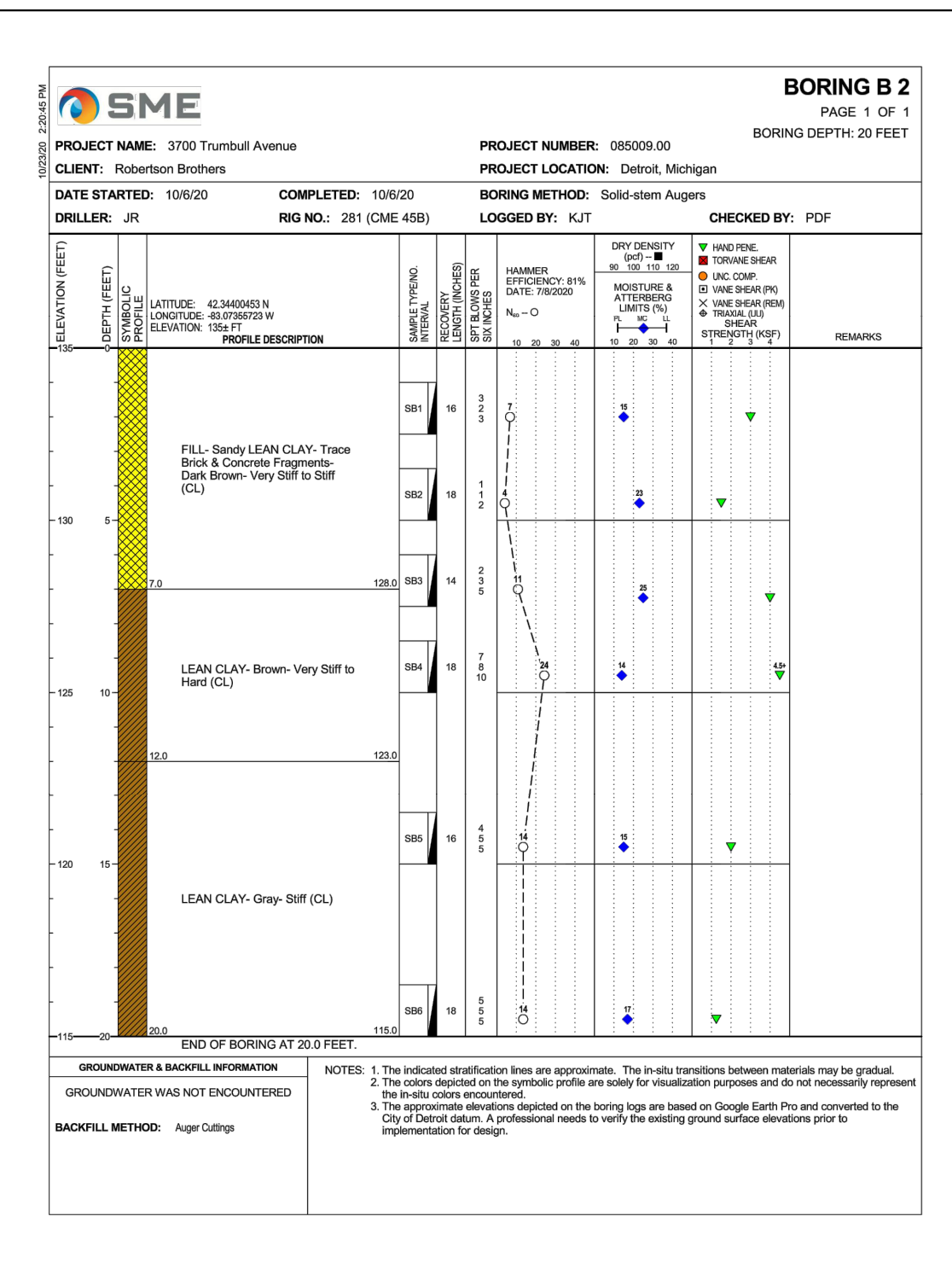
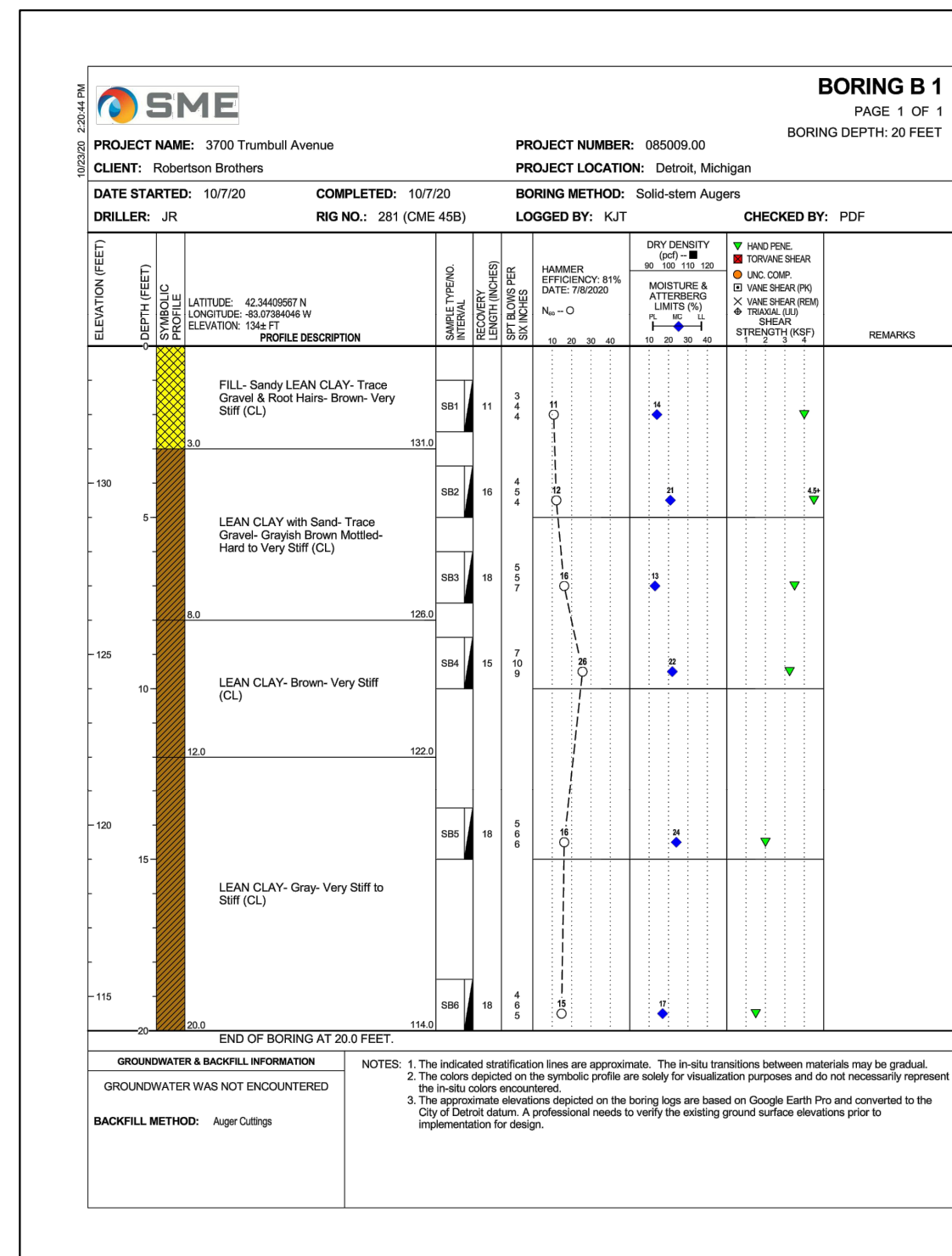
DESIGNED BY:
B. Brickel

APPROVED BY:
B. Brickel

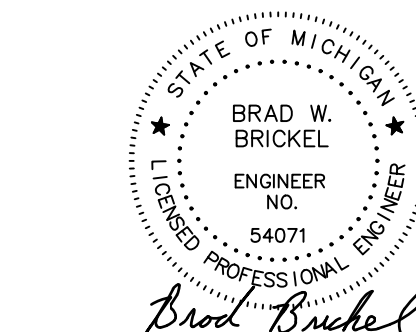
DATE:
September 10, 2020

SCALE: N.T.S.

NFE JOB NO. SHEET NO.
L898 C18



SEAL



PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835
Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
City of Detroit Standard
Details



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J. Lawrey

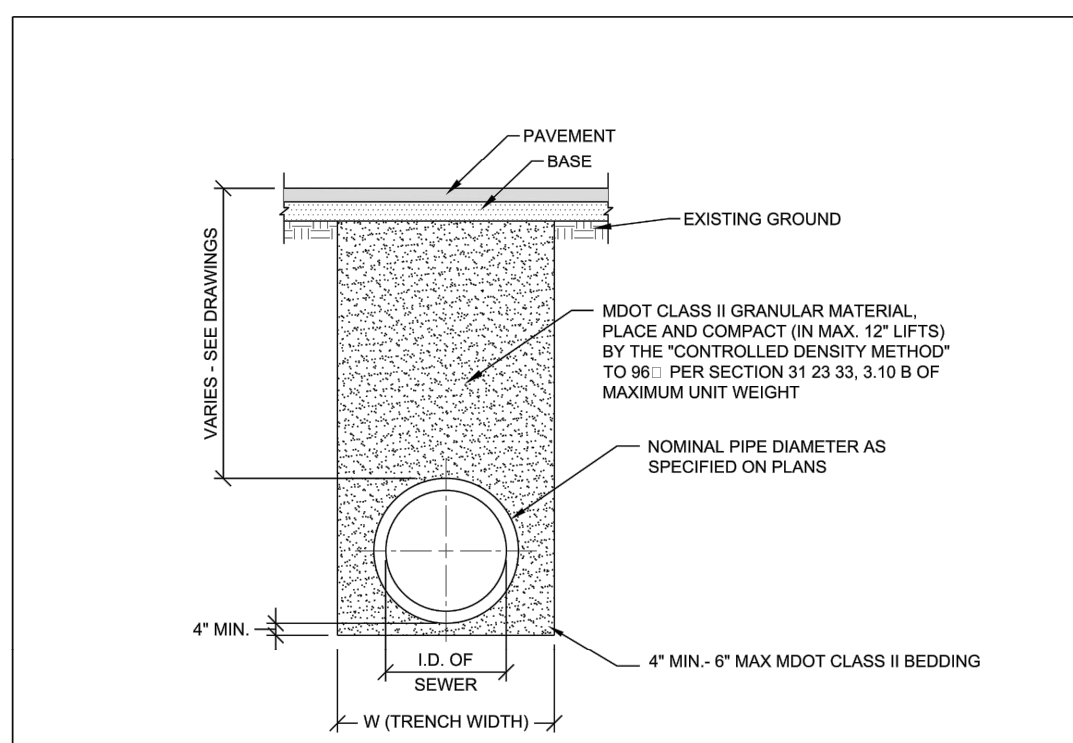
DESIGNED BY:
B. Brickel

APPROVED BY:
B. Brickel

DATE:
September 10, 2020

SCALE: N.T.S.

NFE JOB NO. SHEET NO.
L898 C19



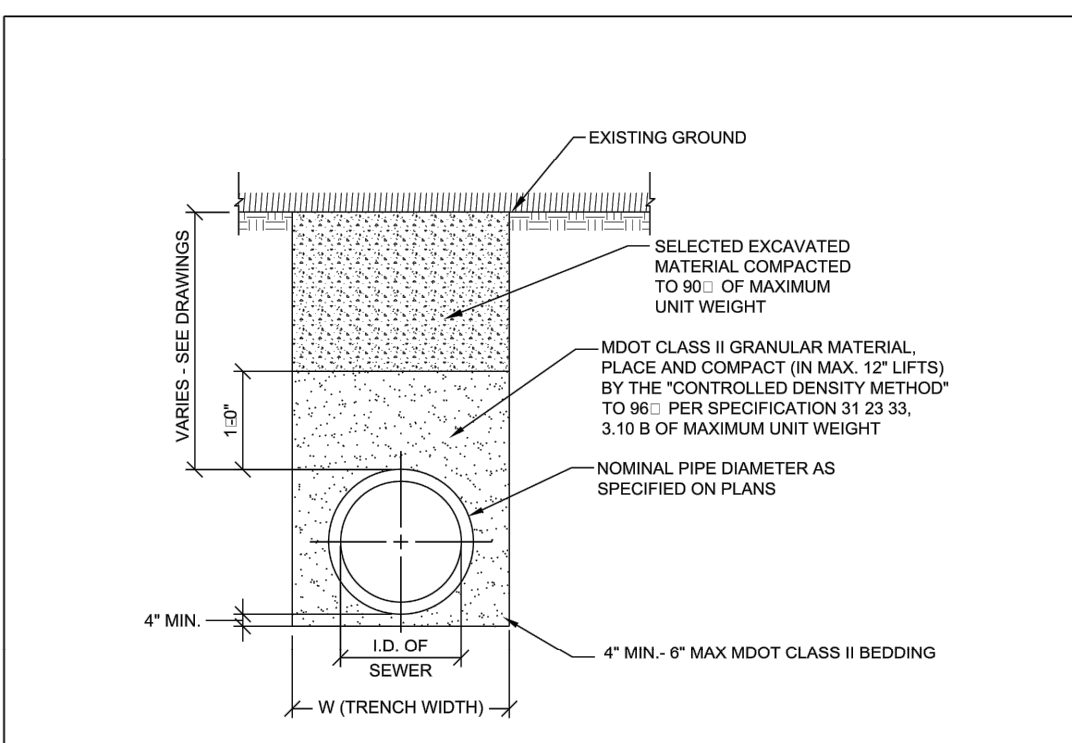
I.D. PIPE SIZE (INCHES)	18 OR LESS	21	24	30	36	42	48	54	60	66	72
MAXIMUM TRENCH WIDTH (FEET)	5.00	5.5	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00

W (TRENCH WIDTH) ≥ 5 FEET, WHEN PIPE I.D. IS 18" OR LESS
W (TRENCH WIDTH) ≥ I.D. + 4 FEET, WHEN PIPE I.D. IS GREATER THAN 18"

- NOTES:**
- NO EXTRA PAYMENT WILL BE MADE FOR BASE AND PAVEMENT RESTORATION ITEMS DUE TO ADDITIONAL EXCAVATION BEYOND THE MAXIMUM TRENCH WIDTH LISTED ABOVE.
 - REFER TO PAVEMENT RESTORATION DETAILS FOR BASE AND PAVEMENT WIDTH.
 - TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P AND SHALL BE PERFORMED TO MINIMIZE THE SURFACE DISRUPTION.

**STANDARD TRENCH DETAIL FOR SEWER
UNDER ROAD BED, PARKING LOTS, SIDEWALKS, DRIVEWAYS,
CURBS, GRAVEL ROADS AND ALLEYS**

REV	DESCRIPTION	DATE	SCALE	SHEET	CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
1	UPDATED	06/20/20	TITLE NONE	1 OF 3	
			DATE 09/20/18	DWG. No. 312333-01	



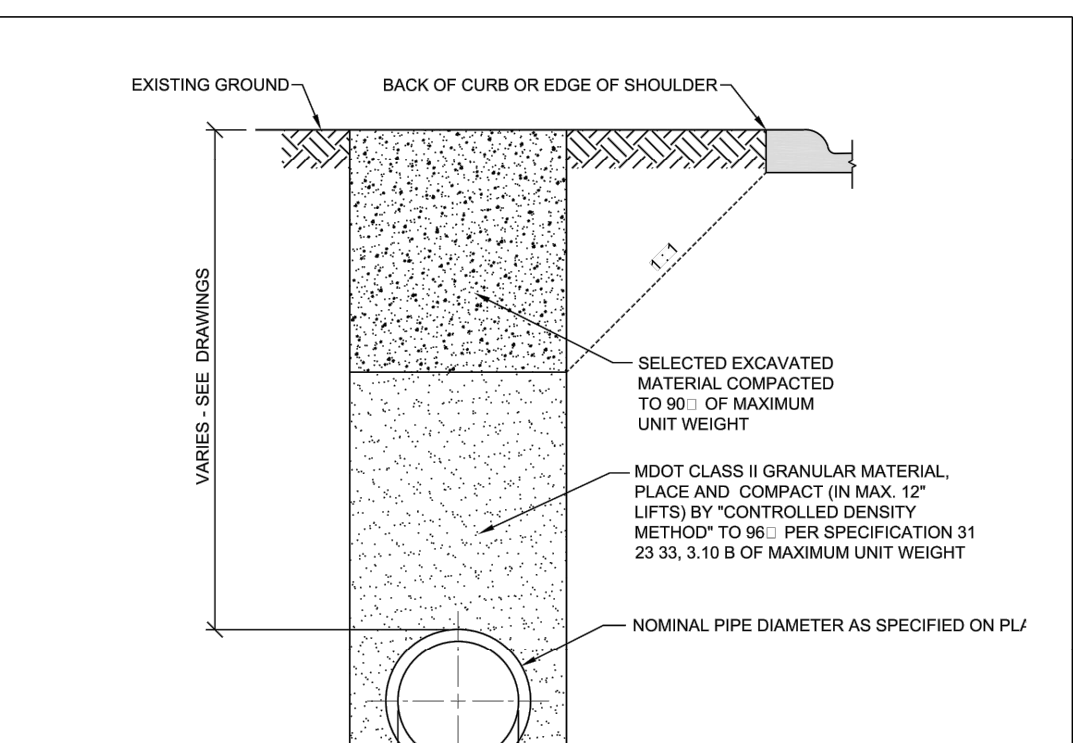
I.D. PIPE SIZE (INCHES)	18 OR LESS	21	24	30	36	42	48	54	60	66	72
MAXIMUM TRENCH WIDTH (FEET)	5.00	5.5	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00

W (TRENCH WIDTH) ≥ 5 FEET, WHEN PIPE I.D. IS 18" OR LESS
W (TRENCH WIDTH) ≥ I.D. + 4 FEET, WHEN PIPE I.D. IS GREATER THAN 18"

- NOTES:**
- NO EXTRA PAYMENT WILL BE MADE FOR BASE AND PAVEMENT RESTORATION ITEMS DUE TO ADDITIONAL EXCAVATION BEYOND THE MAXIMUM TRENCH WIDTH LISTED ABOVE.
 - TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P AND SHALL BE PERFORMED TO MINIMIZE THE SURFACE DISRUPTION.

**STANDARD TRENCH DETAIL FOR SEWER
UNDER BERMS, LAWNS, GRASSY AREAS,
(OUTSIDE PAVEMENT INFLUENCE)**

REV	DESCRIPTION	DATE	SCALE	SHEET	CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
1	UPDATED	06/20/20	TITLE NONE	2 OF 3	
			DATE 09/20/18	DWG. No. 312333-02	



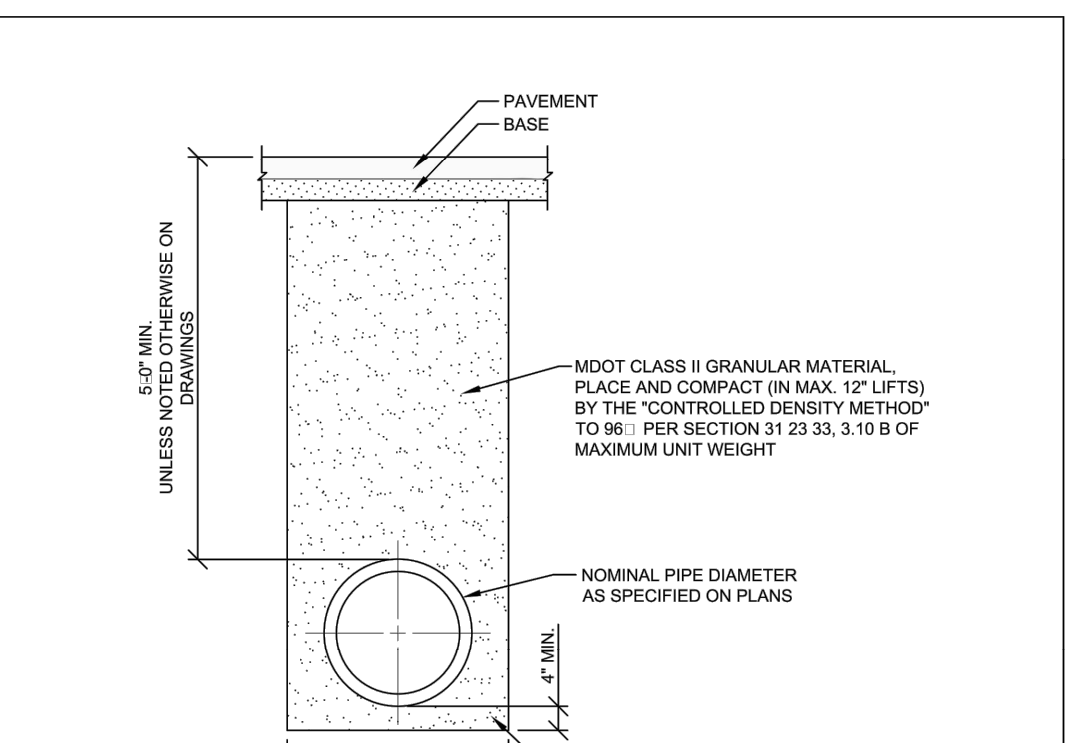
I.D. PIPE SIZE (INCHES)	18 OR LESS	21	24	30	36	42	48	54	60	66	72
MAXIMUM TRENCH WIDTH (FEET)	5.00	5.5	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00

W (TRENCH WIDTH) ≥ 5 FEET, WHEN PIPE I.D. IS 18" OR LESS
W (TRENCH WIDTH) ≥ I.D. + 4 FEET, WHEN PIPE I.D. IS GREATER THAN 18"

- NOTES:**
- NO EXTRA PAYMENT WILL BE MADE FOR BASE AND PAVEMENT RESTORATION ITEMS DUE TO ADDITIONAL EXCAVATION BEYOND THE MAXIMUM TRENCH WIDTH LISTED ABOVE.
 - TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P AND SHALL BE PERFORMED TO MINIMIZE THE SURFACE DISRUPTION.

**STANDARD TRENCH DETAIL FOR SEWER
UNDER ROAD BED, PARKING LOTS, SIDEWALKS,
DRIVEWAYS, CURBS, GRAVEL ROADS AND ALLEYS**

REV	DESCRIPTION	DATE	SCALE	SHEET	CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
1	UPDATED	06/20/20	TITLE NONE	3 OF 3	
			DATE 09/20/18	DWG. No. 312333-03	

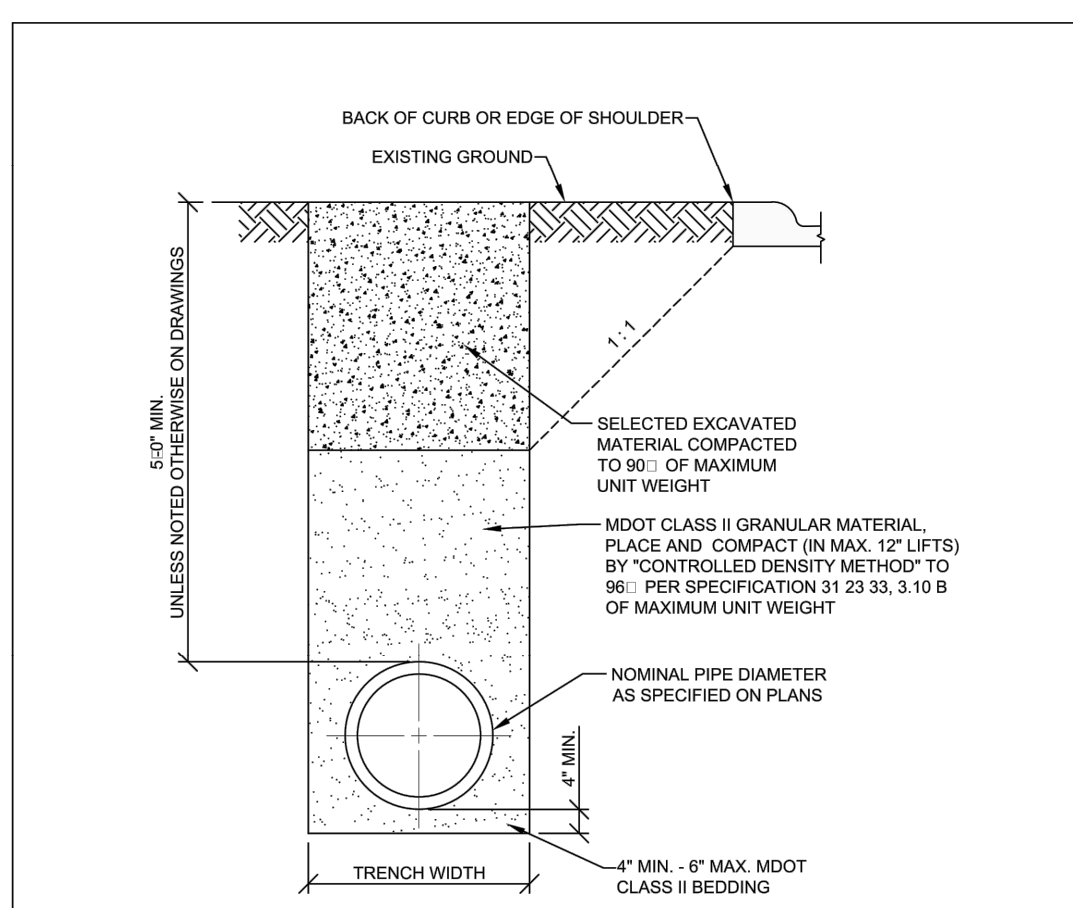


NOMINAL PIPE DIAMETER	MAXIMUM TRENCH WIDTH
LESS THAN 18"	30"
18" TO 24"	PIPE DIAMETER PLUS 18"
GREATER THAN 24"	PIPE DIAMETER PLUS 24"

- NOTES:**
- NO EXTRA PAYMENT WILL BE MADE FOR BASE AND PAVEMENT RESTORATION ITEMS DUE TO ADDITIONAL EXCAVATION BEYOND THE MAXIMUM TRENCH WIDTH LISTED ABOVE.
 - REFER TO PAVEMENT RESTORATION DETAILS FOR BASE AND PAVEMENT WIDTH.
 - TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P AND SHALL BE PERFORMED TO MINIMIZE THE SURFACE DISRUPTION.

