

**LOCATION MAP** 

SCALE:  $I'' = 2,000' \pm$ 

# SITE DEVELOPMENT PLANS

**FOR** 

# 1360 WALTON BOULEVARD PROPOSED STARBUCKS

PID: 15-09-476-030 1360 WALTON BOULEVARD CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

# Site Plan Review

Reviewed for compliance to the City Ordinance, **Building and Fire Codes** 

Department	Reviewer	Approved
Planning	Kristen Kapelanski 248-841-2772 KapelanskiK@RochesterHills.org	No
Building	NA	
Engineering	Jason Boughton 248-841-2490 BoughtonJ@RochesterHills.org	Yes
Traffic	Keith Depp 248-841-2503 DeppK@RochesterHills.org	Yes
Nat. Resources	Matt Einheuser 248-841-2551 EinheuserM@RochesterHills.org	Yes
Fire	Lt. Ann Echols 248-841-2701 EcholsA@RochesterHills.org	Yes

Planning & Economic Development

Conditions and mark-ups noted throughout the plan set must be addressed prior to final approval.

### OWNER / APPLICANT

**VERUS DEVELOPMENT GROUP** 36400 WOODWARD AVE, SUITE 240 **BLOOMFIELD HILLS, MI 48304** FRANK.ARCORI@VERUSDG.COM

# **ARCHITECT**

**SERRA-MARKO & ASSOCIATES INC** 184 E BIG BEAVER ROAD, SUITE 106 TROY, MI 48083

A traffic queuing study of other Metro-Detroit Starbucks should be provided showing average stacking spaces utilized during peak hour(s). Based on staff's experience with the Planning Commission, they will request this conditional use permit request. This must be provided prior to consideration by the Planning Commission.

# WALTON BOULEVARD

SOURCE: GOOGLE EARTH PRO

**PLAN REFERENCE MATERIALS:** 

**& ASSOCIATES, DATED 08/20/2021** 

**INCLUDING, BUT NOT LIMITED TO:** 

**DATED 12/27/2021** 

HILLS ZONING MAP

I. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS

2. ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE

CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION

CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN

CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND

REVIEW IT THOROUGHLY PRIOR TO THE START OF

ALTA/NSPS SURVEY OBTAINED FROM KEM-TEC,

ARCHITECTURAL PLANS OBTAINED FROM SERRA-MARKO

LOCATION MAP OBTAINED FROM USGS NATIONAL

ZONING MAP REFERENCED FROM CITY OF ROCHESTER

AERIAL MAP REFERENCED FROM GOOGLE EARTH PRO

A conditional use permit is required for the proposed drive-through. Refer to Section 138-1.203 of the Zoning Ordinance for required signage that must be placed on the property 15 calendar days prior to the public hearing.

# **AERIAL MAP**

SCALE: I" = 100'±

# PLANS PREPARED BY:

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



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607 Shelby Suite 200, Detroit, MI 48226 Phone 248.247.1115

# R-I PROJECT B-2 SITE B-2 B-5 B-3 B-2 FB-2 **OVERLAY** FB-2 **OVERLAY OVERLAY** OVERLAY FB-2 OVERLAY WALTON BOULEVARD SOURCE: CITY OF ROCHESTER HILLS ZONING MAP

# **ZONING MAP**

SCALE:  $I'' = 100' \pm$ 

ADDITIONAL SHE	ETS
DRAWING TITLE	SHEET#
ALTA / TOPOGRAPHIC SURVEY	I OF I
CITY WATER MAIN STANDARD DETAILS	I OF 3
CITY WATER MAIN STANDARD DETAILS	2 OF 3
CITY WATER MAIN STANDARD DETAILS	3 OF 3
CITY SANITARY SEWER STANDARD DETAILS	I OF 2
CITY SANITARY SEWER STANDARD DETAILS	2 OF 2
CITY STORM SYSTEM STANDARD DETAILS	I OF I

DRAWING TITLE	SHEET #
COVER SHEET	C-I
DEMOLITION PLAN	C-2
SITE PLAN	C-3
GRADING PLAN	C-4
STORMWATER MANAGEMENT PLAN	C-5
UTILITY PLAN	C-6
FIRE PROTECTION PLAN	C-7
LIGHTING PLAN	C-8
SOIL EROSION & SEDIMENT CONTROL PLAN	C-9
LANDSCAPE PLAN	C-10
TREE REPLACEMENT PLAN	C-11
CONSTRUCTION DETAILS	C-12 TO C-16
SIGHT DISTANCE PLAN	C-17