**STANDARD TRENCH DETAIL FOR WATER MAIN
UNDER ROAD BED, PARKING LOTS, SIDEWALKS,
DRIVEWAYS, CURBS, GRAVEL ROADS AND ALLEYS**

REV	DESCRIPTION	DATE	SCALE	SHEET	CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
1	UPDATED	06/20/20	TITLE NONE	1 OF 3	
			DATE 09/20/18	DWG. No. 312333-04	

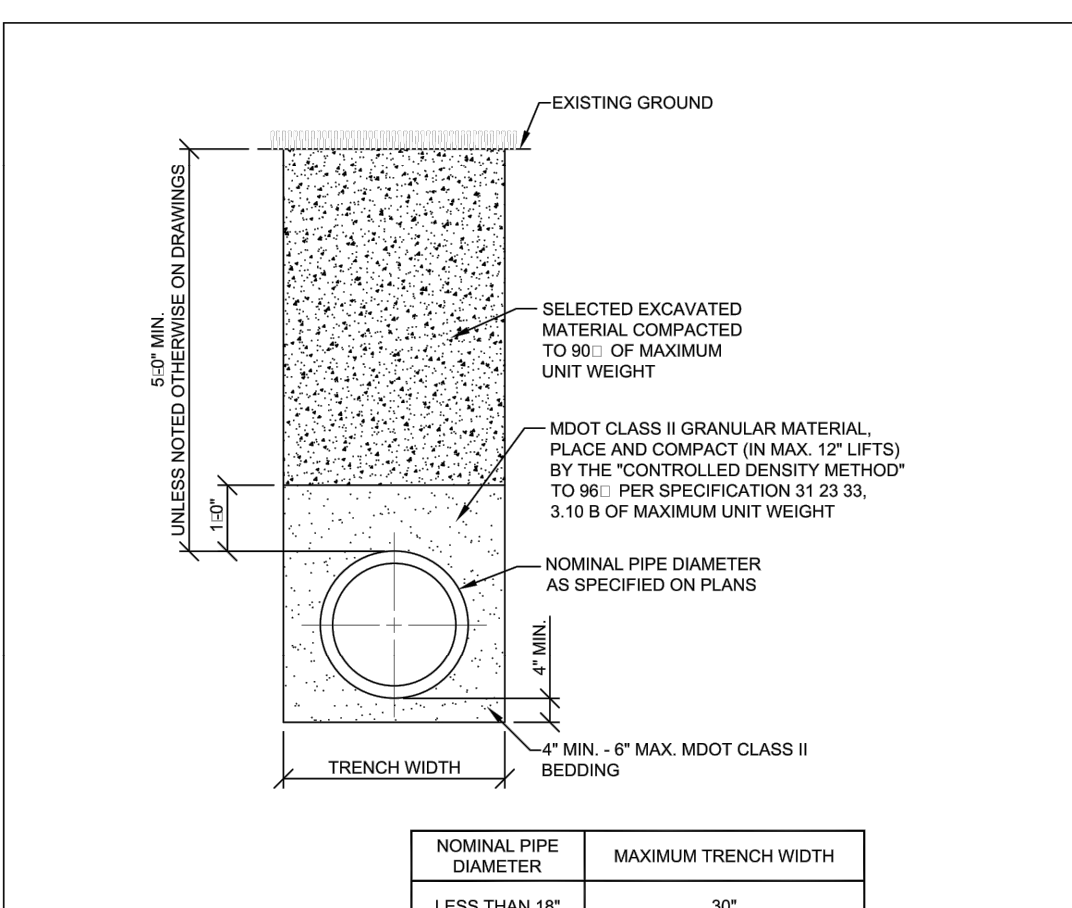


NOMINAL PIPE DIAMETER	MAXIMUM TRENCH WIDTH
LESS THAN 18"	30"
18" TO 24"	PIPE DIAMETER PLUS 18"
GREATER THAN 24"	PIPE DIAMETER PLUS 24"

- NOTES:**
- NO EXTRA PAYMENT WILL BE MADE FOR BASE AND PAVEMENT RESTORATION ITEMS DUE TO ADDITIONAL EXCAVATION BEYOND THE MAXIMUM TRENCH WIDTH LISTED ABOVE.
 - TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P AND SHALL BE PERFORMED TO MINIMIZE THE SURFACE DISRUPTION.

**STANDARD TRENCH DETAIL FOR WATER MAIN
WITHIN INFLUENCE OF ROAD BED**

REV	DESCRIPTION	DATE	SCALE	SHEET	CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
1	UPDATED	06/20/20	TITLE NONE	2 OF 3	
			DATE 09/20/18	DWG. No. 312333-05	

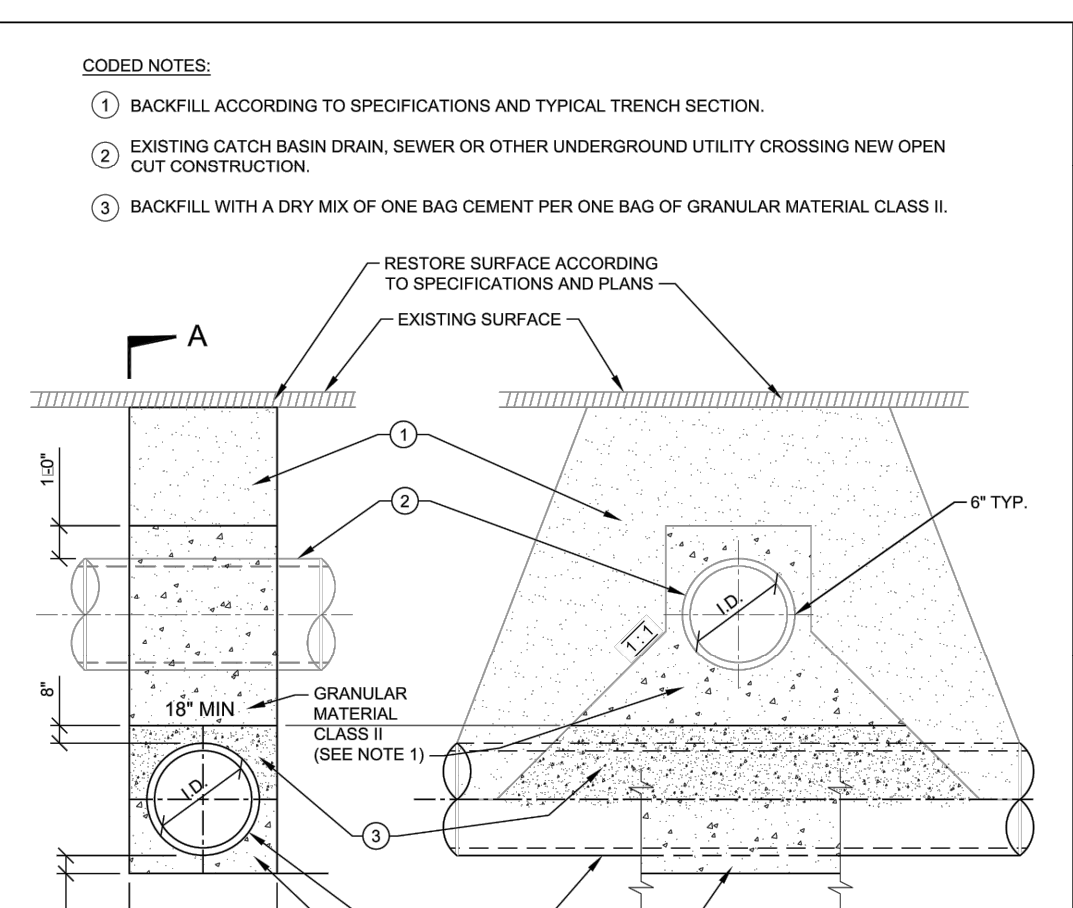


NOMINAL PIPE DIAMETER	MAXIMUM TRENCH WIDTH
LESS THAN 18"	30"
18" TO 24"	PIPE DIAMETER PLUS 18"
GREATER THAN 24"	PIPE DIAMETER PLUS 24"

- NOTES:**
- NO EXTRA PAYMENT WILL BE MADE FOR BASE AND PAVEMENT RESTORATION ITEMS DUE TO ADDITIONAL EXCAVATION BEYOND THE MAXIMUM TRENCH WIDTH LISTED ABOVE.
 - TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P AND SHALL BE PERFORMED TO MINIMIZE THE SURFACE DISRUPTION.

**STANDARD TRENCH DETAIL FOR WATER MAIN
UNDER BERMS, LAWNS, GRASSY AREAS,
(OUTSIDE PAVEMENT INFLUENCE)**

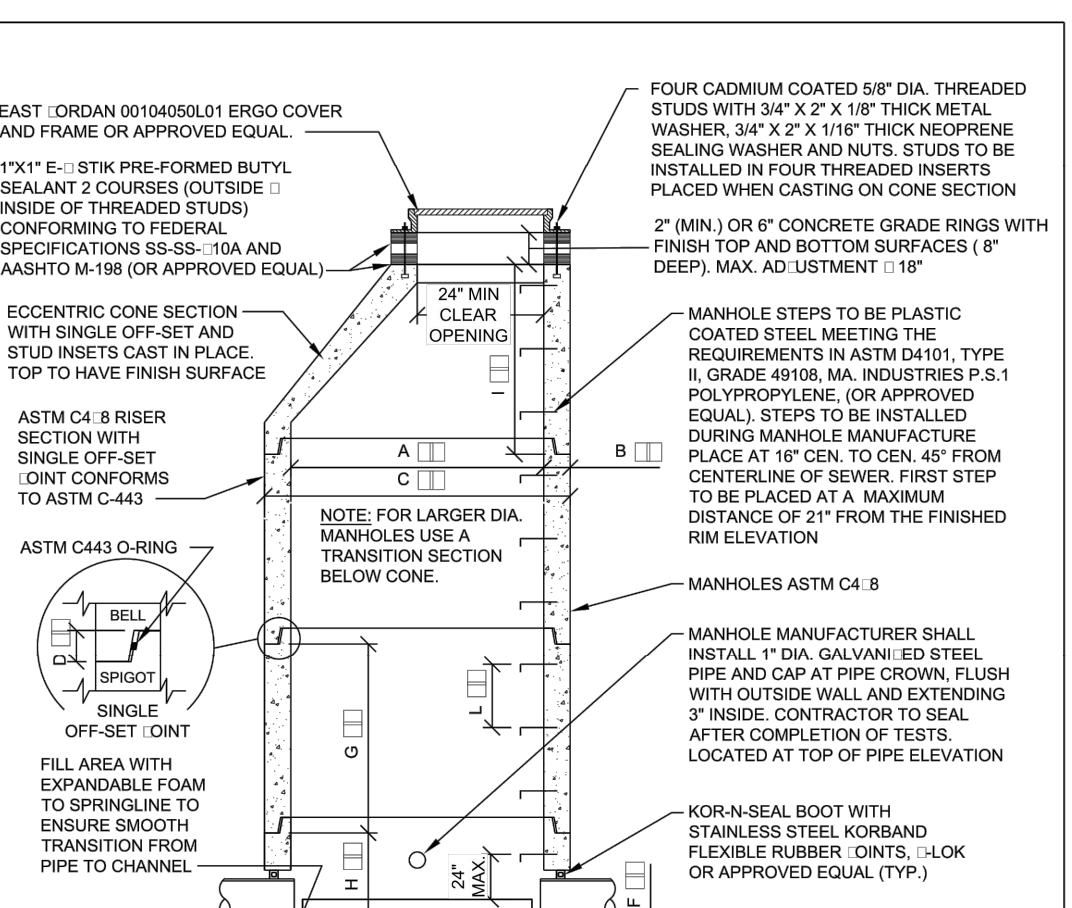
REV	DESCRIPTION	DATE	SCALE	SHEET	CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
1	UPDATED	06/20/20	TITLE NONE	3 OF 3	
			DATE 09/20/18	DWG. No. 312333-06	



- CODED NOTES:**
- BACKFILL ACCORDING TO SPECIFICATIONS AND TYPICAL TRENCH SECTION.
 - EXISTING CATCH BASIN DRAIN, SEWER OR OTHER UNDERGROUND UTILITY CROSSING NEW OPEN CUT CONSTRUCTION.
 - BACKFILL WITH A DRY MIX OF ONE BAG CEMENT PER ONE BAG OF GRANULAR MATERIAL CLASS II.
- NOTES:**
- ALL MDOOT CLASS II GRANULAR MATERIAL, PLACE AND COMPACT (IN MAX. 12" LIFTS) BY "CONTROLLED DENSITY METHOD" TO 96% PER SPECIFICATION 31 23 33, 3.10 B OF MAXIMUM UNIT WEIGHT.
 - WATERMANS CROSSING UNDER SEWERS - WHEN IT IS IMPOSSIBLE TO OBTAIN THE MINIMUM 18-INCH CLEARANCE, REPLACE THE SEWER PIPE (MINIMUM OF 10 FT. ON BOTH SIDES OF WATERMAIN) WITH WATERWORKS GRADE 150PSI PRESSURE TESTED TO ENSURE WATER TIGHTNESS.
 - "W" - SEE TRENCH DETAILS FOR TRENCH WIDTH.
 - TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P

TYPICAL DETAIL AT CROSSING UNDER EXISTING UTILITIES

REV	DESCRIPTION	DATE	SCALE	SHEET	CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
1	UPDATED	06/20/20	TITLE NONE	1 OF 1	
			DATE 09/20/18	DWG. No. 312333-07	



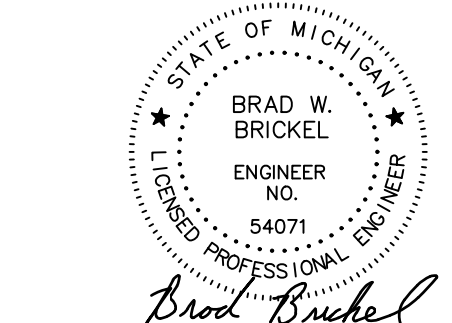
- NOTES:**
- REFER TO DETAIL SHEET 33061-05 FOR MANHOLE ASSEMBLY TABLE
 - PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ALL THE REQUIREMENTS OF "SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE RISERS AND TOPS" ASTM C-48 WITH SINGLE OFF-SET. (DONT CONFORMS TO ASTM C-443).
 - EACH SECTION SHALL HAVE NOT MORE THAN TWO HOLES FOR HANDLING PURPOSES. THESE HOLES SHALL BE SATISFACTORILY PLUGGED WITH GROUT AFTER INSTALLATION.

STANDARD MANHOLE PRECAST

REV	DESCRIPTION	DATE	SCALE	SHEET	CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
1	UPDATED	06/20/20	TITLE NONE	1 OF 1	
			DATE 09/20/18	DWG. No. 33061-02	

DETAIL NOTE
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SEAL



PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835
Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
City of Detroit Standard
Details



DATE ISSUED/REVISED
08-27-21 ISSUED FOR ENGINEERING REVIEW
09-20-21 REVISED GRADING
12-01-21 REVISED PER CITY
01-05-22 REVISED PER CITY

DRAWN BY:
J. Lawrey
DESIGNED BY:
B. Brickel
APPROVED BY:
B. Brickel

DATE:
September 10, 2020

SCALE: N.T.S.

NFE JOB NO. **SHEET NO.**
L898 C20

A. RIBER DIAMETER	IN	40	40	24	36	48	60	100	120
B. WALL THICKNESS	IN	5	4	3	4	5	6	5	10
C. OUTSIDE DIAMETER	IN	50	48	33	40	53	59	110	140
D. INLET DEPTH	IN	4	2.5	4	3.5	5.5	5.5	5.5	6.5
E.									
F. INTEGRAL BASE	IN	4	3	3	3	4	4	4	4
G. RIBER HEIGHTS	FT	1.25	1.42	1.42	1.42	2.25	2.25	2.25	2.25
H. BASE HEIGHT	FT	1.25	1.42	1.42	1.42	2.25	2.25	2.25	2.25
I. CONE HEIGHT TO 24"	FT	1.25	1.42	1.42	1.42	2.25	2.25	2.25	2.25
J. CONE HEIGHT TO 48"	FT	1.25	1.42	1.42	1.42	2.25	2.25	2.25	2.25
K. LOOSE BASE - OUTSIDE DIA.	IN	48	48	36	48	60	60	60	60
L. STEP SPACING	IN	16	16	16	16	16	16	16	16
M. APPROX. WEIGHT / FT ²	LB	86	126	181	248	309	385	430	430

MANHOLE FRAME AND COVER WITH LOGO - SEWER

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE SHEET 1 OF 1
DATE: 9/20/18 DWG. No.: 33561-03

A. RIBER DIAMETER	IN	40	40	24	36	48	60	100	120
B. WALL THICKNESS	IN	5	4	3	4	5	6	5	10
C. OUTSIDE DIAMETER	IN	50	48	33	40	53	59	110	140
D. INLET DEPTH	IN	4	2.5	4	3.5	5.5	5.5	5.5	6.5
E.									
F. INTEGRAL BASE	IN	4	3	3	3	4	4	4	4
G. RIBER HEIGHTS	FT	1.25	1.42	1.42	1.42	2.25	2.25	2.25	2.25
H. BASE HEIGHT	FT	1.25	1.42	1.42	1.42	2.25	2.25	2.25	2.25
I. CONE HEIGHT TO 24"	FT	1.25	1.42	1.42	1.42	2.25	2.25	2.25	2.25
J. CONE HEIGHT TO 48"	FT	1.25	1.42	1.42	1.42	2.25	2.25	2.25	2.25
K. LOOSE BASE - OUTSIDE DIA.	IN	48	48	36	48	60	60	60	60
L. STEP SPACING	IN	16	16	16	16	16	16	16	16
M. APPROX. WEIGHT / FT ²	LB	86	126	181	248	309	385	430	430

MANHOLE ASSEMBLY

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE SHEET 1 OF 1
DATE: 9/20/18 DWG. No.: 33561-05

GRAVEL ACCESS APPROACH

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE SHEET 1 OF 1
DATE: 9/20/18 DWG. No.: 015-13-01

DOG HOUSE OPENING	SEWER PIPE I.D.	MAX. OPENING
8" - 10"	1:1.5"	
12" - 15"	2:0"	
18" - 24"	3:0"	

MANHOLE OVER EXISTING SEWER

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE SHEET 1 OF 1
DATE: 9/20/18 DWG. No.: 33561-08

CONNECTION RESIDENTIAL SERVICE

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE SHEET 1 OF 1
DATE: 9/20/18 DWG. No.: 33419-01

GATE VALVE ON D.I. PIPE

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE SHEET 1 OF 1
DATE: 9/20/18 DWG. No.: 33419-04

CONCRETE VALVE BOX COLLAR

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE SHEET 1 OF 1
DATE: 9/20/18 DWG. No.: 33419-09

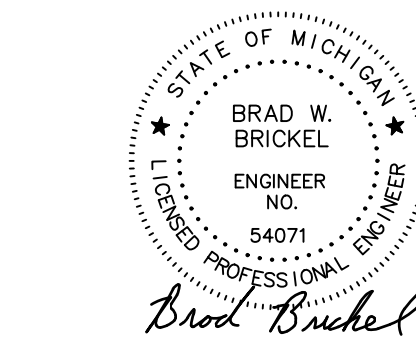
WYE CONNECTION AND EXTENSION

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE SHEET 1 OF 1
DATE: 9/20/18 DWG. No.: 33311-02

DETAIL NOTE
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SEAL



PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835

Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
City of Detroit Standard
Details



Know what's below
Call before you dig.

DATE ISSUED/REVISED
08-27-21 ISSUED FOR ENGINEERING REVIEW
09-20-21 REVISED GRADING
12-01-21 REVISED PER CITY
01-05-22 REVISED PER CITY

DRAWN BY:
J. Lawrey

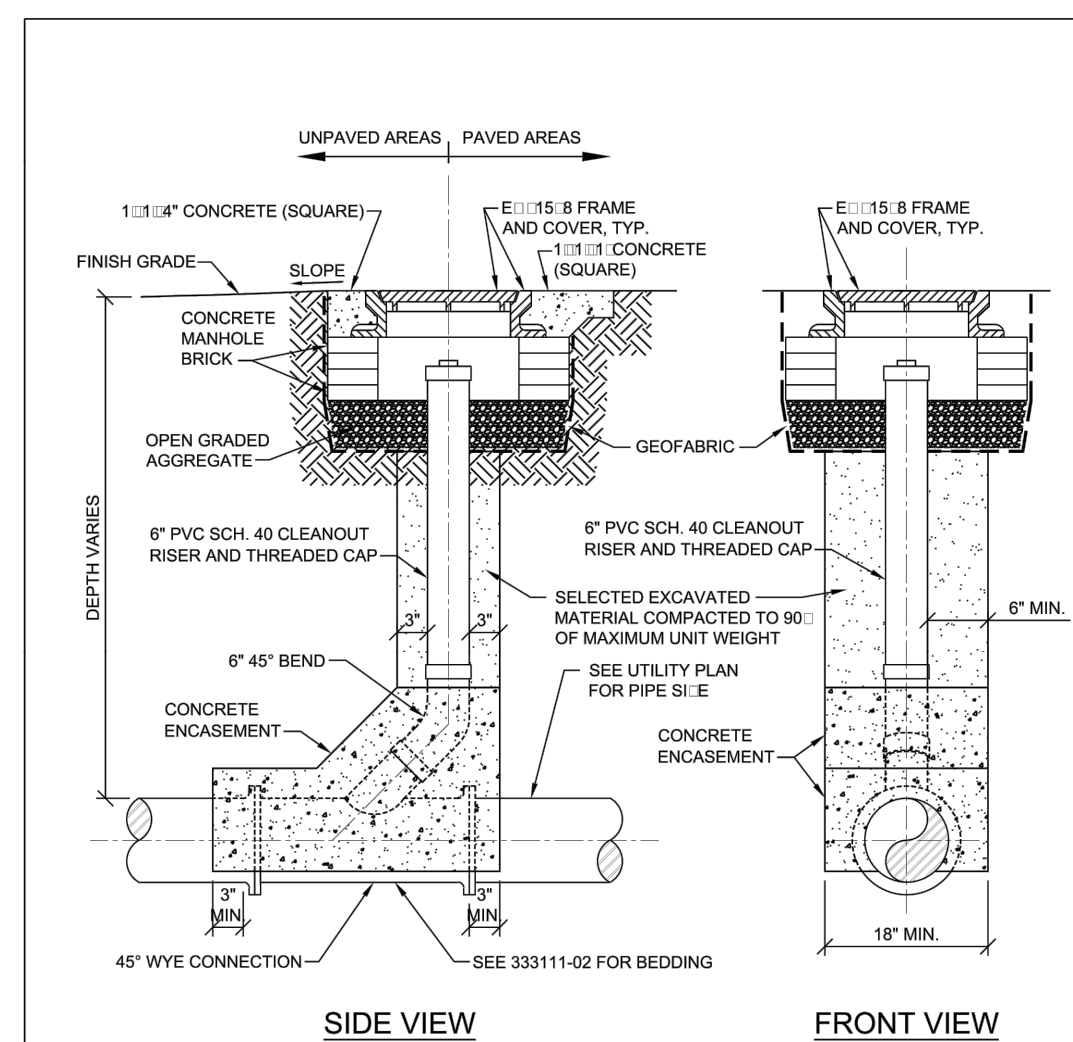
DESIGNED BY:
B. Brickel

APPROVED BY:
B. Brickel

DATE:
September 10, 2020

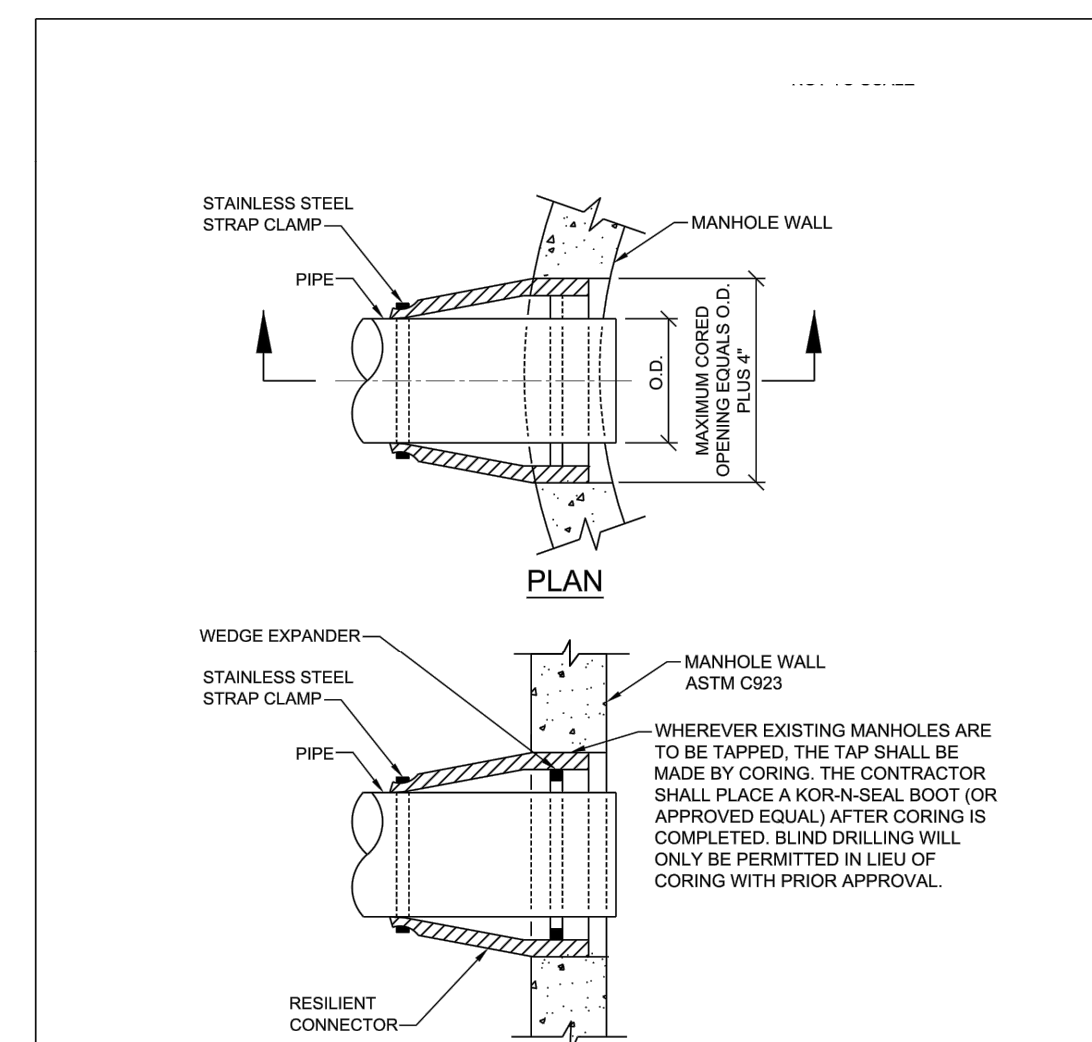
SCALE: N.T.S.

NFE JOB NO. SHEET NO.
L898 C21



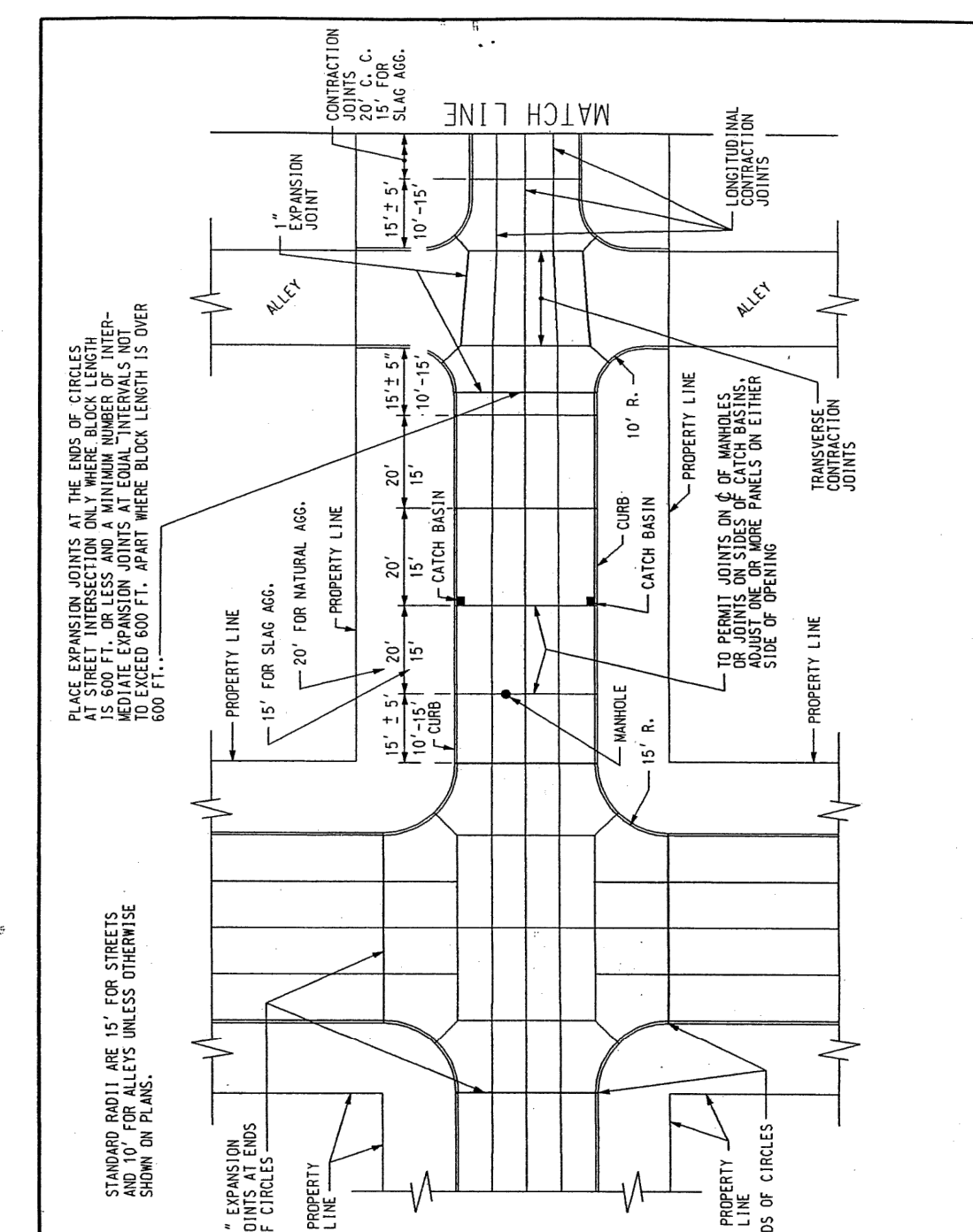
- NOTES:
1. MINIMUM SEPARATION DISTANCE BETWEEN LATERALS: 5 FT
 2. MINIMUM DEPTH OF COVER OVER PIPE: 2 FT

CLEANOUT		CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION	
1	UPDATED	06/2020	DATE
REV	DESCRIPTION	DATE	REVISIONS
SCALE		SHEET 1 OF 1	
DATE		DWG. NO. 333111-03	



- NOTE:
1. ALL NEW PIPE OPENINGS FOR PROPOSED MANHOLES SHALL BE MADE BY MANHOLE MANUFACTURER.
- WATERTIGHT RESILIENT CONNECTOR
FOR CONNECTING PROPOSED PIPES TO EXISTING MANHOLES
AND EXISTING PIPES TO PROPOSED MANHOLES**

SEWER PIPE CONNECTION WITH MANHOLE		CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION	
1	UPDATED	06/2020	DATE
REV	DESCRIPTION	DATE	REVISIONS
SCALE		SHEET 1 OF 1	
DATE		DWG. NO. 333111-05	



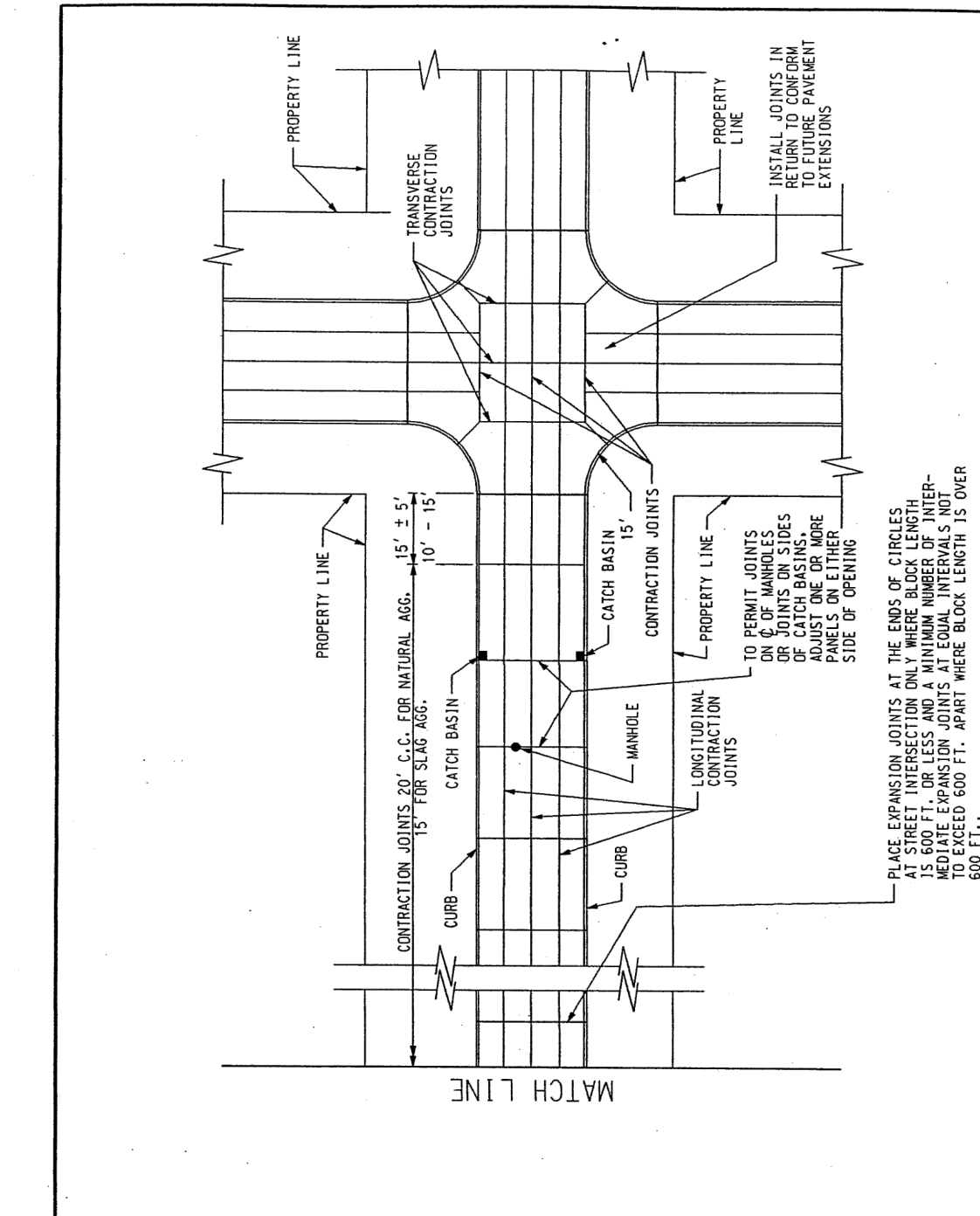
REVISED DATE (METRIC TO ENGLISH UNIT SYSTEM): DEC. 2002

CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
NON-REINFORCED CONCRETE PAVEMENT

APPROVED: *Dodun Haida*
DRAWN BY: *...*
DATE: *...*
M.E.S. CHECKED BY: *...*
CITY ENGINEER

PREPARED BY BUREAU OF STREETS AND HIGHWAYS

DRAWING NO. DETAIL STANDARD NO. SHEET NO. DATE



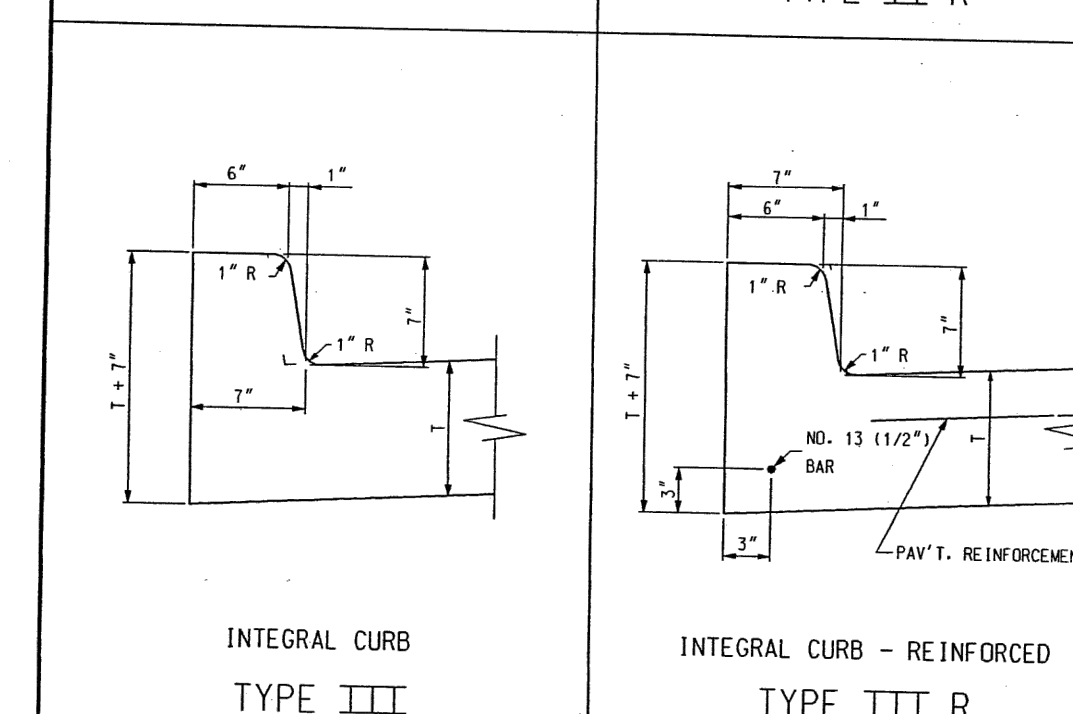
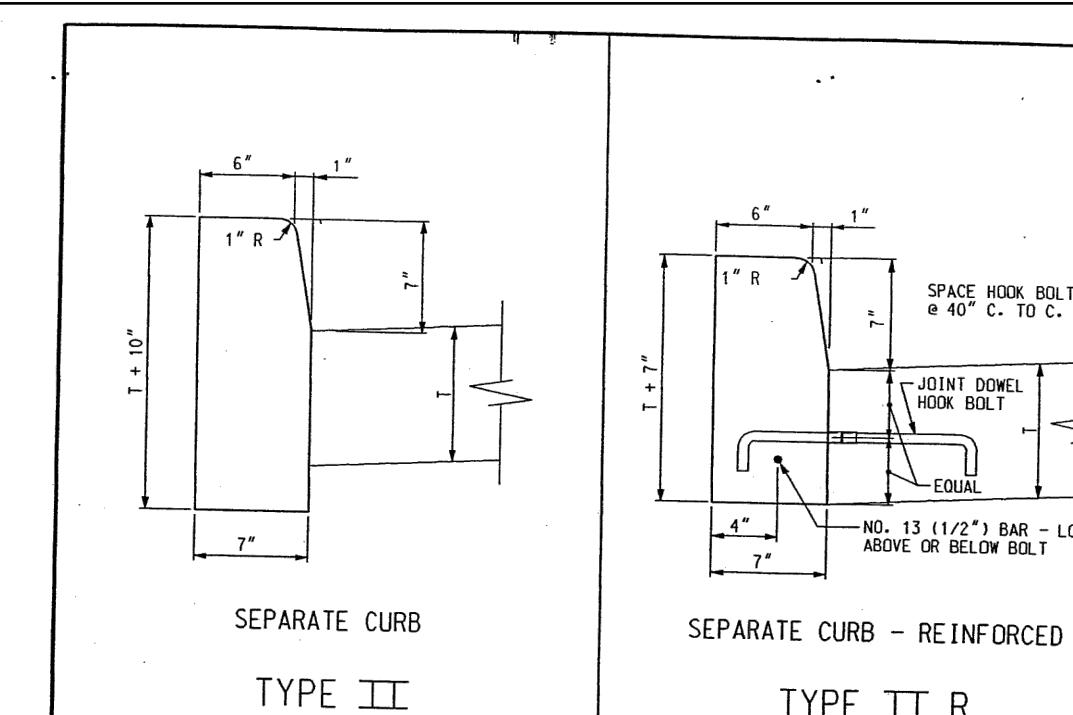
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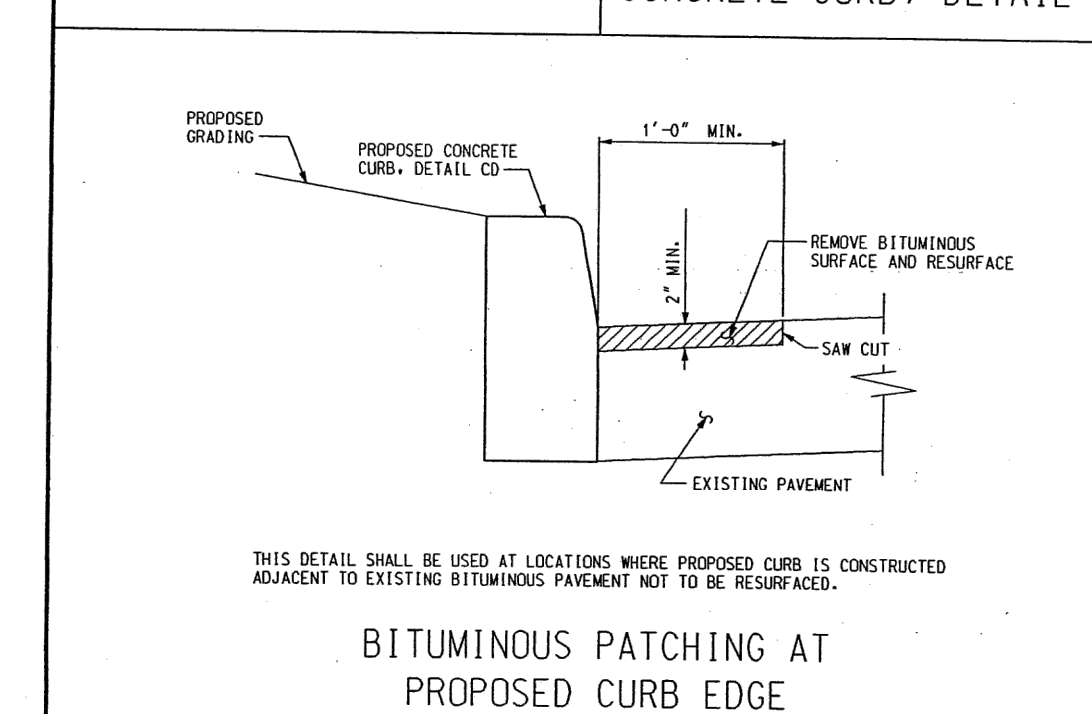
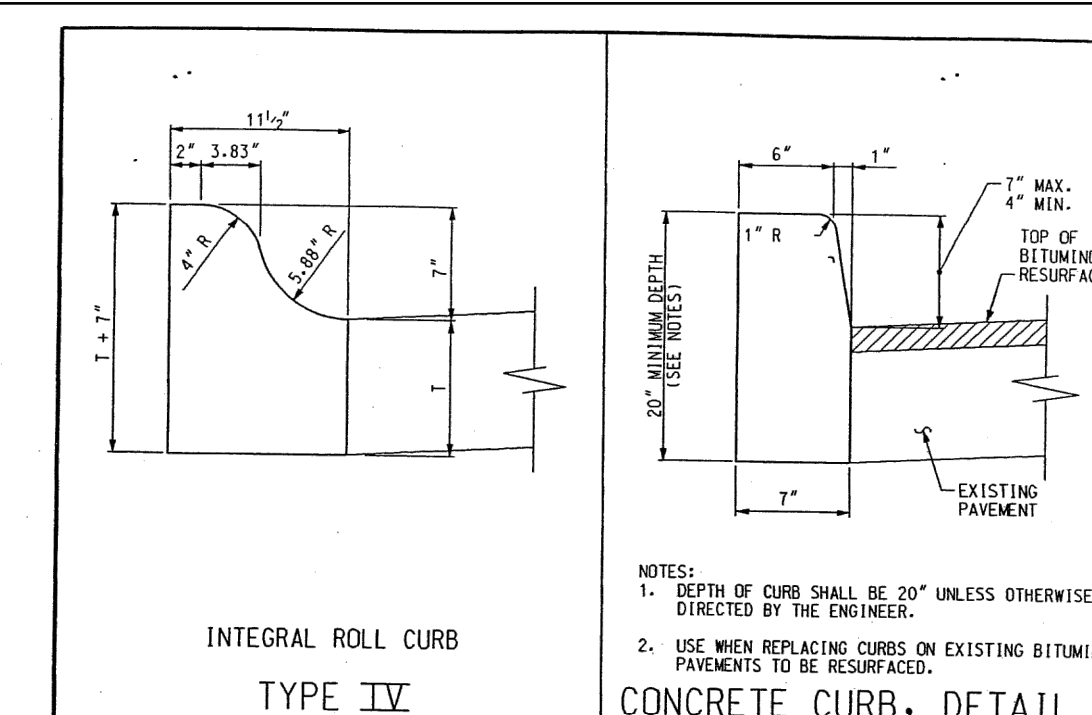
REVISED DATE (METRIC TO ENGLISH UNIT SYSTEM): DEC. 2002

CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
STANDARD CURB DETAILS

APPROVED: *Dodun Haida*
DRAWN BY: *...*
DATE: *...*
M.E.S. CHECKED BY: *...*
CITY ENGINEER

PREPARED BY BUREAU OF STREETS AND HIGHWAYS

DRAWING NO. DETAIL STANDARD NO. SHEET NO. DATE



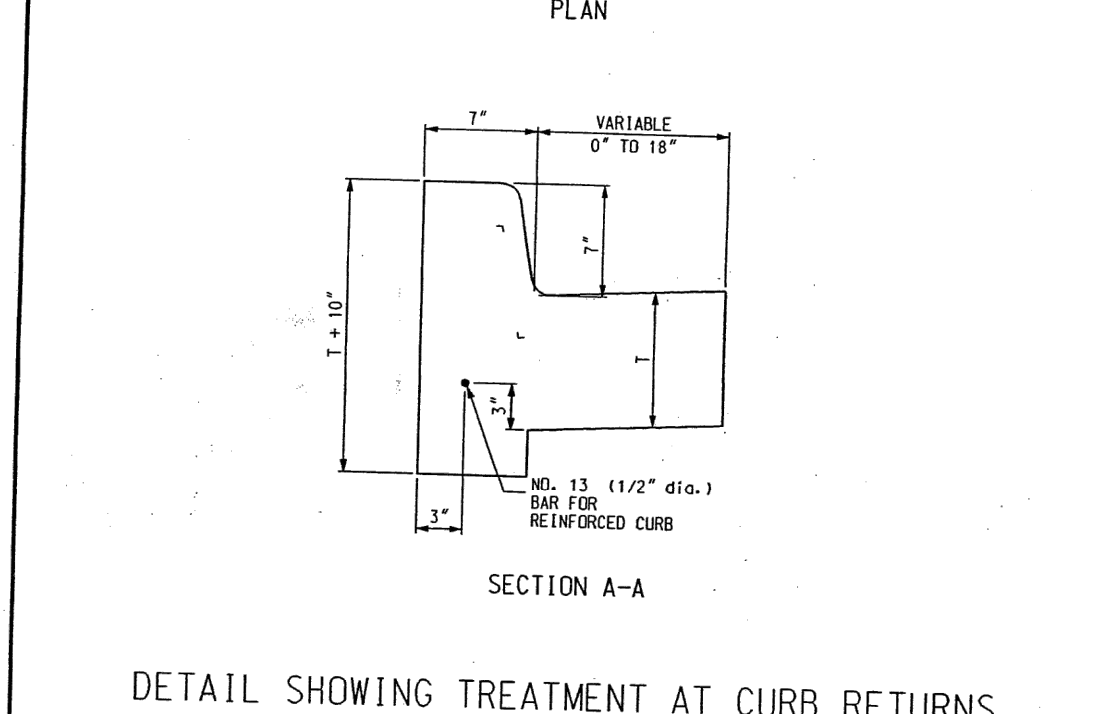
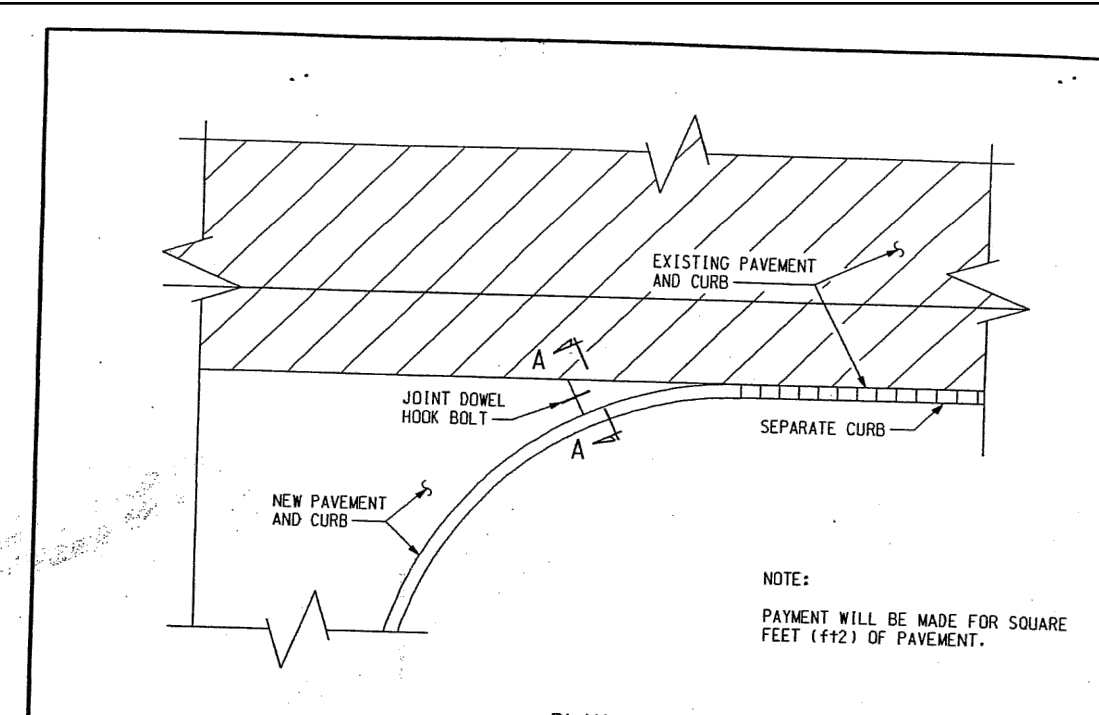
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CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
STANDARD CURB DETAILS