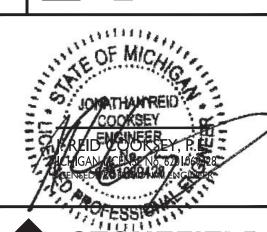
	REVISED PER CITY SECOND SITE PLAN REVIEW	REVISED PER CITY SITE PLAN REVIEW	SUBMISSION FOR SITE PLAN APPROVAL	REVISED PER FIRE DEPARTMENT COMMENTS	REVISED PER CITY COMMENTS	SUBMISSION FOR PRE-APPLICATION MEETING	DESCRIPTION
	JRC / ECM	JRC / ECM	RAC / ECM	RAC	ECM	JRC	ВҮ
	02/09/2022	12/28/2021	09/08/2021	08/20/2021	08/02/2021	07/08/2021	DATE
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NOT APPROVED FOR CONSTRUCTION



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STONEFIELD engineering & design

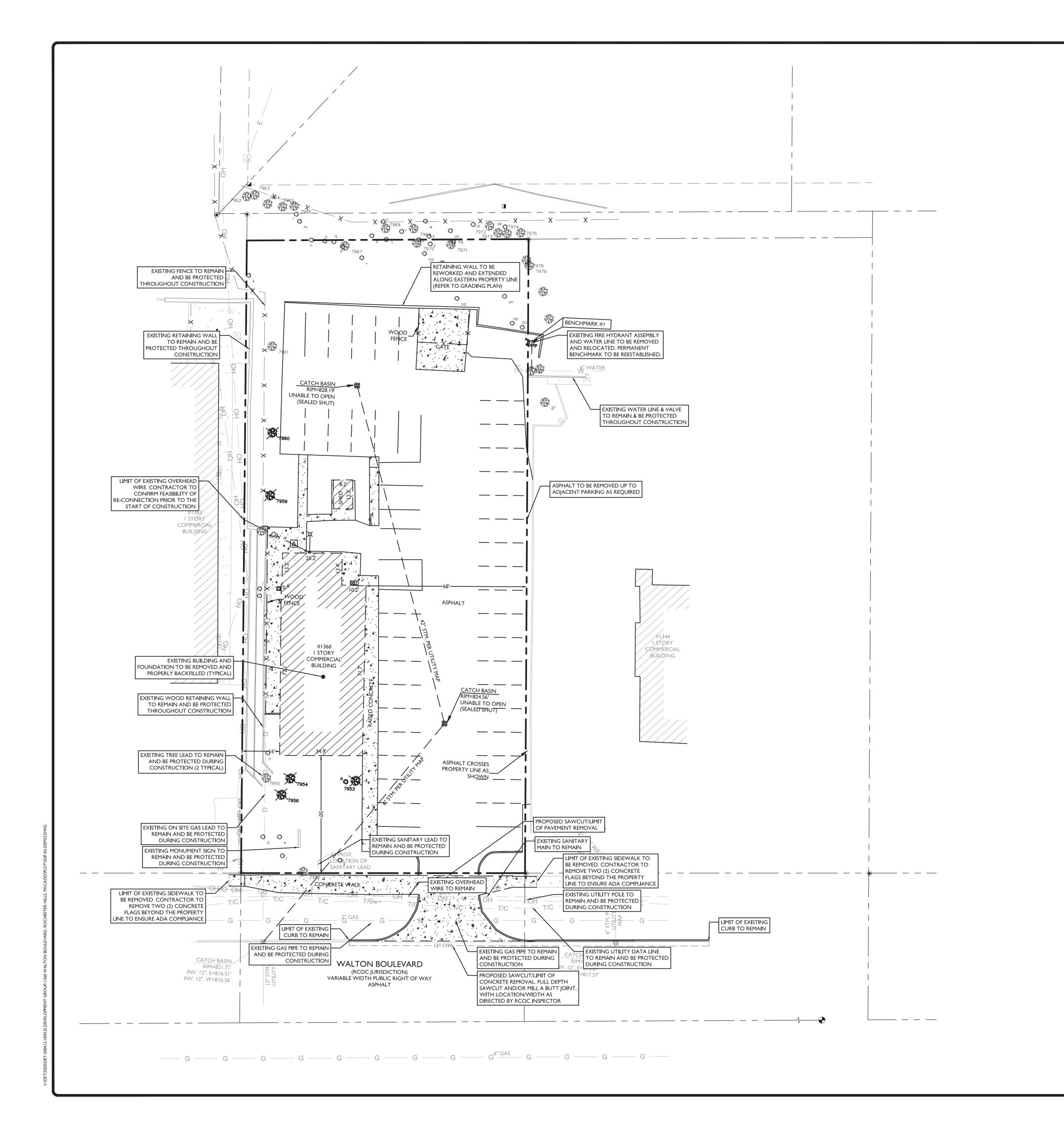
CITY FILE #21-030 SECTION #9 SCALE: AS SHOWN PROJECT ID: DET-200412