APPROVED: *Dodun Haida*
DRAWN BY: *...*
DATE: *...*
M.E.S. CHECKED BY: *...*
CITY ENGINEER

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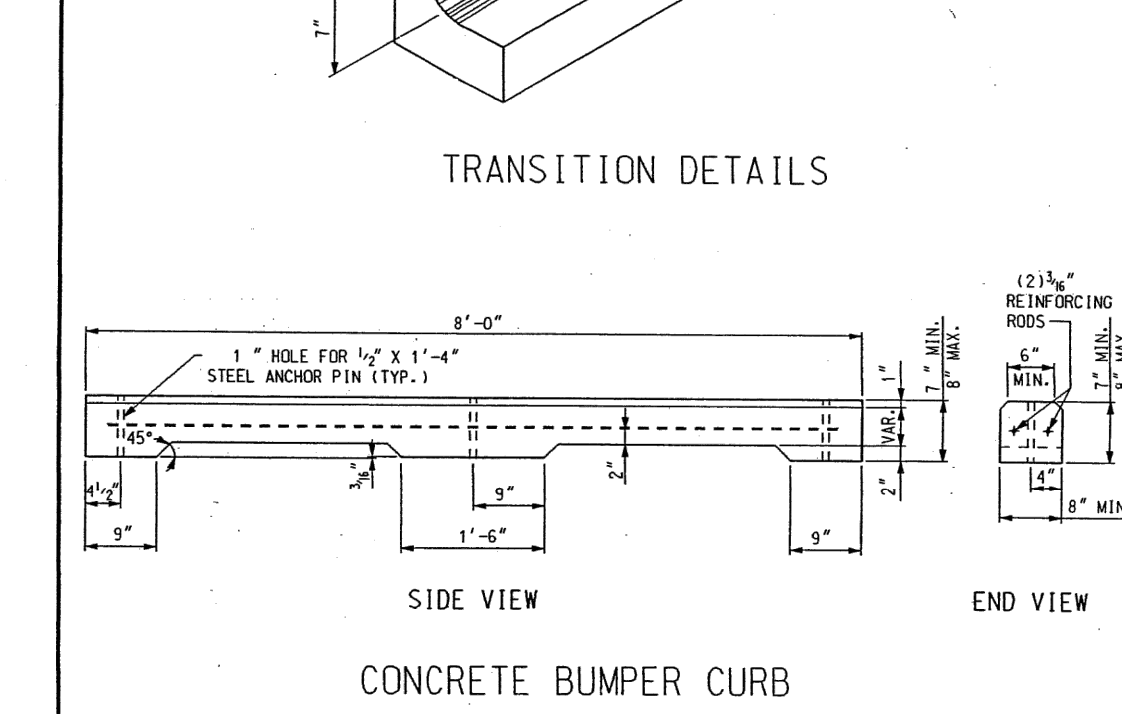
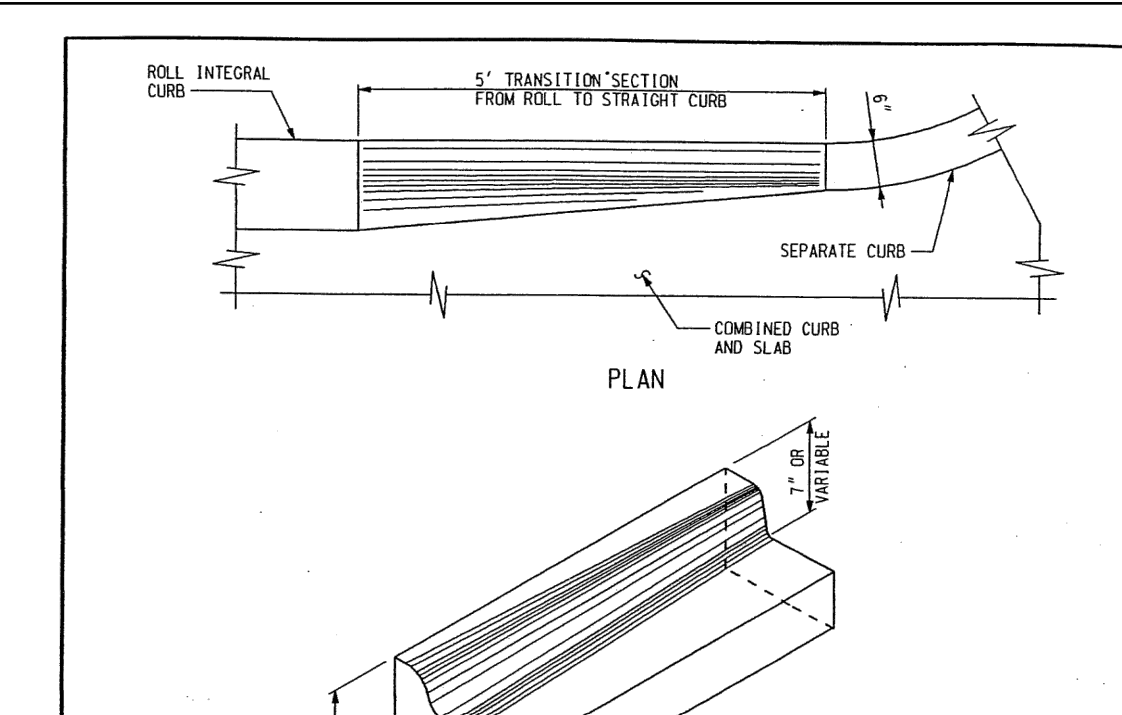
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CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
STANDARD CURB DETAILS

APPROVED: *Dodun Haida*
DRAWN BY: *...*
DATE: *...*
M.E.S. CHECKED BY: *...*
CITY ENGINEER

PREPARED BY BUREAU OF STREETS AND HIGHWAYS

DRAWING NO. DETAIL STANDARD NO. SHEET NO. DATE



REVISED DATE (METRIC TO ENGLISH UNIT SYSTEM): DEC. 2002

CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
STANDARD CURB DETAILS

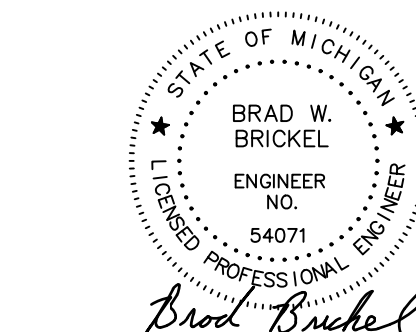
APPROVED: *Dodun Haida*
DRAWN BY: *...*
DATE: *...*
M.E.S. CHECKED BY: *...*
CITY ENGINEER

PREPARED BY BUREAU OF STREETS AND HIGHWAYS

DRAWING NO. DETAIL STANDARD NO. SHEET NO. DATE

DETAIL NOTE
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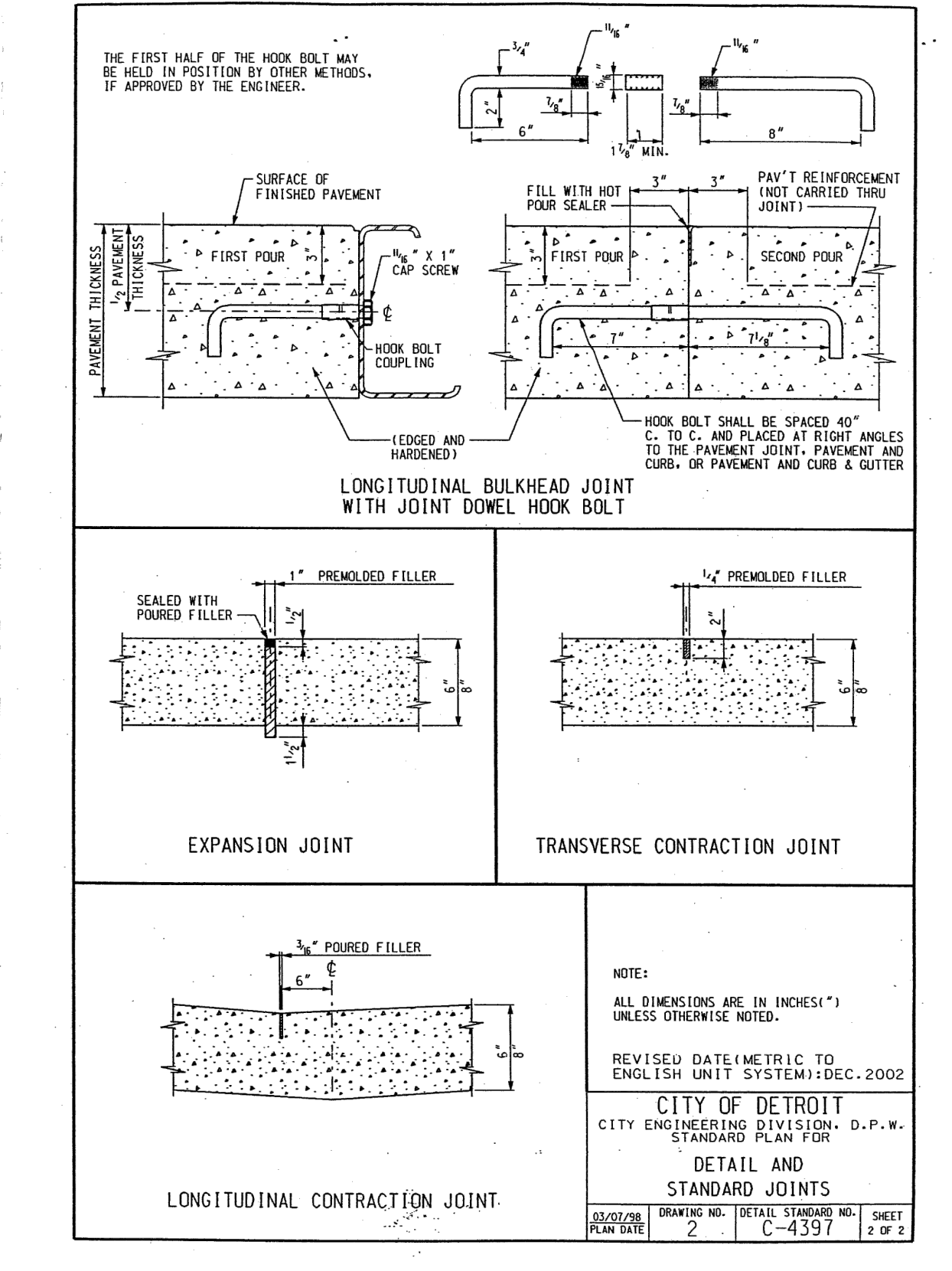
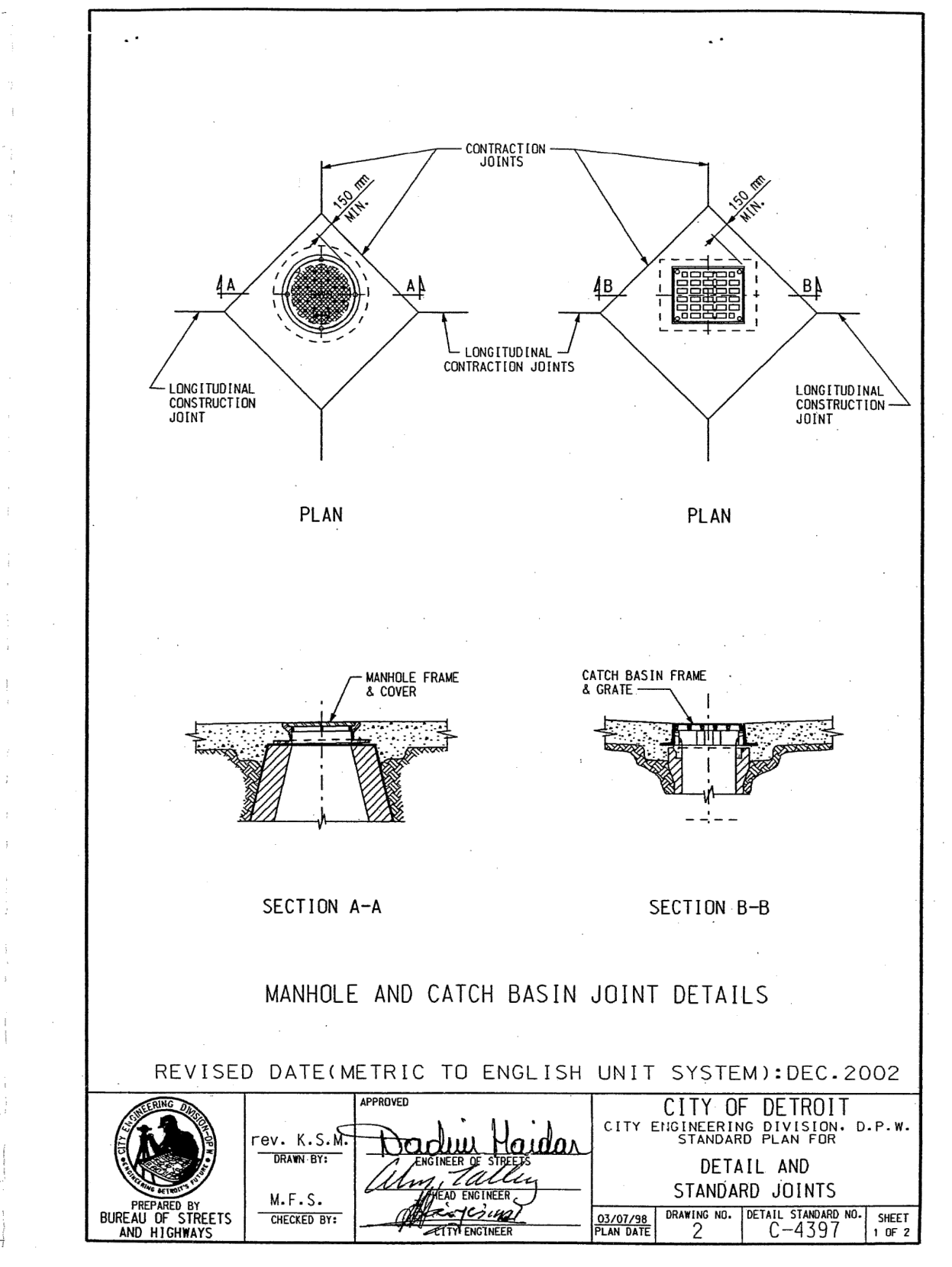
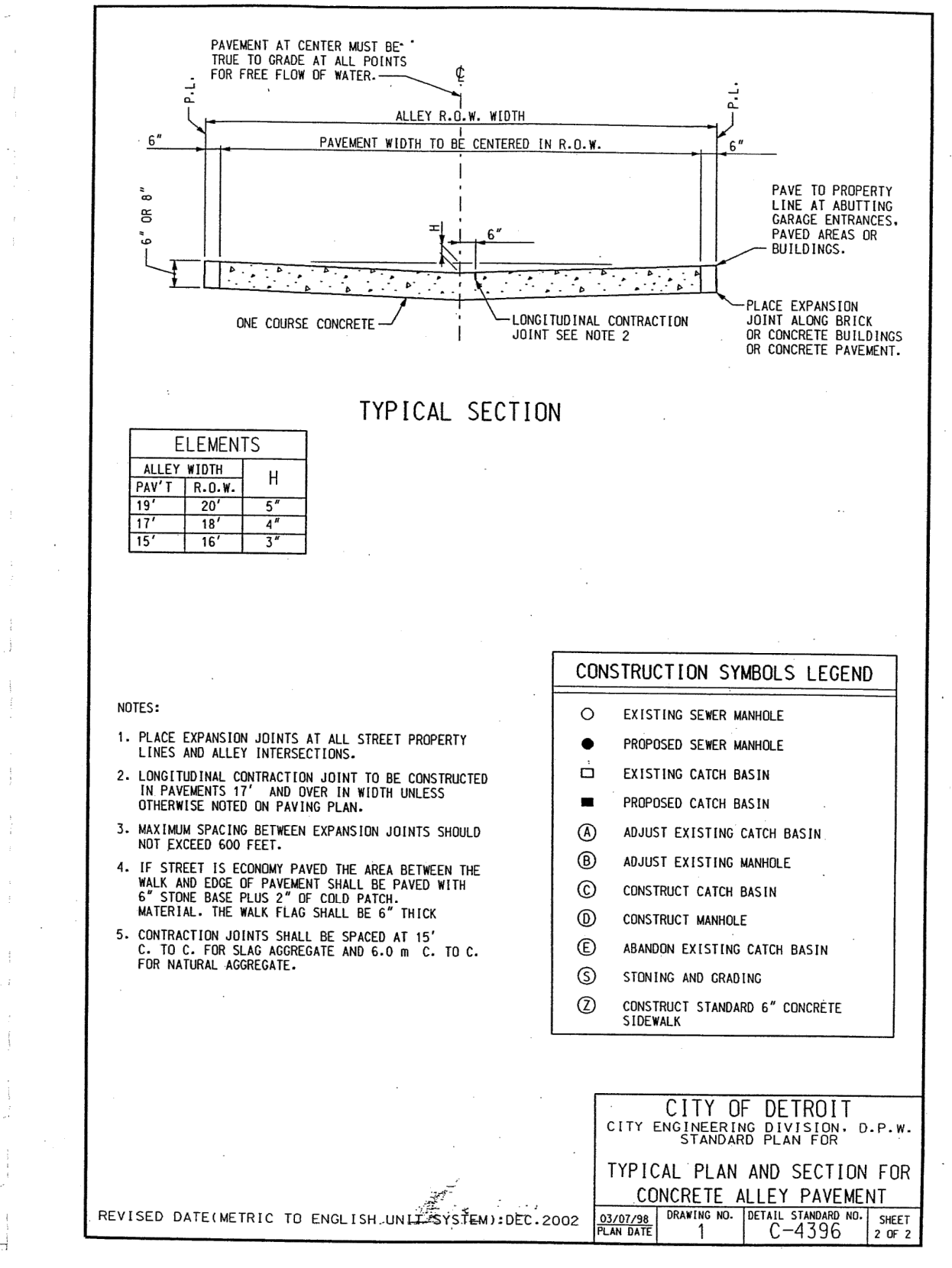
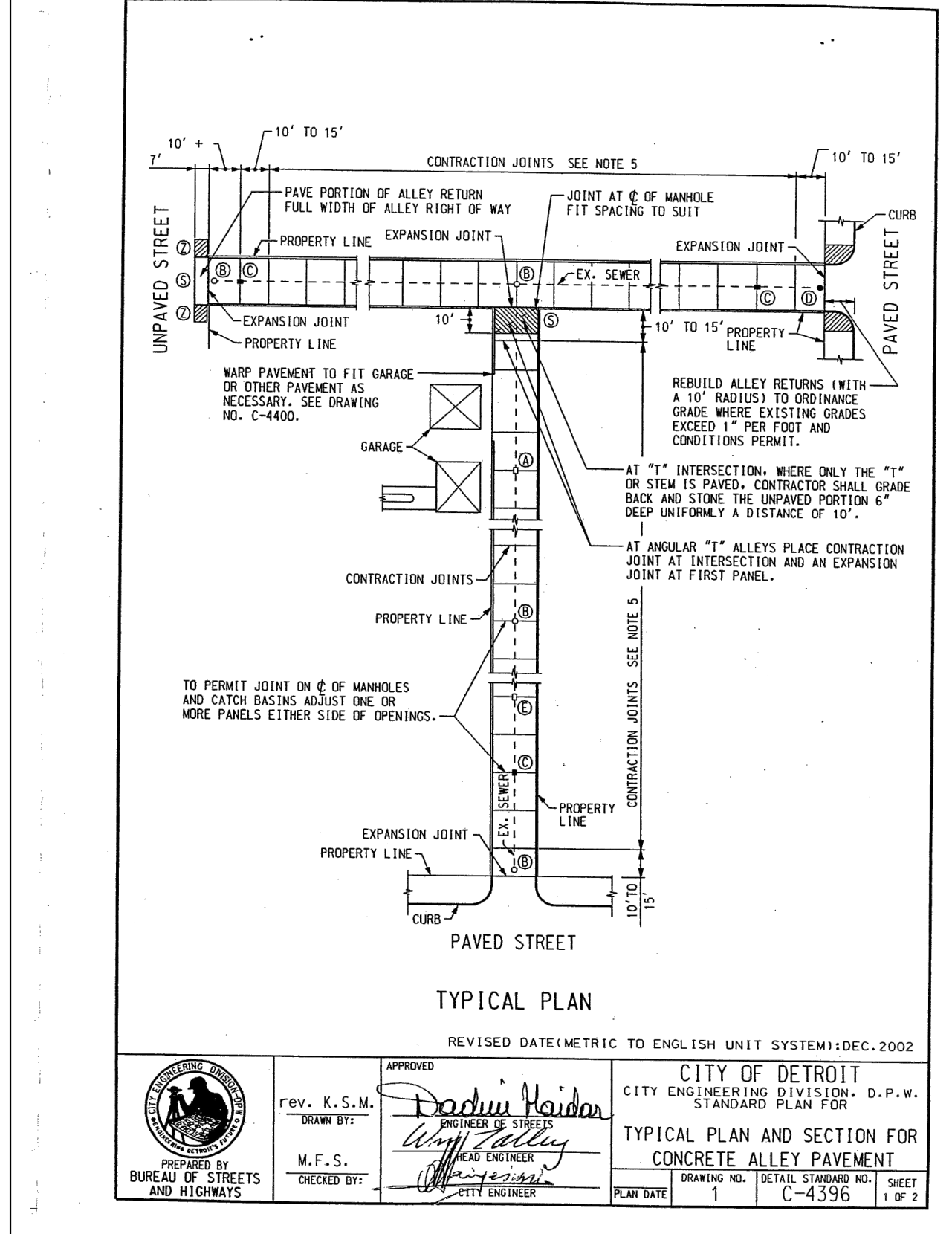
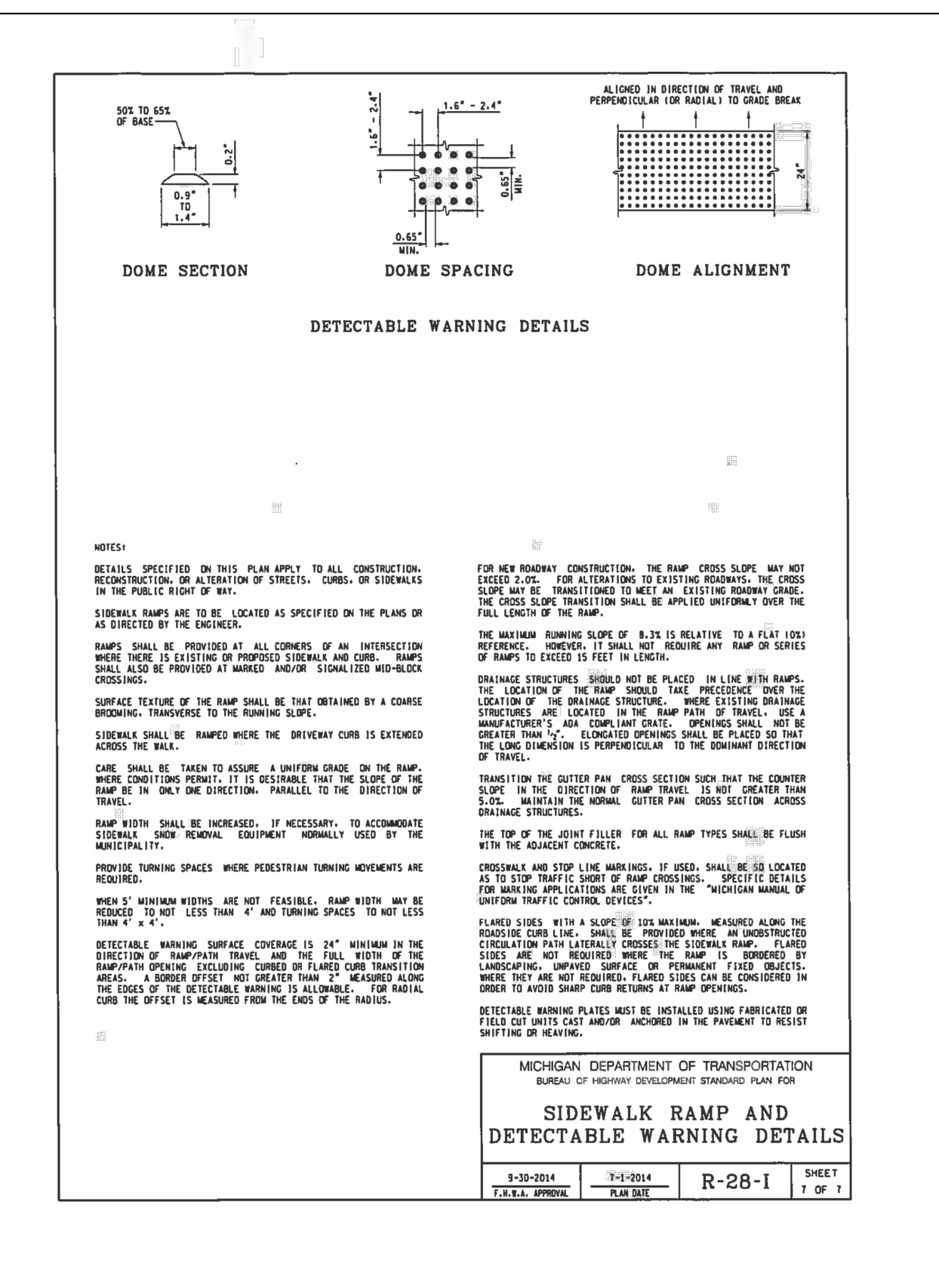
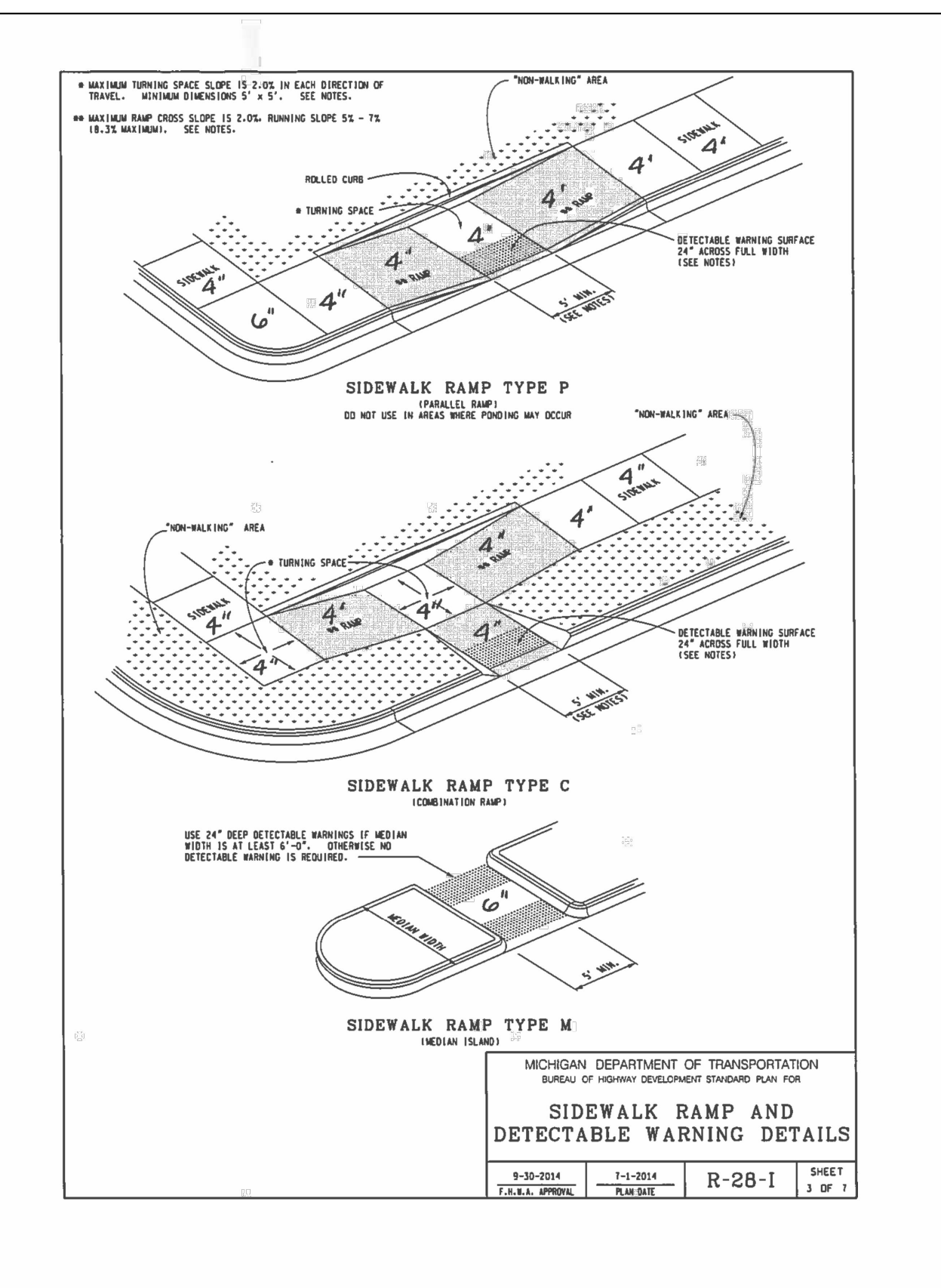
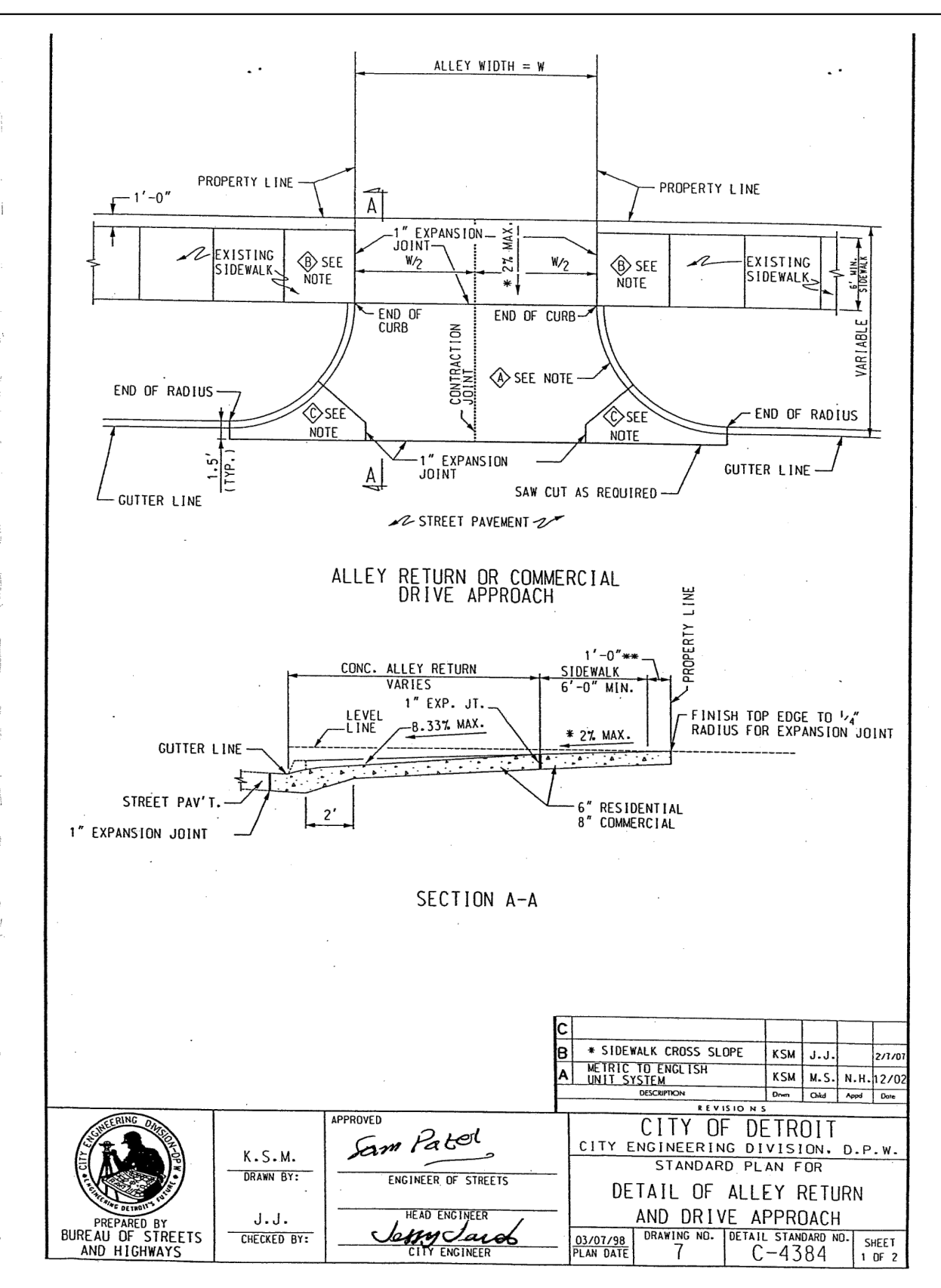
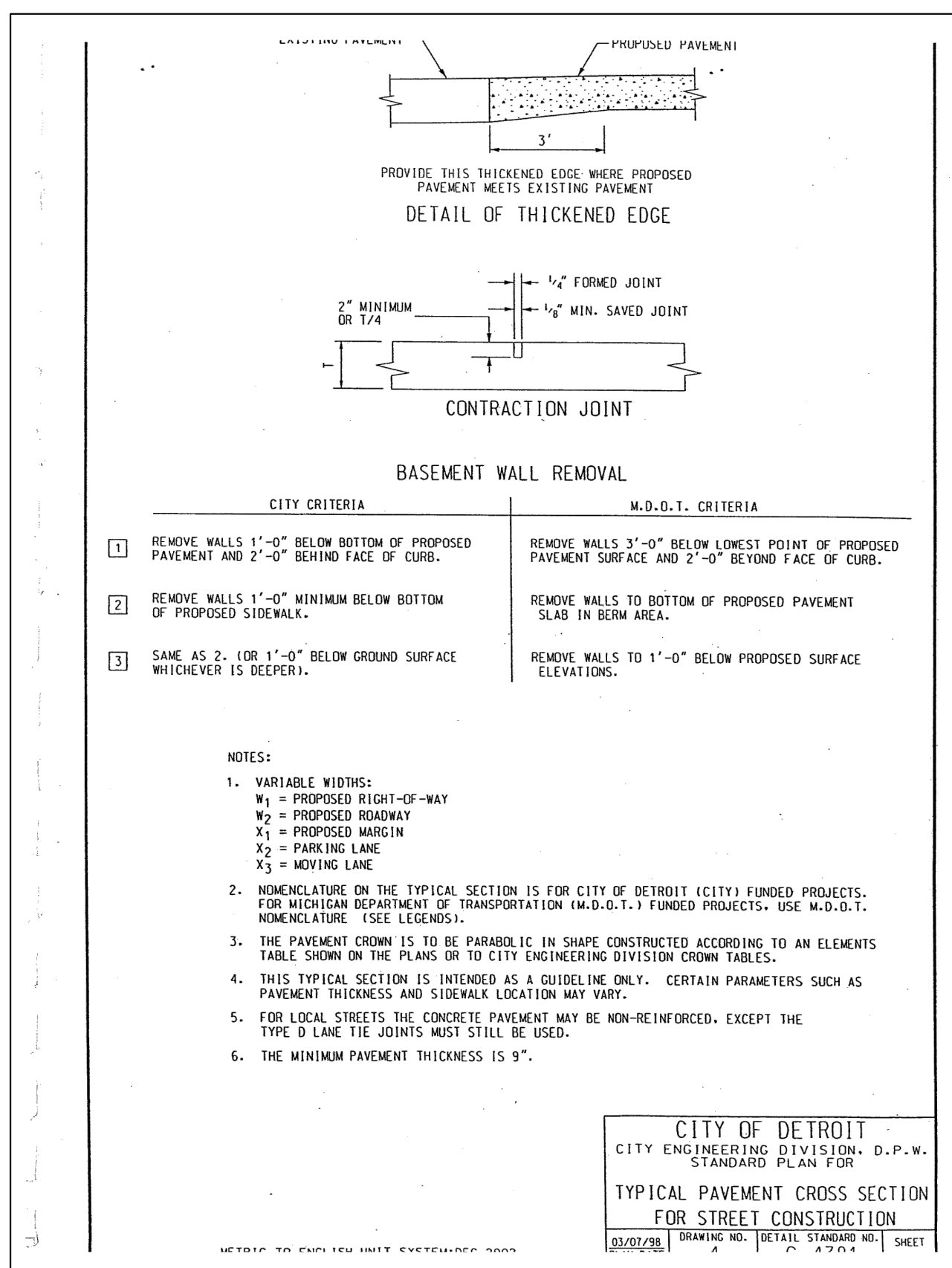
DESIGNED BY:
B. Brickel

APPROVED BY:
B. Brickel

DATE:
September 10, 2020

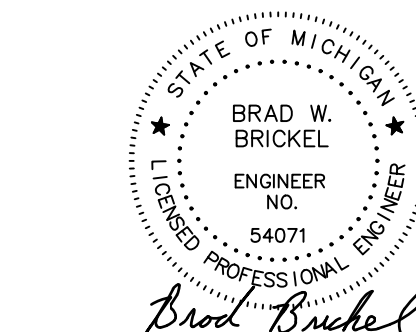
SCALE: N.T.S.

NFE JOB NO. SHEET NO.
L898 C22



DETAIL NOTE
THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT DWG STANDARD SPECIFICATIONS AND DETAILS.

SEAL



PROJECT
Scripps District
3700 Trumbull

CLIENT
3701 Lincoln, LLC
6905 Telegraph Road,
Bloomfield Hills, MI 48301

Contact: Tim Loughrin
Phone: 248.282.1428
Contact: Jason Jones
Phone: 313.575.6835

Contact: George Roberts
Phone: 248.302.8662

PROJECT LOCATION
Part of Hodges Bros.
Subdivision of Outlots
98, 99, 102 & 103
Woodbridge Farm
City of Detroit,
Wayne County, Michigan

SHEET
City of Detroit Standard
Details



DATE ISSUED/REVISED
08-27-21 ISSUED FOR ENGINEERING REVIEW
09-20-21 REVISED GRADING
12-01-21 REVISED PER CITY
01-05-22 REVISED PER CITY

DRAWN BY:
J. Lawrey

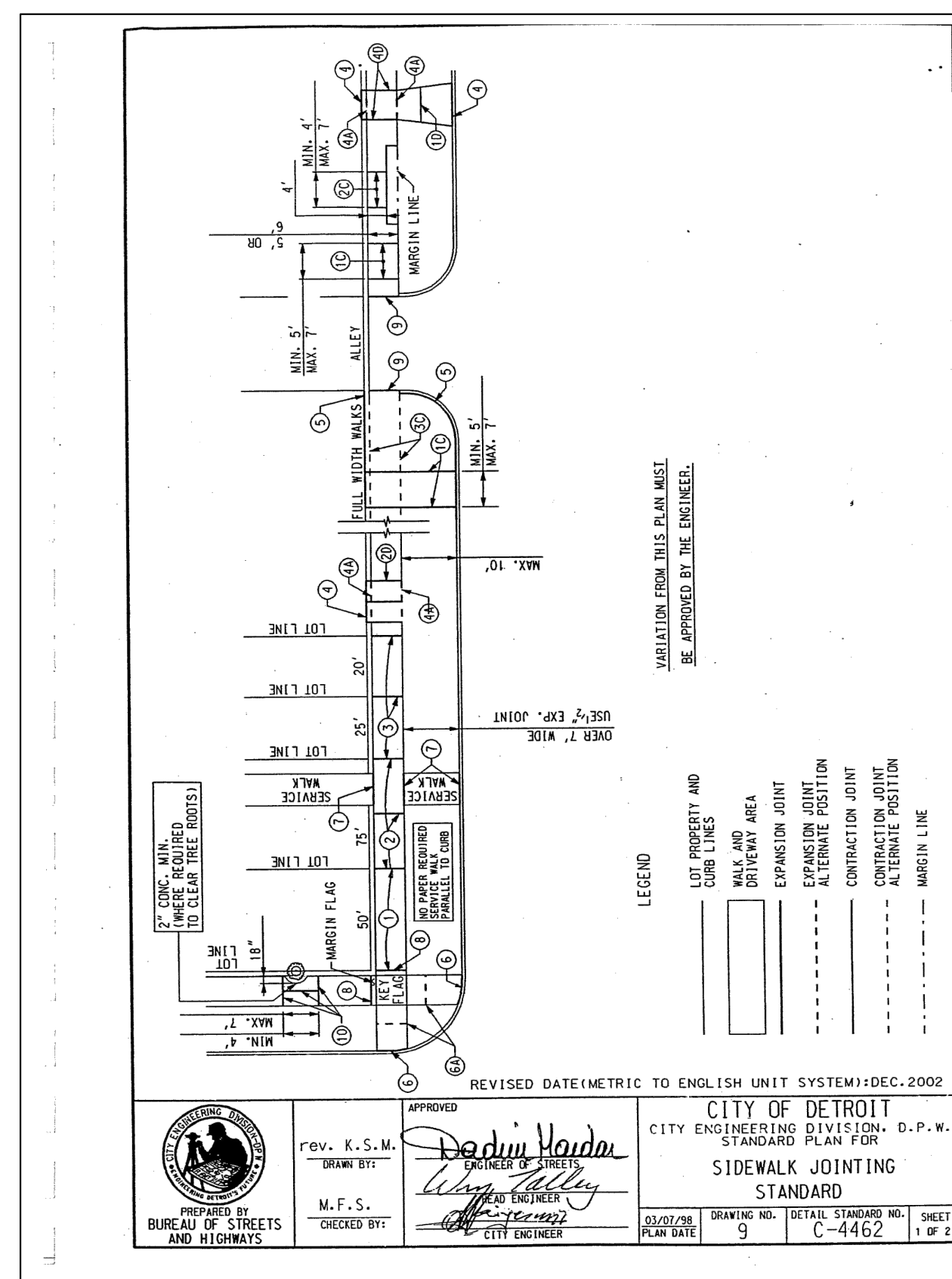
DESIGNED BY:
B. Brickel

APPROVED BY:
B. Brickel

DATE:
September 10, 2020

SCALE: N.T.S.

NFE JOB NO. SHEET NO.
L898 C23



EXPANSION JOINTS

- ALL EXPANSION JOINT PAPER SHALL EXTEND 1" BELOW THE BOTTOM OF THE THINNER OF ADJOINING PAVEMENT SECTIONS.
- PLACE 1/2" PAPER EXPANSION JOINTS AT LOT LINES WHEN LOT LINES ARE BETWEEN 25' AND 50' APART.
- PLACE ADDITIONAL 1/2" PAPER EXPANSION JOINTS SO THAT THE DISTANCE BETWEEN JOINTS DOES NOT EXCEED 15.2 m WHEN LOT LINES ARE OVER 15.240 m APART.
- PLACE 1/2" PAPER EXPANSION JOINTS AT EVERY SECOND LOT LINE AND CONTRACTION JOINT AT INTERVENING LOT LINE WHEN LOT LINES ARE LESS THAN 25' APART.
- PLACE 1" PAPER EXPANSION JOINTS AT CURB AND BUILDING OR PROPERTY LINE OR AT ALTERNATE POSITION (A) AS SHOWN FOR DRIVEWAY.
- PLACE 1" PAPER EXPANSION JOINTS AT CURB AND BUILDING OR PROPERTY LINE FOR FULL WIDTH SIDEWALK EXCEEDING 7' IN WIDTH.
- PLACE 1" PAPER EXPANSION JOINTS AT CURB CIRCLES OR AT ALTERNATE POSITION (A) AS SHOWN.
- PLACE 1" PAPER EXPANSION JOINTS AT INTERSECTIONS OF SERVICE WALKS AND SIDEWALKS AND SERVICE WALKS AND CURBS.
- PLACE 1" PAPER EXPANSION JOINTS AT CROSSWALKS.
- PLACE 1" PAPER EXPANSION JOINTS AT ALLEY APRONS.
- PLACE 1/2" PAPER EXPANSION JOINT BOTH SIDES OF SIDEWALK FLAG ABUTTING TREE AND ON CENTERLINE JOINT.

CONTRACTION JOINTS

- PLACE CONTRACTION JOINTS AT INTERVALS OF NOT LESS THAN 5' NOR MORE THAN 7' ON WALKS 5' WIDE OR WIDER, INCLUDING FULL WIDTH WALKS.
- PLACE CONTRACTION JOINTS AT INTERVALS OF NOT LESS THAN 4' NOR MORE THAN 7' ON WALKS 4' WIDE.
- PLACE CONTRACTION JOINTS AT THE MARGIN LINE ON FULL WIDTH WALKS (OPTIONAL).

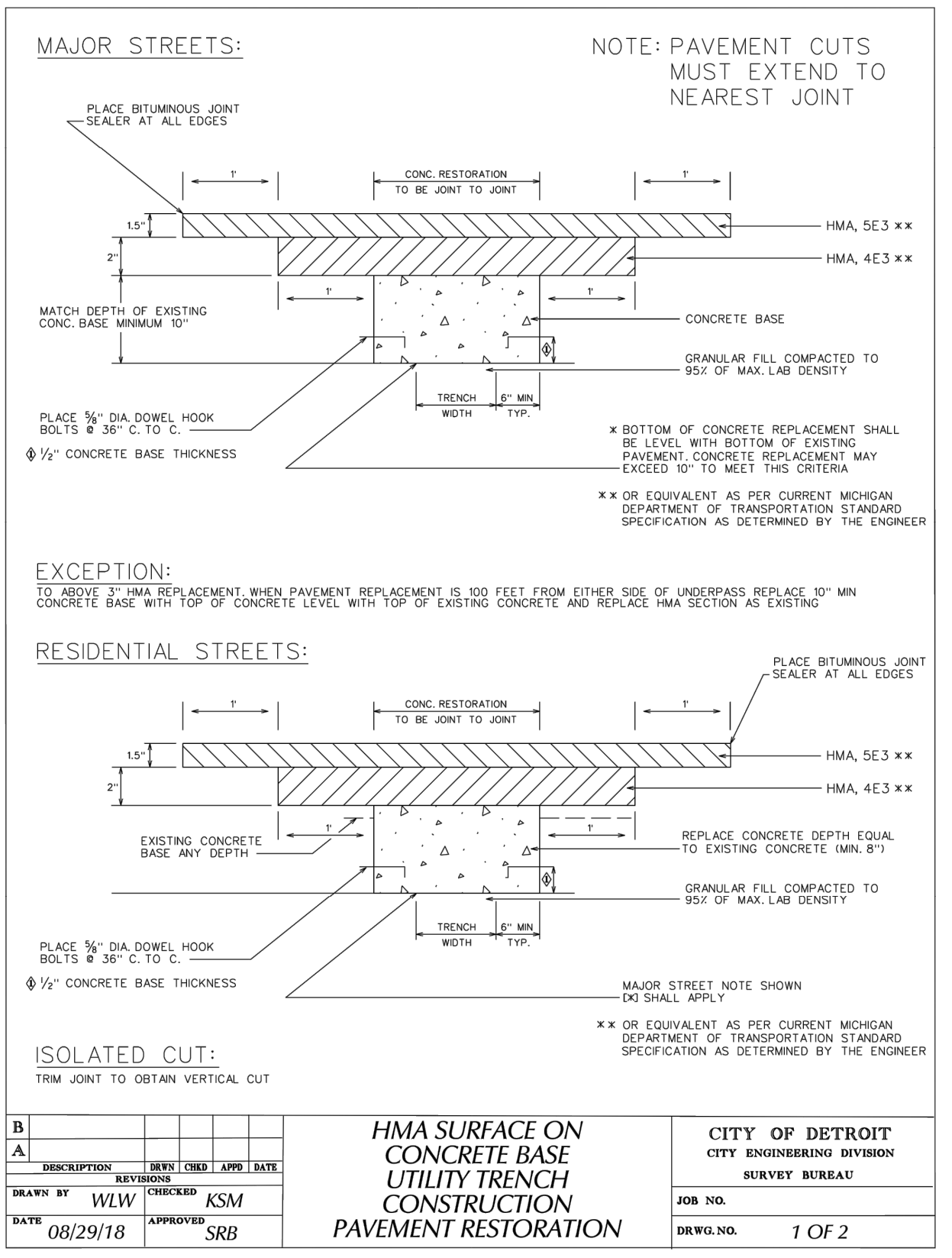
DRIVEWAYS

- PLACE CONTRACTION JOINTS IN DRIVEWAYS SO THAT NO SLAB WILL EXCEED THE DIMENSIONS OF 15' BY 15'.
- PLACE 1" PAPER EXPANSION JOINTS ON ALL SIDES OF COMMERCIAL DRIVES.
- PLACE CONTRACTION OR CONTRACTION JOINT ON CENTERLINE WHEN WIDTH OF DRIVEWAY EXCEEDS 15'.
- PLACE 1/2" PAPER EXPANSION JOINTS ON BOTH SIDES OF RESIDENTIAL DRIVEWAYS. IF DRIVEWAY EDGE IS WITHIN 2' OF LOT LINE, PLACE THIS EXPANSION PAPER AT PROPERTY LINE.