**COVER SHEET** 

C-I

DRAWING:

The applicant needs to submit a Land Improvement Permit (LIP) application with engineer's estimate, fee and construction plans to proceed with the construction plan review process.

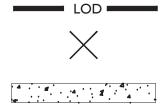




### **SYMBOL**

### **DESCRIPTION**

FEATURE TO BE REMOVED / DEMOLISHED



LIMIT OF DISTURBANCE

TREES TO BE REMOVED

CONCRETE PAVEMENT TO BE REMOVED

ALL SITE FEATURES WITHIN THE LIMIT OF DISTURBANCE INDICATED ON THIS PLAN ARE TO BE REMOVED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY STONEFIELD **ENGINEERING & DESIGN, LLC. IF SIGNIFICANT** DISCREPANCIES ARE DISCERNED BETWEEN THIS PLAN AND FIELD CONDITIONS

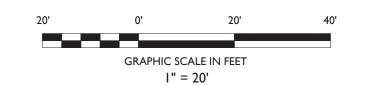


Know what's **below Call** before you dig.

### **DEMOLITION NOTES**

- I. THE WORK REFLECTED ON THE DEMOLITION PLAN IS TO PROVIDE GENERAL INFORMATION TOWARDS THE EXISTING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE ENTIRE PLAN SET AND ASSOCIATED REPORTS/REFERENCE DOCUMENTS INCLUDING ALL DEMOLITION ACTIVITIES AND INCIDENTAL TASKS NECESSARY TO COMPLETE THE
- SITE IMPROVEMENTS. 2. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND
- METHODS OF DEMOLITION ACTIVITIES.

  3. EXPLOSIVES SHALL NOT BE USED UNLESS WRITTEN CONSENT FROM BOTH THE OWNER AND ANY APPLICABLE GOVERNING AGENCY IS OBTAINED. BEFORE THE START OF ANY EXPLOSIVE PROGRAM, THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL LOCAL, STATE, AND FEDERAL PERMITS. ADDITIONALLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SEISMIC TESTING AS REQUIRED AND ANY DAMAGES AS THE RESULT OF SAID DEMOLITION PRACTICES.
- 4. ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL CODES. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL UTILITIES ARE DISCONNECTED IN ACCORDANCE WITH THE UTILITY AUTHORITY'S REQUIREMENTS PRIOR TO STARTING THE DEMOLITION OF ANY STRUCTURE. ALL EXCAVATIONS ASSOCIATED WITH DEMOLISHED STRUCTURES OR REMOVED TANKS SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO SUPPORT SITE AND BUILDING IMPROVEMENTS. A GEOTECHNICAL ENGINEER SHOULD BE PRESENT DURING BACKFILLING ACTIVITIES TO OBSERVE AND CERTIFY THAT BACKFILL MATERIAL WAS COMPACTED TO A SUITABLE CONDITION.
- 5. DEMOLISHED DEBRIS SHALL NOT BE BURIED ON SITE. ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.