REVISI O N DATE (METRIC TO ENGLISH UNIT SYSTEM) : DEC. 2002

CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
STANDARD PLAN FOR
SIDEWALK JOINTING
STANDARD

DRAWING NO. C-4462
SHEET 2 OF 2



CITY OF DETROIT NOTES

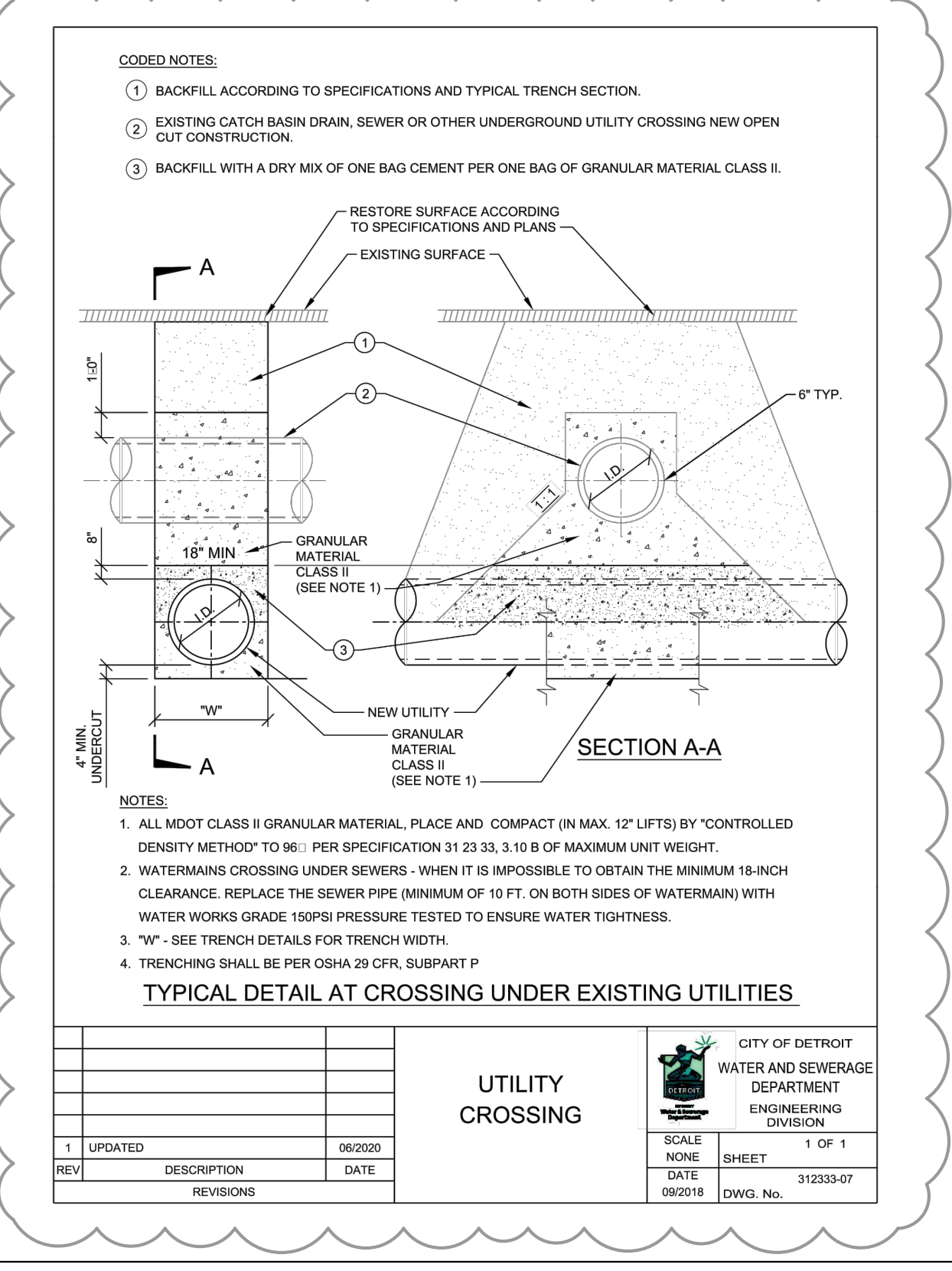
- MILL (REMOVE) HMA PAVEMENT WITHIN AND BEYOND THE AREA OF TRENCH PAVEMENT REMOVAL IN ORDER TO DETERMINE LOCATION OF UNDERLYING CONCRETE BASE PAVEMENT JOINTS. MILL MINIMUM TO 1' BEYOND NEAREST CONCRETE JOINTS.
- EXTEND UTILITY TRENCH CONCRETE PAVEMENT REMOVAL TO ALL CONCRETE PAVEMENT JOINTS AND / OR CURBS ADJACENT TO THE TRENCH AREA. REMOVAL SHALL BE "JOINT TO JOINT".
- CONCRETE PAVEMENT CUTS SHALL BE MINIMUM 3' WIDE.
- ALL PAVEMENT CUTS SHALL BE MINIMUM 1" WIDER THAN TRENCH WIDTH.
- ALL REMOVALS SHALL BE SAWCUT STRAIGHT AND SQUARE (90 DEGREES).
- CONCRETE RESTORATION PAVEMENT SHALL BE MDOT P1 MIX (3,500 PSI).
- RESTORED CONCRETE PAVEMENT SHALL MATCH THICKNESS OF EXISTING CONCRETE PAVEMENT IN CONFORMANCE WITH MDOT STANDARDS DETAIL R-44-F.
- RESTORED CONCRETE SHALL BE ANCHORED TO EXISTING CONCRETE PAVEMENT IN CONFORMANCE WITH MDOT STANDARD DETAIL R-44-F.
- APPLY HMA TACK COAT PER MDOT STANDARD SPECIFICATIONS SECTION 904.
- RESTORE HMA PAVEMENT 3/2" TO MATCH EXISTING, IN 2 LIFTS:
1ST LIFT - 2" MDOT HMA 4E3 (13A RESIDENTIAL), COMPACTED, EXTENDED 1' BEYOND BASE CONCRETE REPAIR.
2ND LIFT - 1/2" MDOT HMA 5E3 (36A RESIDENTIAL), COMPACTED, EXTENDED 1' BEYOND 1ST LIFT..
- BITUMINOUS JOINT SEALER SHALL BE PLACED AT ALL FINISHED HMA JOINTS.
- ALL DISTURBED PAVEMENT MARKINGS AND OTHER ASSETS, INCLUDING BIKE LANE DELINEATORS, WILL HAVE TO BE REPLACED AT THE COST OF THE PERMIT HOLDER, AND SHALL CONFORM TO THE LATEST CED / TED STANDARDS.
- FOR OTHER RELATED SPECIFICATIONS (BACKFILL COMPACTION, MATERIALS, ETC.), REFER TO DIVISION 15 OF THE STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION.
- NOTIFY THE CITY OF DETROIT ENGINEERING DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION.
- ANY OPEN EXCAVATIONS ARE TO BE STEEL PLATED. IF EXCAVATIONS ARE IN THE PAVEMENT, THE PLATES ARE TO BE SPIKED AND RAMPED WITH COLD PATCH. CONTACT THE CITY WITH LOCATION OF THE STEEL PLATE.
- THE CITY OF DETROIT REQUIRES ALL CONCRETE WORK TO BE STAMPED WITH A CONTRACTOR'S IDENTIFICATION STAMP.

HMA SURFACE ON CONCRETE BASE UTILITY TRENCH CONSTRUCTION PAVEMENT RESTORATION

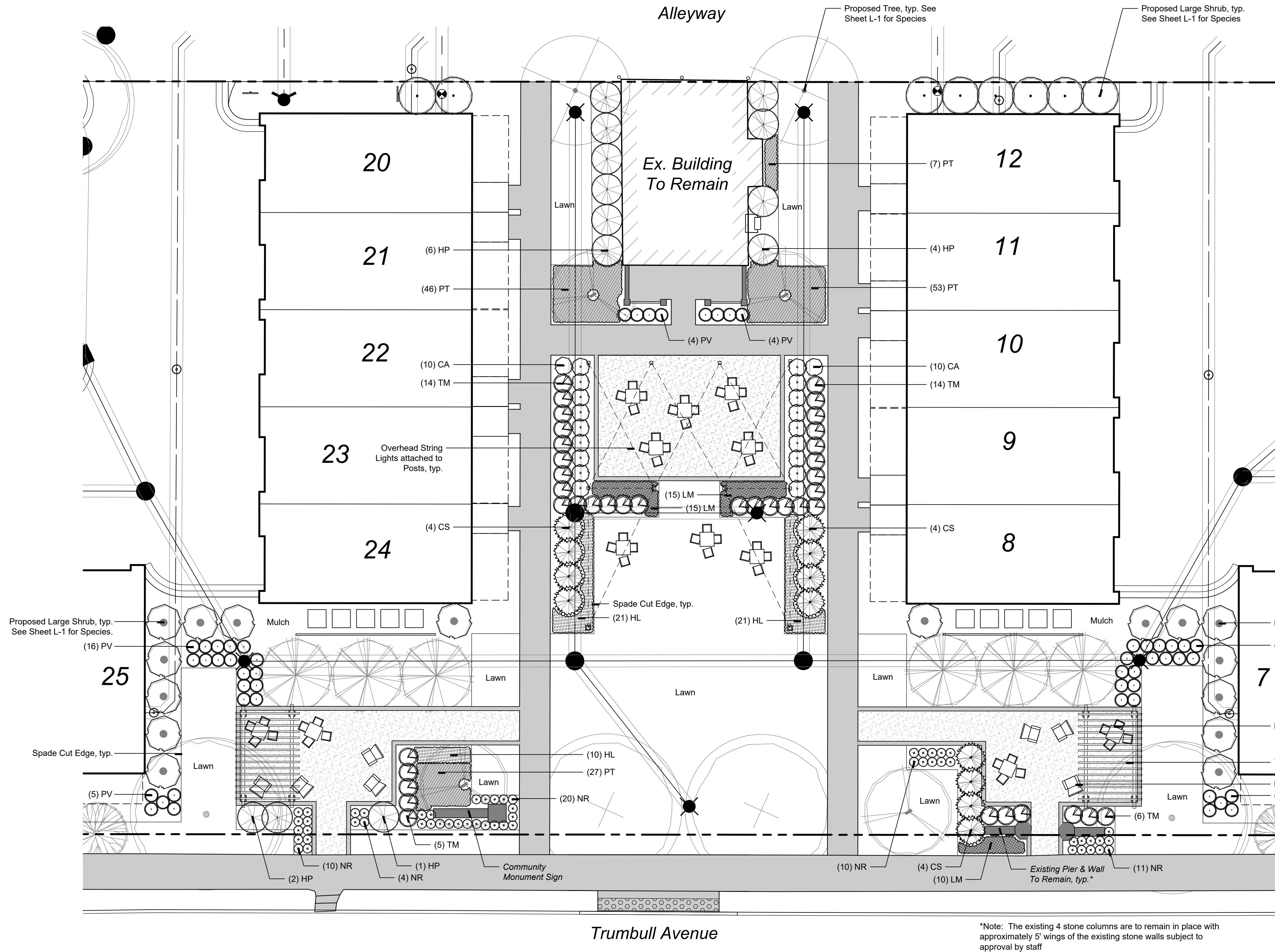
CITY OF DETROIT
CITY ENGINEERING DIVISION
SURVEY BUREAU

JOB NO. 2 OF 2

DRAWN BY: WJW
CHECKED: KSM
DATE: 08/29/18
APPROVED: SRB



DETAIL NOTE
THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT DWS STANDARD SPECIFICATIONS AND DETAILS.



Plant Schedule This Sheet

Shrubs						
sym.	qty.	botanical name	common name	size	spacing	root
CS	12	<i>Cornus stolonifera</i> 'Farrow'	Arctic Fire Red Twig Dogwood	No. 3	5' o.c.	cont.
HP	13	<i>Hydrangea paniculata</i> 'Little Quick Fire'	Little Quick Fire Panicle Hydrangea	No. 3	5' o.c.	cont.
TM	39	<i>Taxus x media</i> 'Densiflora'	Dense Yew	24"-30" ht.	36" o.c.	B&B

Ornamental Grasses, Perennials & Bulbs						
sym.	qty.	botanical name	common name	size	spacing	root
CA	20	<i>Calamagrostis x acutiflora</i> 'Karl Foerster'	Karl Foerster Feather Reed Grass	No. 2	36" o.c.	cont.
HL	52	<i>Hemerocallis</i> 'Little Business'	Little Business Daylily	No. 1	18" o.c.	cont.
LM	40	<i>Liriope muscari</i> 'Big Blue'	Big Blue Liriope	No. 1	18" o.c.	cont.
NR	55	<i>Nepeta racemosa</i> 'Blue Wonder'	Blue Wonder Catmint	No. 1	18" o.c.	cont.
PV	51	<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Switchgrass	No. 2	30" o.c.	cont.
PT	137	<i>Pachysandra terminalis</i>	Japanese Pachysandra	No. 1	18" o.c.	cont.

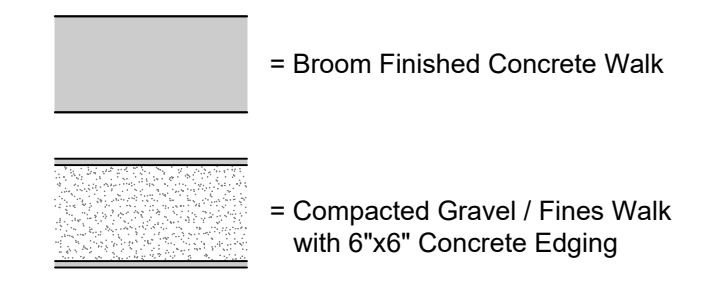


sheet title:
**Central Amenity
Plan & Precedents**

project title:
Scripps District
Detroit, Michigan
prepared for:
Robertson Brothers Homes
6905 Telegraph Rd. - Suite 200
Bloomfield Hills, MI 48301
Phone: 248.282.1428

job number: 20002
date: 03.09.2021
drawn by: EMJ
checked by: WTK

Walk Material Legend



*Note: The existing 4 stone columns are to remain in place with approximately 5' wings of the existing stone walls subject to approval by staff

Park / Green Space Landscape Enlargement Plan

Scale: 1" = 10'



Decorative Trellis Structure
(Potentially matching Scripps Park, or similar)



Overhead String Lights on Posts



Movable Chairs
(Adirondack or Similar)

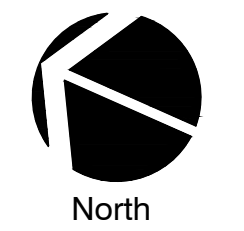


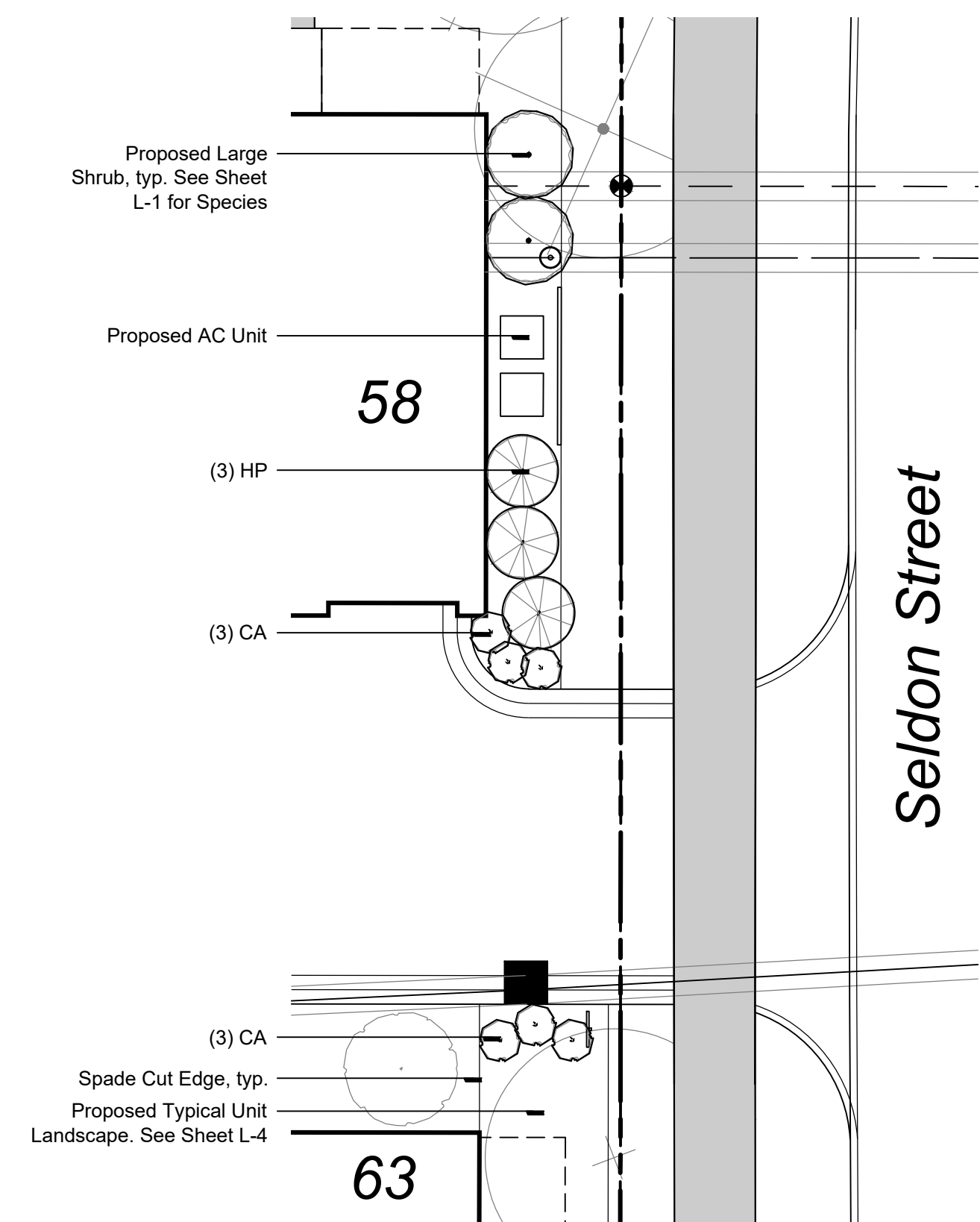
Movable Bistro Table & Chairs

Note: The hardscape elements displayed here are to be considered precedent images and are subject to change as final details are developed.

revisions:

03.22.2021	Issued for Site Plan Review
08.27.2021	Per Site Plan Revisions
09.07.2021	Per Site Plan Revisions
10.25.2021	Per Site Plan Revisions
01.03.2022	Per Site Plan Revisions

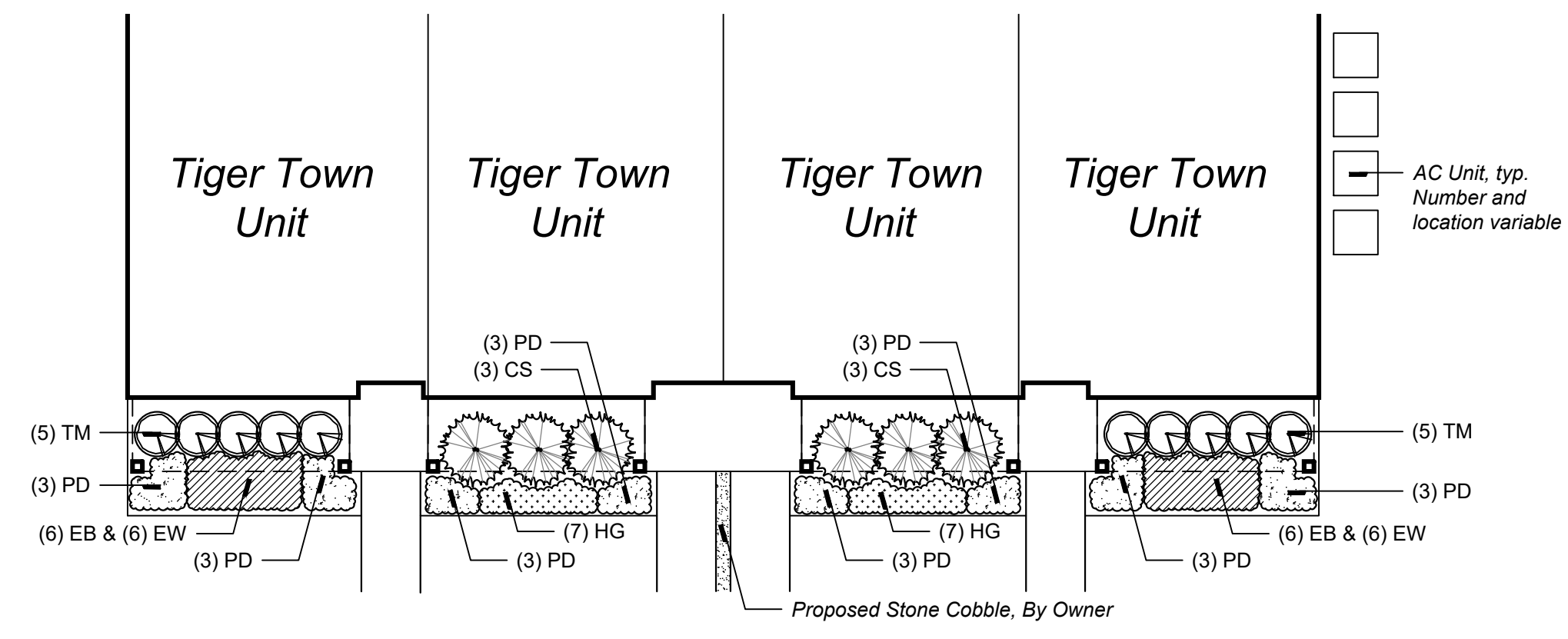




Seldon Entry Landscape Enlargement Plan
Scale: 1" = 10'

Plant Schedule: Landscape Enlargements

Shrubs						
sym.	qty.	botanical name	common name	size	spacing	root
CS	5	<i>Cornus stolonifera</i> 'Farrow'	Arctic Fire Red Twig Dogwood	No. 3	5' o.c.	cont.
HP	3	<i>Hydrangea paniculata</i> 'Little Quick Fire'	Little Quick Fire Panicle Hydrangea	No. 3	5' o.c.	cont.
Ornamental Grasses, Perennials & Bulbs						
sym.	qty.	botanical name	common name	size	spacing	root
CA	6	<i>Calamagrostis x acutiflora</i> 'Karl Foerster'	Karl Foerster Feather Reed Grass	No. 2	36" o.c.	cont.
HL	23	<i>Hemerocallis</i> 'Little Business'	Little Business Daylily	No. 1	18" o.c.	cont.
LM	22	<i>Liriope muscari</i> 'Big Blue'	Big Blue Liriope	No. 1	18" o.c.	cont.
NR	22	<i>Nepeta racemosa</i> 'Blue Wonder'	Blue Wonder Catmint	No. 1	18" o.c.	cont.
PV	33	<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Switchgrass	No. 2	30" o.c.	cont.
PT	21	<i>Pachysandra terminalis</i>	Japanese Pachysandra	No. 1	18" o.c.	cont.

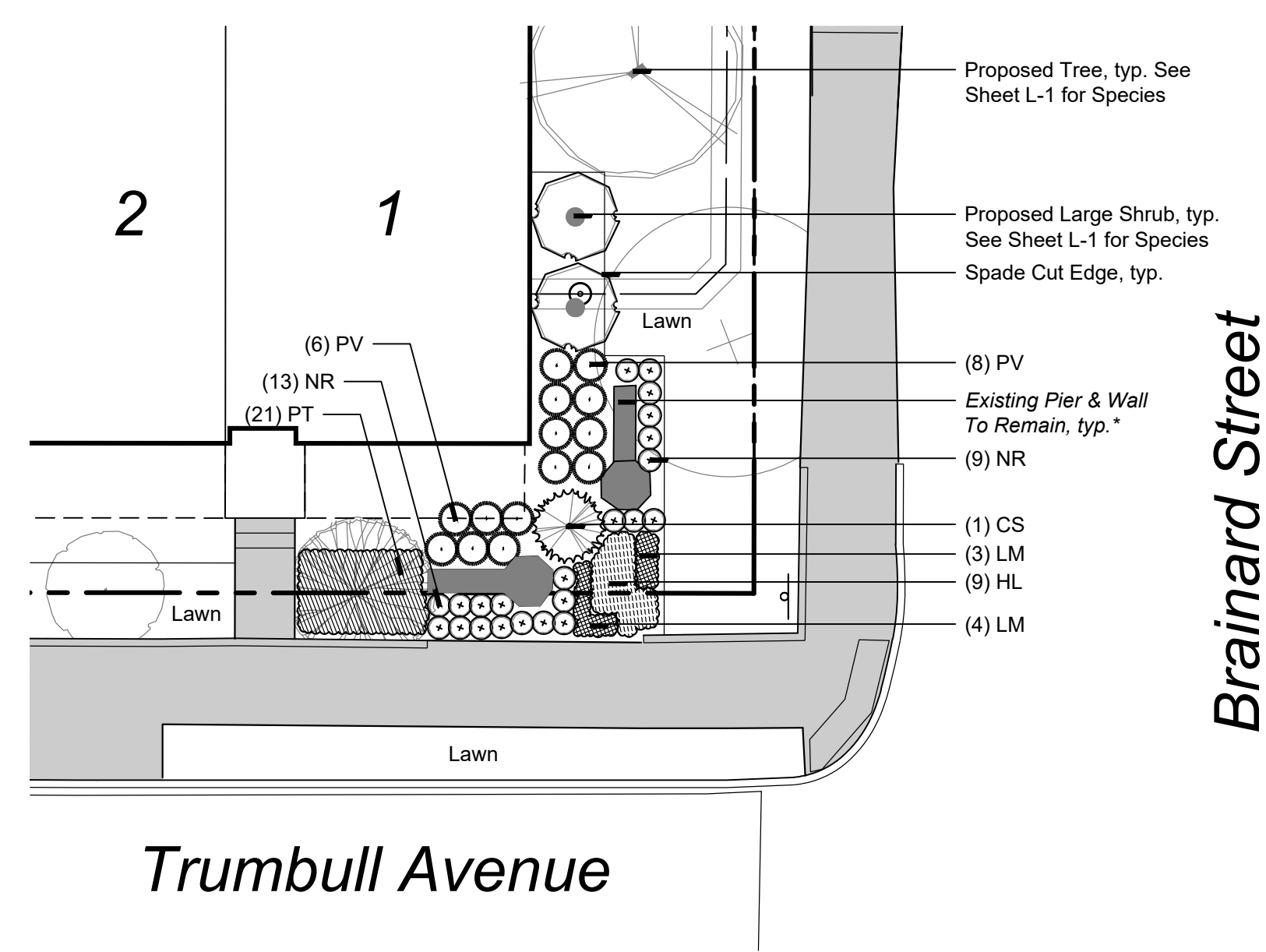


Typical Tiger Town Unit Landscape Plan
*Note: This Typical Unit Landscape Detail applies to Units 1-7 & 25-33
Scale: 1" = 10'

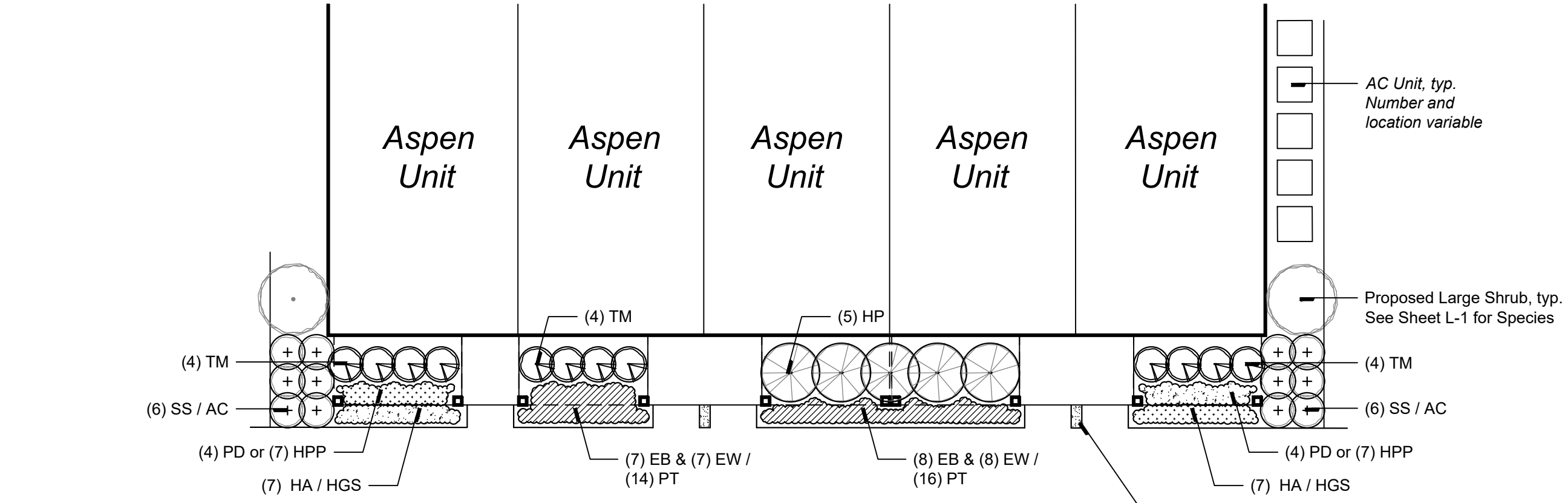
Plant Schedule: Typical Unit Landscapes

Tiger Town Unit Landscape						
sym.	qty.	botanical name	common name	size	spacing	root
CS	24	<i>Cornus stolonifera</i> 'Farrow'	Arctic Fire Red Twig Dogwood	No. 3	5' o.c.	cont.
TM	40	<i>Taxus x media</i> 'Densiflora'	Dense Yew	24"-30" ht.	36" o.c.	B&B
Ornamental Grasses, Perennials & Bulbs						
sym.	qty.	botanical name	common name	size	spacing	root
EB	48	<i>Echinacea purpurea</i> 'PowWow Berry'	PowWow Berry Coneflower	No. 1	18" o.c.	cont.
EW	48	<i>Echinacea purpurea</i> 'PowWow White'	PowWow White Coneflower	No. 1	18" o.c.	cont.
HG	56	<i>Hemerocallis</i> 'Little Grapette'	Little Grapette Daylily	No. 1	18" o.c.	cont.
PD	96	<i>Penstemon</i> 'Dark Towers'	Dark Towers Beardtongue	No. 1	24" o.c.	cont.
Aspen Unit Landscape						
sym.	qty.	botanical name	common name	size	spacing	root
HP	35	<i>Hydrangea paniculata</i> 'Little Quick Fire'	Little Quick Fire Panicle Hydrangea	No. 3	5' o.c.	cont. Use in Shade Exposure
TM	136	<i>Taxus x media</i> 'Densiflora'	Dense Yew	24"-30" ht.	36" o.c.	B&B
Ornamental Grasses, Perennials & Bulbs						
sym.	qty.	botanical name	common name	size	spacing	root
AC	108	<i>Aralia cordata</i> 'Sun King'	Sun King Japanese Spikenard	No. 1	30" o.c.	cont. Use in Shade Exposure
EB	15	<i>Echinacea purpurea</i> 'PowWow Berry'	PowWow Berry Coneflower	No. 1	18" o.c.	cont. Use in Sun Exposure
EW	15	<i>Echinacea purpurea</i> 'PowWow White'	PowWow White Coneflower	No. 1	18" o.c.	cont. Use in Sun Exposure
HA	28	<i>Hemerocallis</i> 'Always Afternoon'	Always Afternoon Daylily	No. 1	18" o.c.	cont. Use in Sun Exposure
HGS	126	<i>Heuchera</i> 'Green Spice'	Green Spice Coralbells	No. 1	18" o.c.	cont. Use in Shade Exposure
HPP	126	<i>Heuchera</i> 'Purple Palace'	Purple Palace Coralbells	No. 1	18" o.c.	cont. Use in Shade Exposure
PD	16	<i>Penstemon</i> 'Dark Towers'	Dark Towers Beardtongue	No. 1	24" o.c.	cont. Use in Sun Exposure
PT	250	<i>Pachysandra terminalis</i>	Japanese Spurge	No. 1	18" o.c.	cont. Use in Shade Exposure
SS	24	<i>Schizachyrium scaparium</i> 'Blue Heaven'	Blue Heaven Little Bluestem	No. 2	30" o.c.	cont. Use in Sun Exposure

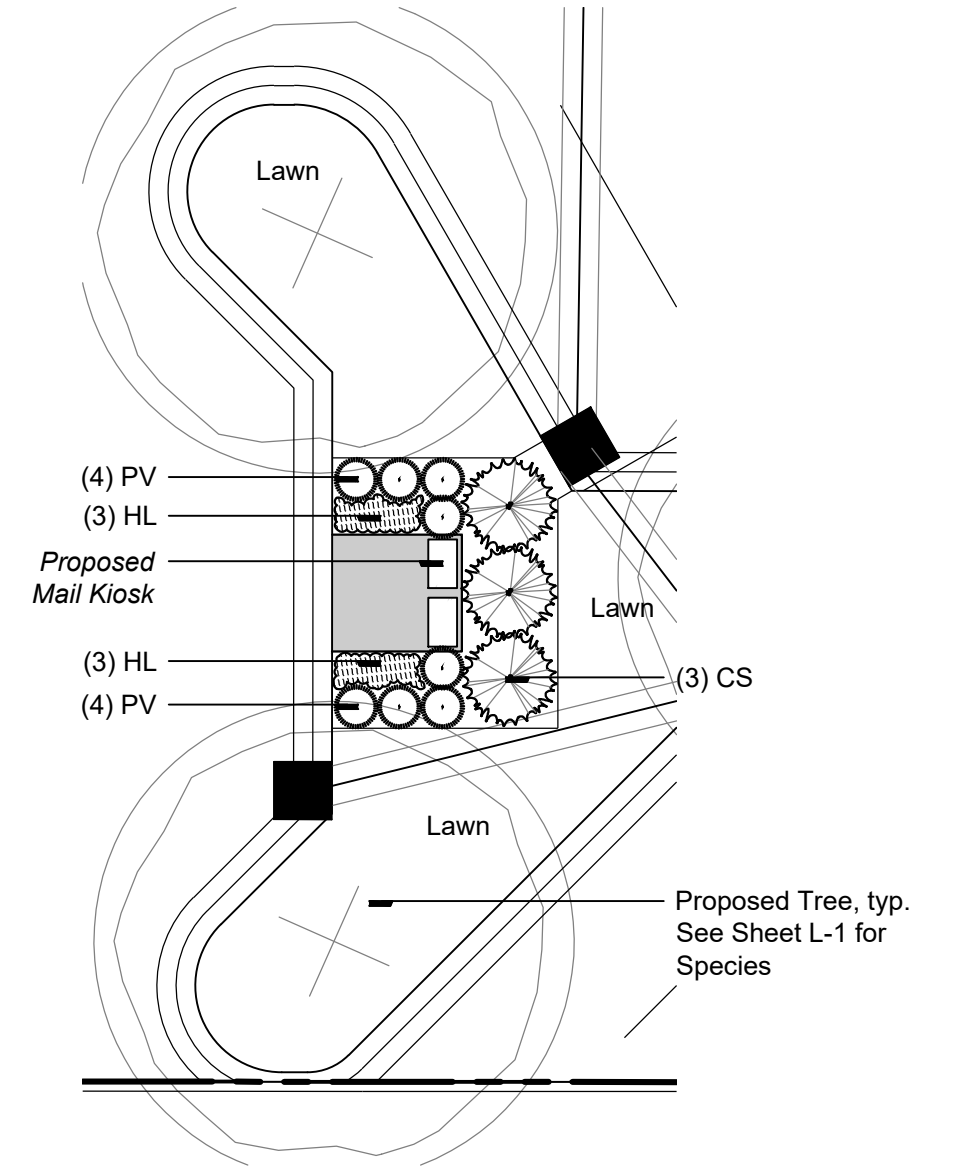
Notes:
- This Plant Schedule reflects the total amount of each plant needed for the project, with the exception of those that are exposure dependent. The exposure dependent amounts are the total needed divided between the correlated plants, each showing the total amount needed for the project.



Corner Piers Landscape Enlargement Plan
*Note: The existing 4 stone columns are to remain in place with approximately 5' wings of the existing stone walls subject to approval by staff
Scale: 1" = 10'



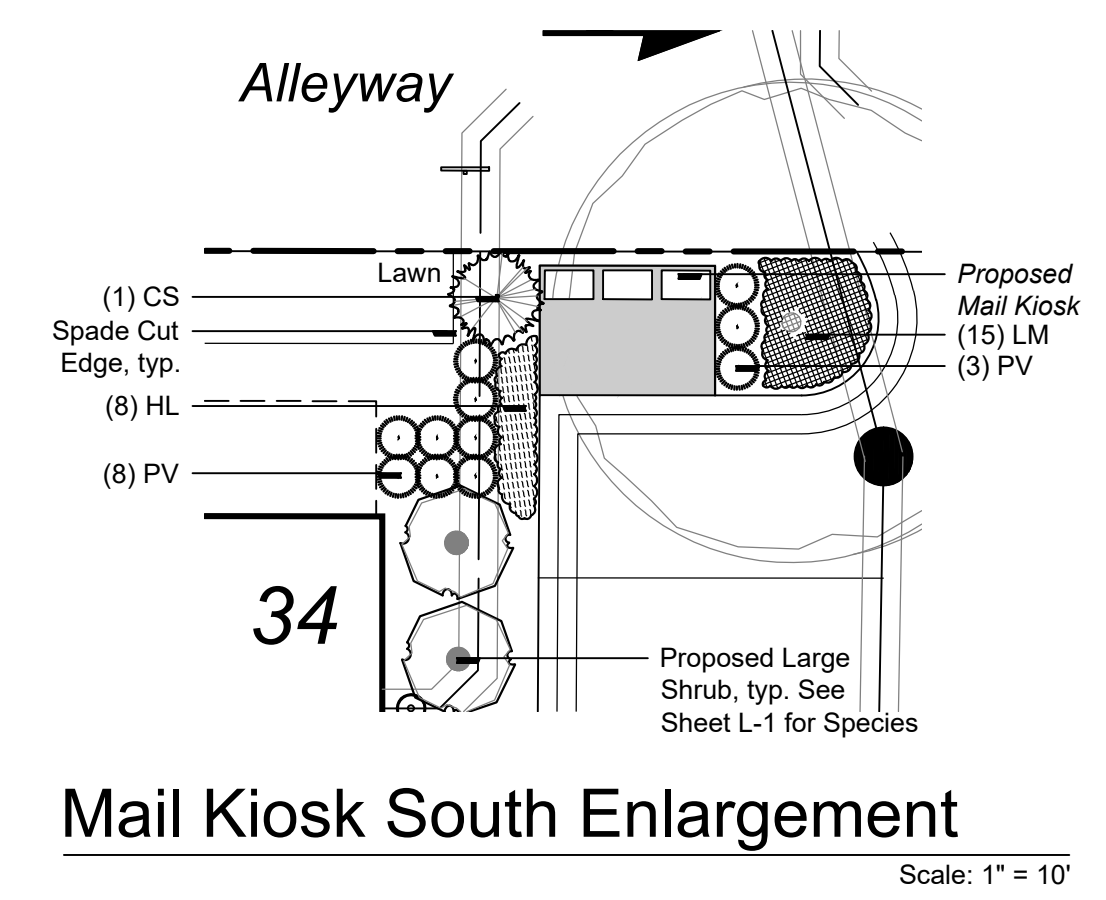
Typical Aspen Unit Landscape Plan
*Note: This Typical Unit Landscape Detail applies to Units 8-24 & 34-64
Scale: 1" = 10'



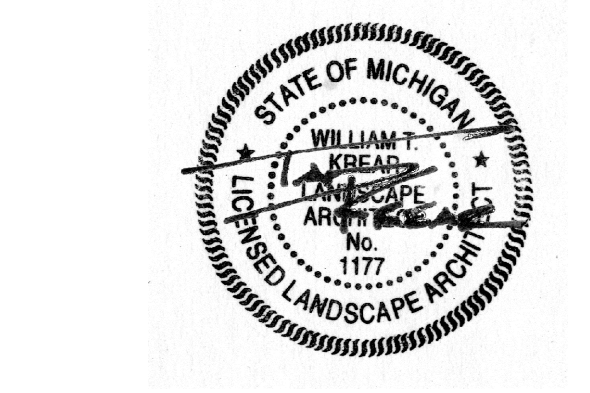
Mail Kiosk North Enlargement
Scale: 1" = 10'

Decorative Mailbox - 16 Gang CBU
Scale: NTS
Manufacturer: Salisbury Industries
1010 E. 62nd St.
Los Angeles, CA 90001
www.mailboxes.com
Model: Regency Decorative CBU
#3316R
Black
Quantity: 2

Decorative Mailbox - 12 Gang CBU
Scale: NTS
Manufacturer: Salisbury Industries
1010 E. 62nd St.
Los Angeles, CA 90001
www.mailboxes.com
Model: Regency Decorative CBU
#3312R
Black
Quantity: 3



Mail Kiosk South Enlargement
Scale: 1" = 10'



sheet title:
Landscape Enlargement Details

project title:
Scripps District

Detroit, Michigan

prepared for:
Robertson Brothers Homes
6905 Telegraph Rd. - Suite 200
Bloomfield Hills, MI 48301

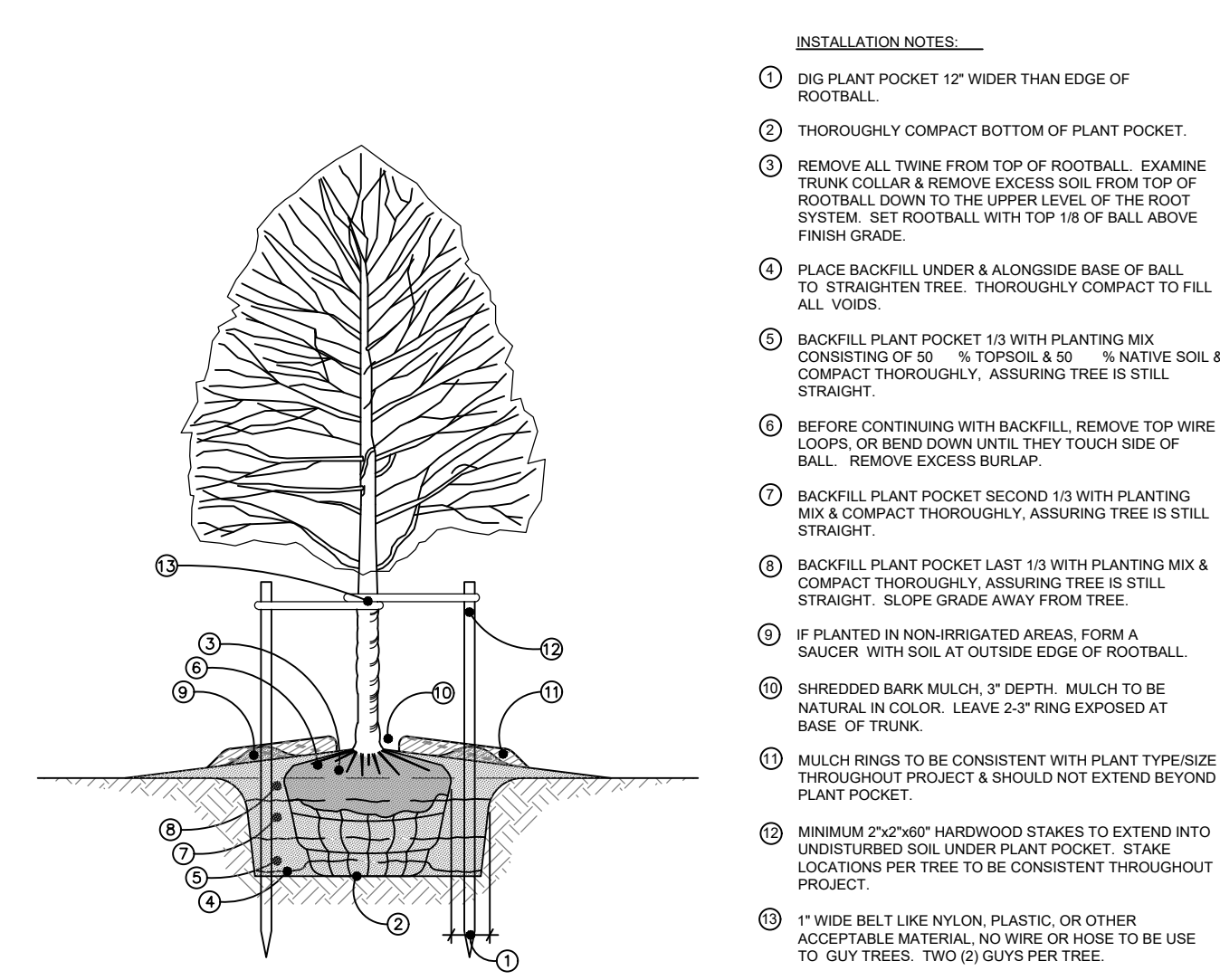
Phone: 248.282.1428

job number: 20002
date: 03.09.2021

drawn by: EMJ
checked by: WTK

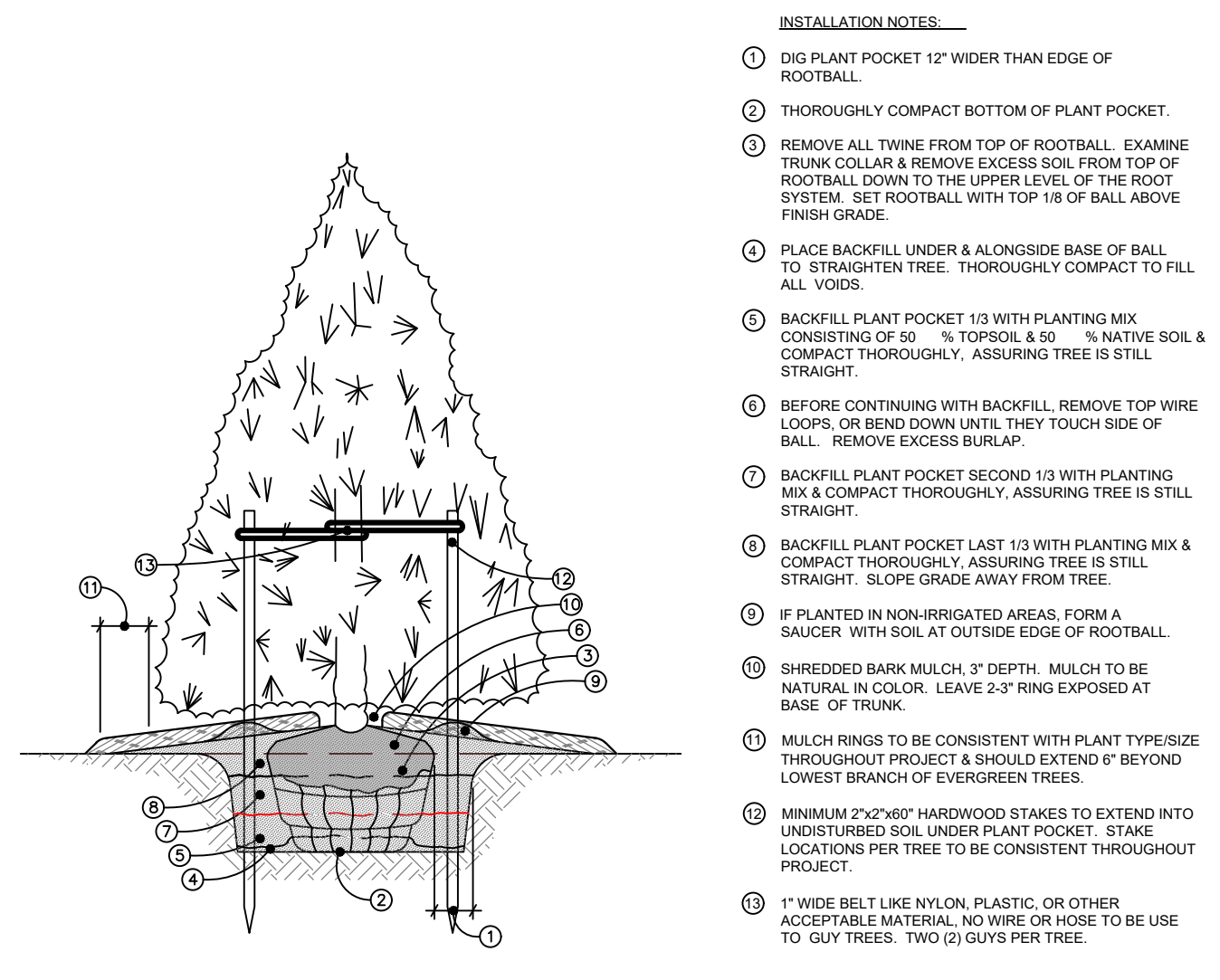
revisions:

03.22.2021	Issued for Site Plan Review
08.27.2021	Per Site Plan Revisions
09.07.2021	Per Site Plan Revisions
10.25.2021	Per Site Plan Revisions
01.03.2022	Per Site Plan Revisions



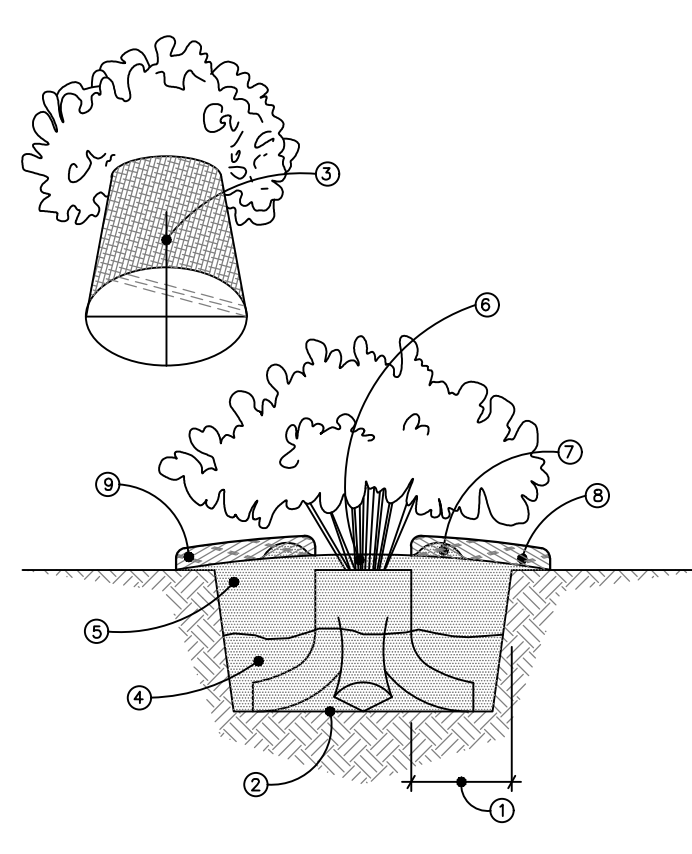
- INSTALLATION NOTES:**
- DIG PLANT POCKET 12" WIDER THAN EDGE OF ROOTBALL.
 - THOROUGHLY COMPACT BOTTOM OF PLANT POCKET.
 - REMOVE ALL TWINE FROM TOP OF ROOTBALL. EXAMINE TRUNK COLLAR & REMOVE EXCESS SOIL FROM TOP OF ROOTBALL DOWN TO THE UPPER LEVEL OF THE ROOT SYSTEM. SET ROOTBALL WITH TOP 1/8 OF BALL ABOVE FINISH GRADE.
 - PLACE BACKFILL UNDER & ALONGSIDE BASE OF BALL TO STRAIGHTEN TREE. THOROUGHLY COMPACT TO FILL ALL VOIDS.
 - BACKFILL PLANT POCKET 1/3 WITH PLANTING MIX CONSISTING OF 50% TOPSOIL & 50% NATIVE SOIL & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT.
 - BEFORE CONTINUING WITH BACKFILL, REMOVE TOP WIRE LOOPS, OR BEND DOWN UNTIL THEY TOUCH SIDE OF BALL. REMOVE EXCESS BURLAP.
 - BACKFILL PLANT POCKET SECOND 1/3 WITH PLANTING MIX & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT.
 - BACKFILL PLANT POCKET LAST 1/3 WITH PLANTING MIX & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT. SLOPE GRADE AWAY FROM TREE.
 - IF PLANTED IN NON-IRRIGATED AREAS, FORM A SAUCER WITH SOIL AT OUTSIDE EDGE OF ROOTBALL.
 - SHREDED BARK MULCH, 3" DEPTH. MULCH TO BE NATURAL IN COLOR. LEAVE 2-3" RING EXPOSED AT BASE OF TRUNK.
 - MULCH RINGS TO BE CONSISTENT WITH PLANT TYPE/SIZE THROUGHOUT PROJECT & SHOULD NOT EXTEND BEYOND PLANT POCKET.
 - MINIMUM 2"x2"x60" HARDWOOD STAKES TO EXTEND INTO UNDISTURBED SOIL UNDER PLANT POCKET. STAKE LOCATIONS PER TREE TO BE CONSISTENT THROUGHOUT PROJECT.
 - 1" WIDE BELT LIKE NYLON, PLASTIC, OR OTHER ACCEPTABLE MATERIAL, NO WIRE OR HOSE TO BE USE TO GUY TREES. TWO (2) GUYS PER TREE.

Deciduous Tree Planting Detail - 4" Cal. and Under
Scale: NTS



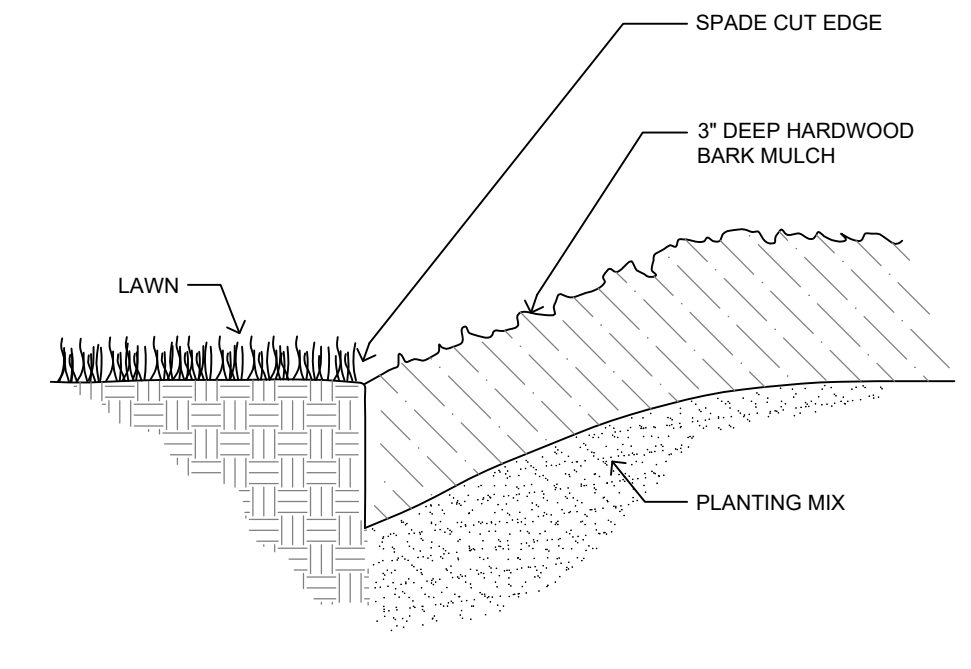
- INSTALLATION NOTES:**
- DIG PLANT POCKET 12" WIDER THAN EDGE OF ROOTBALL.
 - THOROUGHLY COMPACT BOTTOM OF PLANT POCKET.
 - REMOVE ALL TWINE FROM TOP OF ROOTBALL. EXAMINE TRUNK COLLAR & REMOVE EXCESS SOIL FROM TOP OF ROOTBALL DOWN TO THE UPPER LEVEL OF THE ROOT SYSTEM. SET ROOTBALL WITH TOP 1/8 OF BALL ABOVE FINISH GRADE.
 - PLACE BACKFILL UNDER & ALONGSIDE BASE OF BALL TO STRAIGHTEN TREE. THOROUGHLY COMPACT TO FILL ALL VOIDS.
 - BACKFILL PLANT POCKET 1/3 WITH PLANTING MIX CONSISTING OF 50% TOPSOIL & 50% NATIVE SOIL & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT.
 - BEFORE CONTINUING WITH BACKFILL, REMOVE TOP WIRE LOOPS, OR BEND DOWN UNTIL THEY TOUCH SIDE OF BALL. REMOVE EXCESS BURLAP.
 - BACKFILL PLANT POCKET SECOND 1/3 WITH PLANTING MIX & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT.
 - BACKFILL PLANT POCKET LAST 1/3 WITH PLANTING MIX & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT. SLOPE GRADE AWAY FROM TREE.
 - IF PLANTED IN NON-IRRIGATED AREAS, FORM A SAUCER WITH SOIL AT OUTSIDE EDGE OF ROOTBALL.
 - SHREDED BARK MULCH, 3" DEPTH. MULCH TO BE NATURAL IN COLOR. LEAVE 2-3" RING EXPOSED AT BASE OF TRUNK.
 - MULCH RINGS TO BE CONSISTENT WITH PLANT TYPE/SIZE THROUGHOUT PROJECT & SHOULD EXTEND 1" BEYOND LOWEST BRANCH OF EVERGREEN TREES.
 - MINIMUM 2"x2"x60" HARDWOOD STAKES TO EXTEND INTO UNDISTURBED SOIL UNDER PLANT POCKET. STAKE LOCATIONS PER TREE TO BE CONSISTENT THROUGHOUT PROJECT.
 - 1" WIDE BELT LIKE NYLON, PLASTIC, OR OTHER ACCEPTABLE MATERIAL, NO WIRE OR HOSE TO BE USE TO GUY TREES. TWO (2) GUYS PER TREE.

Evergreen Tree Planting Detail - 10' Ht. and Under
Scale: NTS



- INSTALLATION NOTES:**
- DIG PLANT POCKET 6" WIDER THAN EDGE OF ROOTBALL.
 - THOROUGHLY COMPACT BOTTOM OF PLANT POCKET.
 - REMOVE PLANT FROM CONTAINER AND EXAMINE ROOTMASS. IF ROOTMASS IS LOOSE, INTEGRATE PLANT ROOTS & POTTING MEDIA WITH PLANTING MIX. IF A ROOTBOUND CONDITIONS EXISTS, DISRUPT THE ROOTMASS BY CUTTING THROUGH BOTTOM HALF OF ROOTMASS. ROTATE ROOTMASS 90° AND CUT AGAIN, FORMING FOUR (4) LOBBES. SPREAD THE FOUR LOBBES DISTRICTLY. ROOTMASS AND INTEGRATE PLANT ROOTS & POTTING MEDIA WITH PLANTING MIX. PLACE PLANT IN POCKET SLIGHTLY ABOVE GRADE.
 - BACKFILL PLANT POCKET 1/2 WITH PLANTING MIX CONSISTING OF 50% TOPSOIL & 50% NATIVE SOIL, ASSURING SHRUB IS STRAIGHT.
 - BACK FILL REMAINING 1/2 OF PLANT POCKET WITH PLANTING MIX & COMPACT THOROUGHLY, ASSURING SHRUB IS STILL STRAIGHT.
 - SPREAD 1" OF PLANTING MIX OVER TOP OF CONTAINER ROOTBALL. SLOPE GRADE AWAY FROM SHRUB.
 - IF PLANTED IN NON-IRRIGATED AREAS, FORM A SAUCER WITH SOIL AT OUTSIDE EDGE OF ROOTBALL.
 - SHREDED BARK MULCH, 3" DEPTH. MULCH TO BE NATURAL IN COLOR. LEAVE 1-2" RING EXPOSED AT BASE OF PLANT.
 - IF NOT PLANTED WITHIN A LANDSCAPE BED, MULCH RINGS TO BE CONSISTENT IN SIZE WITH PLANT TYPE/SIZE THROUGHOUT PROJECT.

Shrub Planting Detail - Container
Scale: NTS



Spade Cut Edging Detail
NTS

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Landscape Notes

- Landscape areas and plant material shall be kept free from refuse and debris. Plant materials, including lawns, shall be maintained in a healthy growing condition, neat and orderly in appearance.
- Tree stakes, guy wires and tree wrap shall be removed after one year.
- All plant material shall be true to name and free from physical damage and wind burn.
- Plants shall be full, well-branched, and in a healthy, vigorous growing condition.
- Plants shall be watered before and after planting is complete.
- All trees must be staked, fertilized, and mulched and shall be guaranteed to exhibit a normal growth cycle for at least one (1) full year following planting.
- All material shall conform to the guidelines established in the most recent edition of the American Standard for Nursery Stock.
- Provide clean backfill soil, using material stockpiled on site. Soil shall be screened and free of any debris, foreign material, or stone.
- "Agriform" tabs or similar slow-release fertilizer shall be added to the planting pits before being backfilled.
- Amended planting mix shall consist of 1/3 screened topsoil, 1/3 sand, and 1/3 peat.
- All plantings shall be mulched with shredded hardwood bark, spread to a minimum depth of 3". Mulch is to be free from debris and foreign material and shall contain no pieces of inconsistent size.
- The Landscape Contractor shall be responsible for all work shown on the landscape drawings and specifications.
- No substitutions or changes of location, or plant types shall be made without the approval of the Landscape Architect or Owner's representative.
- The Landscape Architect shall be notified of any discrepancies between the plans and field conditions prior to installation.
- The Landscape Contractor shall be responsible for maintaining all plant material in a vertical condition throughout the guaranteed period.
- The Landscape Architect shall have the right at any stage of the installation to reject any work or material that does not meet the requirements of the plans and specifications, if requested by the owner.
- The Contractor shall be responsible for checking plant quantities to ensure quantities on drawings and plant list are the same. In the event of a discrepancy, the quantities on the plans shall prevail.
- The Landscape Contractor shall seed and mulch or sod (as indicated on plans) all areas disturbed during construction, throughout the contract limits.
- A pre-emergent weed control agent, "Preen" or equal, shall be applied uniformly to all planting beds prior to mulching.
- The Developer and Landscape Architect reserve the right to change location of plant material and alter plant species/variety at the time of installation based upon availability and quantity of material as well as site conditions. Materials will be of similar size, appearance and growth habit.
- All Lawn areas shall be Seeded or Sodded
- All Landscape Areas shall be irrigated by an automatic irrigation system with separate zones for Lawn and Plants.



sheet title:

Landscape Details

project title:

Scripps District

Detroit, Michigan

prepared for:

Robertson Brothers Homes
6905 Telegraph Rd. - Suite 200
Bloomfield Hills, MI 48301

Phone: 248.282.1428

job number:

20002

date:

03.09.2021

drawn by:

EMJ

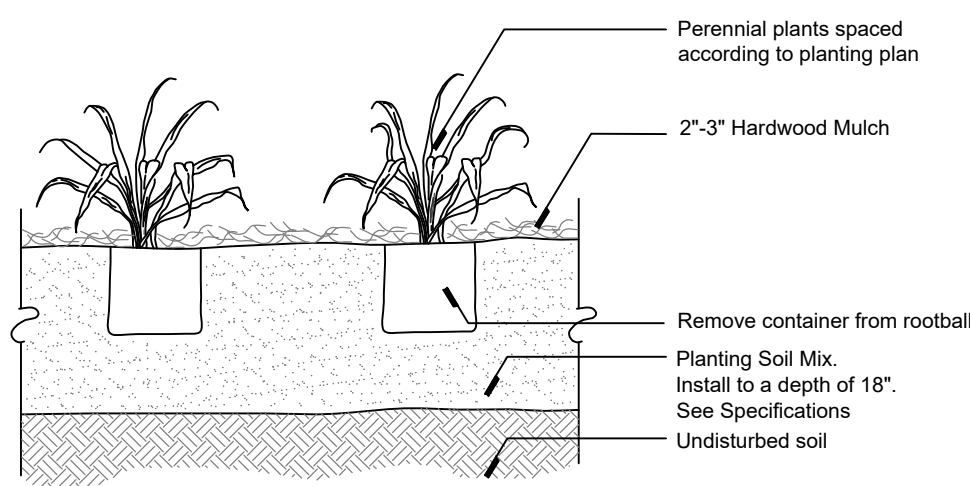
checked by:

WTK

revisions:

03.22.2021	Issued for Site Plan Review
08.27.2021	Per Site Plan Revisions
09.07.2021	Per Site Plan Revisions
10.25.2021	Per Site Plan Revisions
01.03.2022	Per Site Plan Revisions

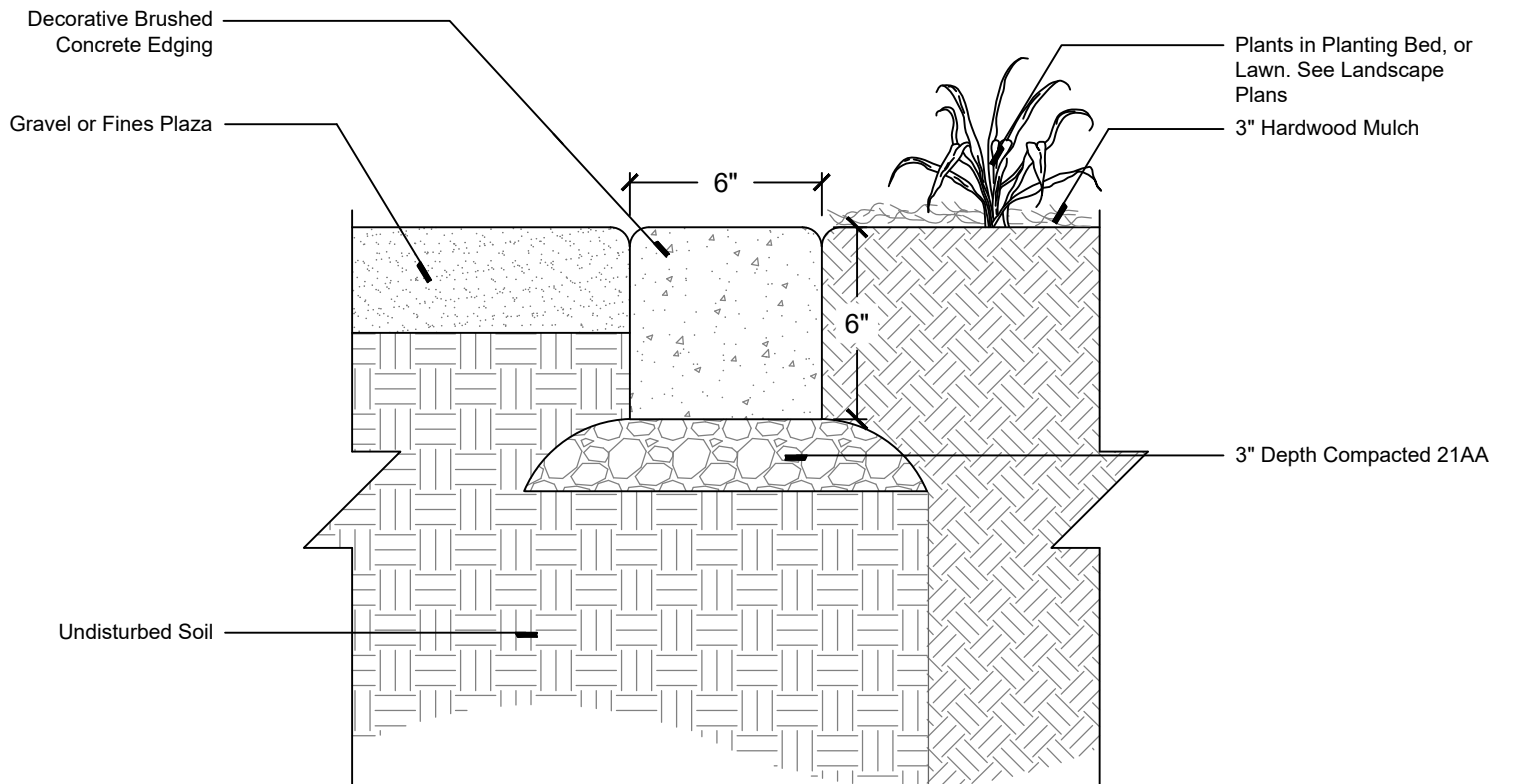
Perennial Planting Detail



- Perennial plants spaced according to planting plan
- 2"-3" Hardwood Mulch
- Remove container from rootball
- Planting Soil Mix. Install to a depth of 18". See Specifications
- Undisturbed soil

Scale: NTS

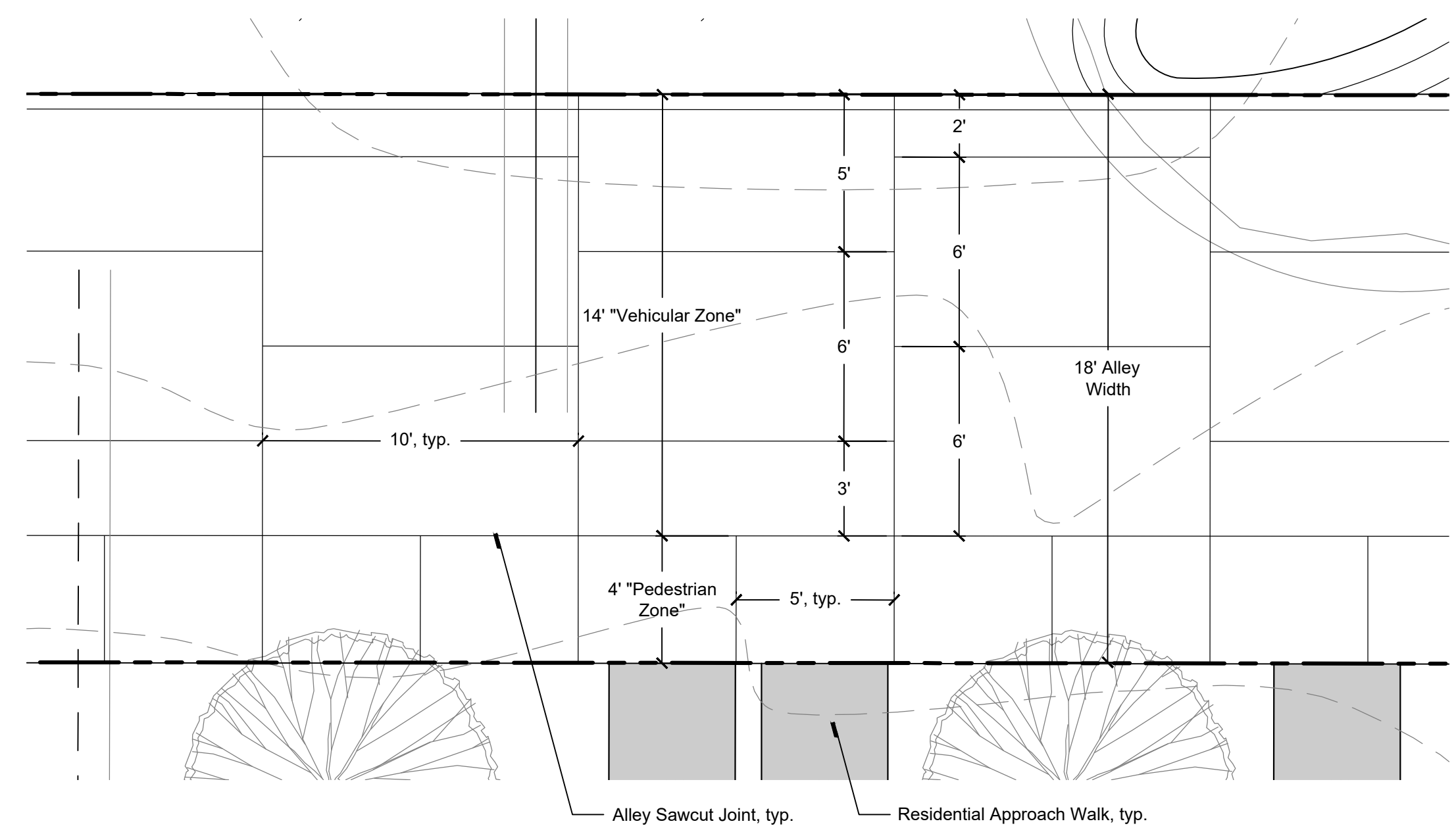
6"x6" Decorative Concrete Edge Detail



- Decorative Brushed Concrete Edging
- Gravel or Fines Plaza
- Plants in Planting Bed, or Lawn. See Landscape Plans
- 3" Hardwood Mulch
- 3" Depth Compacted 21AA
- Undisturbed Soil

Scale: NTS

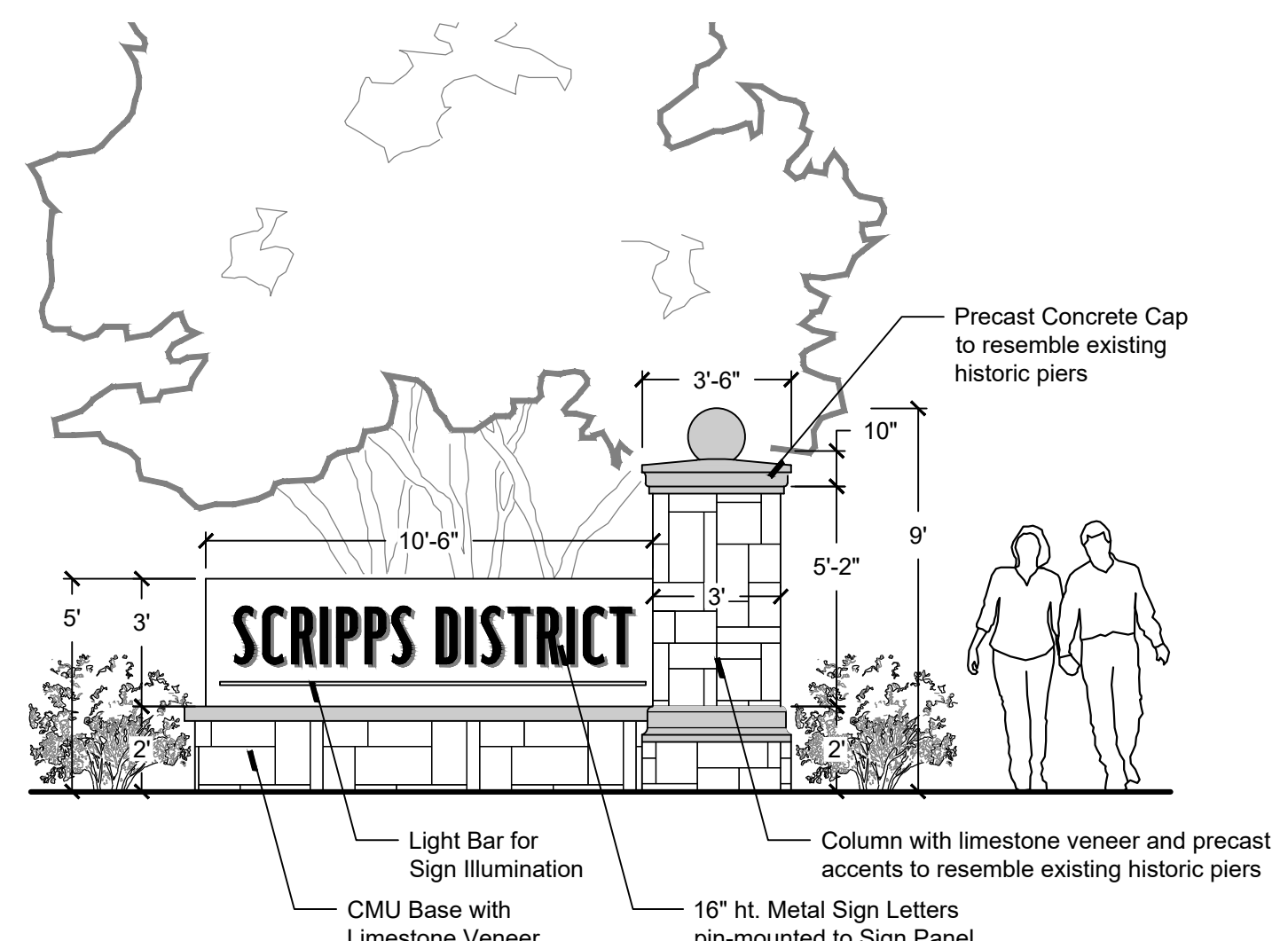
Decorative Alleyway Typical Jointing Detail



- 14" "Vehicular Zone"
- 18' Alley Width
- 4" "Pedestrian Zone"
- Alley Sawcut Joint, typ.
- Residential Approach Walk, typ.

Scale: 1/4" = 1'

Community Monument Sign - Elevation Detail

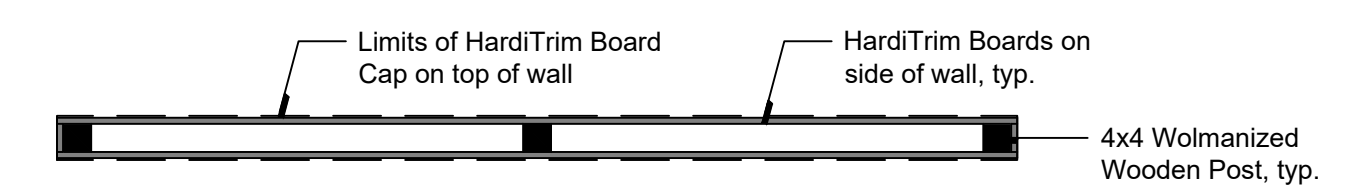


- Light Bar for Sign Illumination
- CMU Base with Limestone Veneer
- 16" ht. Metal Sign Letters pin-mounted to Sign Panel.
- Column with limestone veneer and precast accents to resemble existing historic piers
- 3'-6" Precast Concrete Cap to resemble existing historic piers

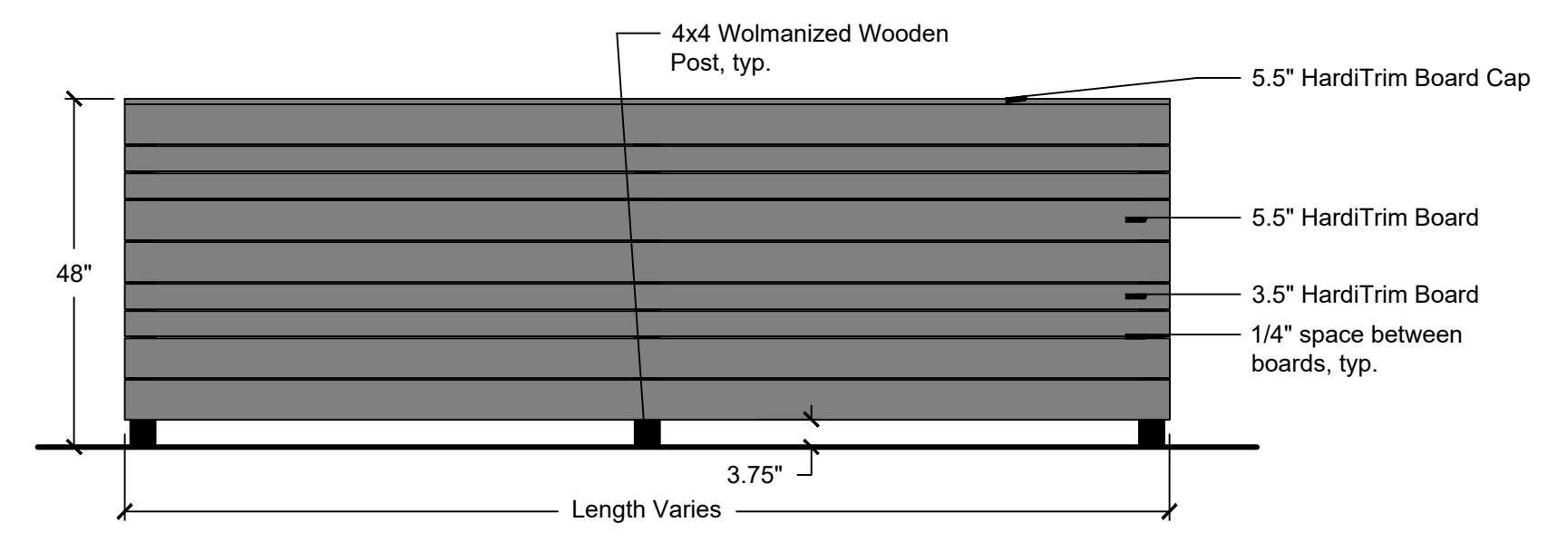
Scale: 1/4" = 1'

- Allowable Sign Area: 32 SF
- Proposed Sign Area: 32 SF
- Allowable Sign Height: 5'
- Proposed Sign Height: 5'

Screen Wall Top View Detail



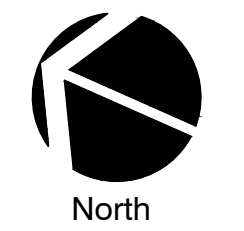
- *Notes:
- Color of HardiTrim Boards to match building
 - HardiTrim Boards shall be installed on all sides of the wall



Scale: 1/2" = 1'

- *Notes:
- Color of HardiTrim Boards to match building
 - HardiTrim Boards shall be installed on all sides of the wall

Scale: 1/2" = 1'



sheet no.

L-4