		REVISED PER CITY SECOND SITE PLAN REVIEW	REVISED PER CITY SITE PLAN REVIEW	SUBMISSION FOR SITE PLAN APPROVAL	REVISED PER FIRE DEPARTMENT COMMENTS	REVISED PER CITY COMMENTS	SUBMISSION FOR PRE-APPLICATION MEETING	DESCRIPTION
		JRC / ECM	JRC / ECM	RAC / ECM	RAC	ECM	JRC	ВҮ
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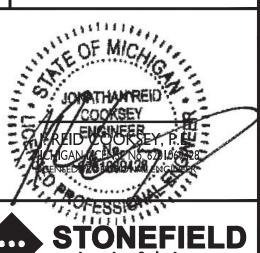
### NOT APPROVED FOR CONSTRUCTION



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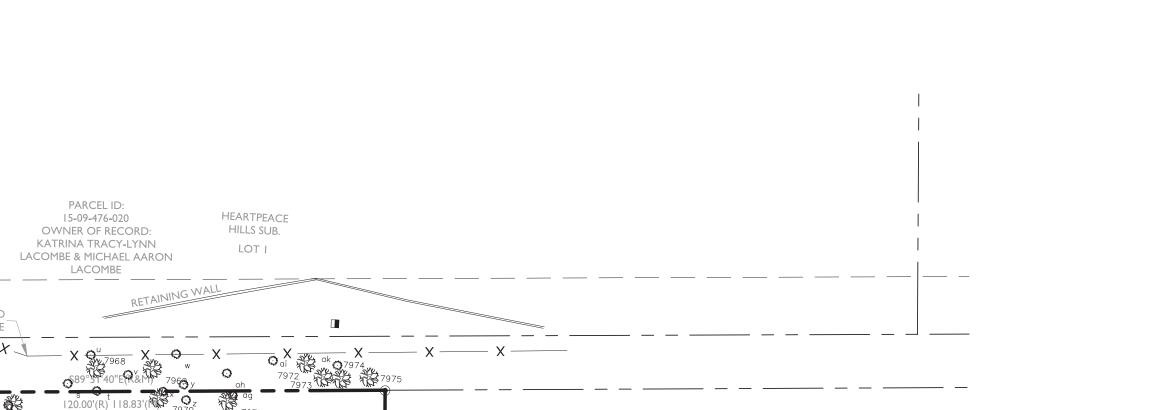


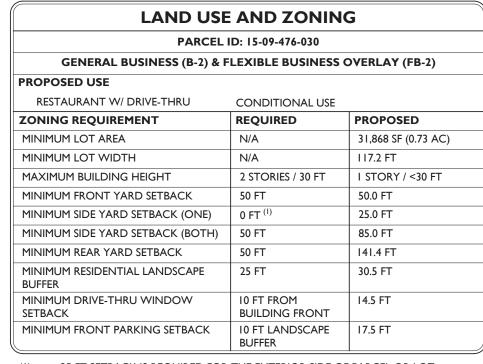
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CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

**DEMOLITION PLAN** 





(I) 25 FT SETBACK IS REQUIRED FOR THE EXTERIOR SIDE OF PARCEL OR LOT ON THE EXTERIOR OF THE DISTRICT

OFF-S	TREET PARKING REQUIR	EMENTS
CODE SECTION	REQUIRED	PROPOSED
§ 138-11.204	REQUIRED RESTAURANT PARKING:	25 SPACES
	I SPACE PER 2 PERSONS AT MAX OCCUPANCY	
	(50 PERSONS)(1 SPACE / 2 PERSONS) = 25 SPACES	
§ 138-11.204	REQUIRED DRIVE-THRU STACKING:	15 SPACES
	10 STACKING SPACES	
§ 138-11.302	DIMENSIONAL REQUIREMENTS:	18 FT X 10 FT
	75°-90°: 18 FT X 10 FT W/ 24 FT TWO-WAY AISLE	W/ 24 FT AISLE

SYMBOL	DESCRIPTION
	PROPERTY LINE
	SETBACK LINE
	SAWCUT LINE
	PROPOSED CURB
	PROPOSED EXTENDED CURB
= = = = =	PROPOSED FLUSH CURB
<del></del>	PROPOSED SIGNS / BOLLARDS
	PROPOSED BUILDING
Δ Δ	PROPOSED CONCRETE
	PROPOSED ASPHALT
	PROPOSED AREA LIGHT
	PROPOSED BUILDING DOORS

### **GENERAL NOTES**

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- I. THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. PRIOR TO THE START OF CONSTRUCTION.
- 2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES
- DURING CONSTRUCTION. 3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
- 4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN,
- 5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND
- METHODS OF CONSTRUCTION. 6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
- 7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTORS EXPENSE. 8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS
- REFLECTED WITHIN THE PLAN SET. 9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL

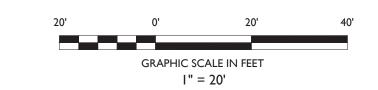
FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW

THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS

- DEVICES, LATEST EDITION. 10. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF STREET OPENING PERMITS.
- II. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES. 12. SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC. BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES

AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.

NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES



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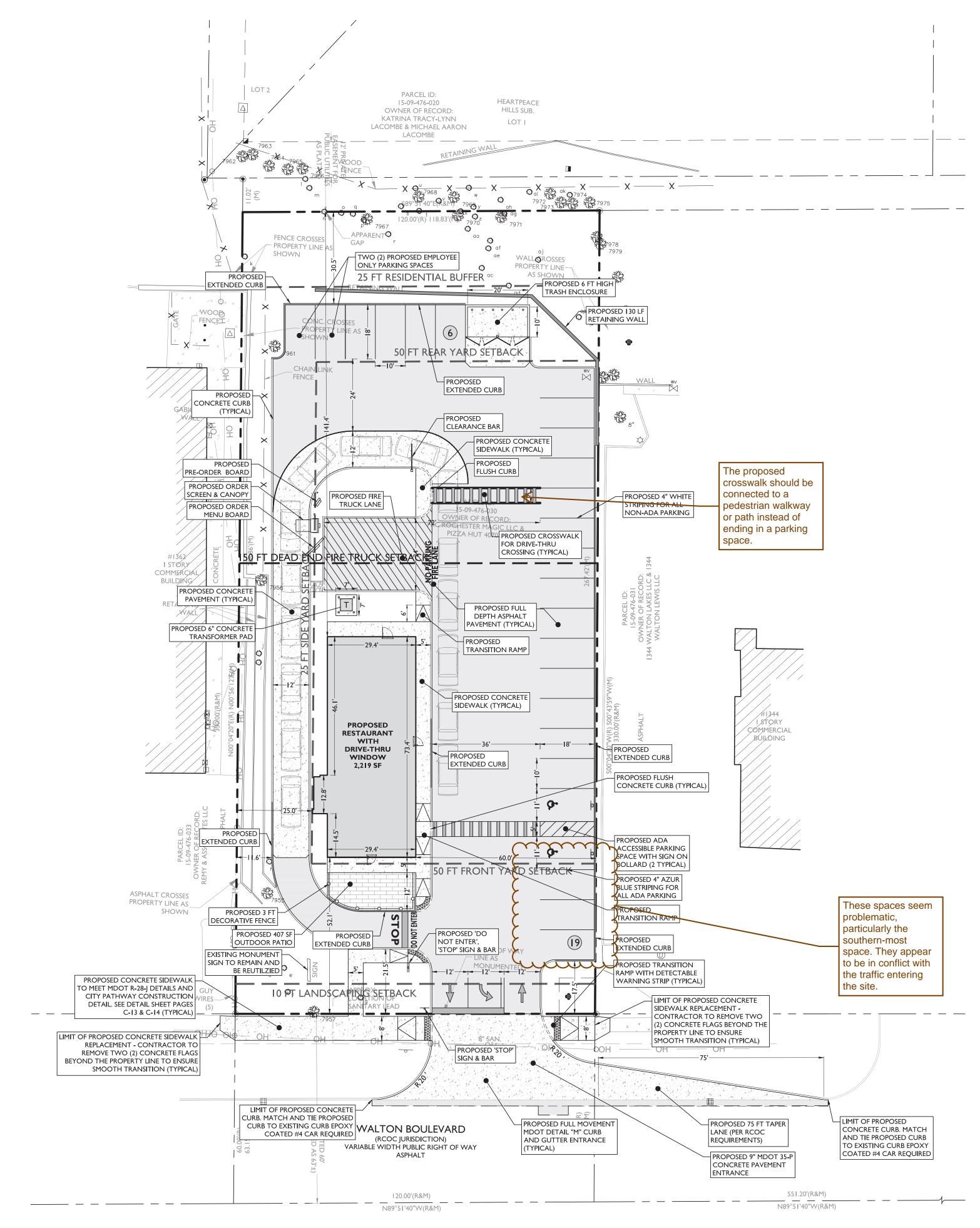


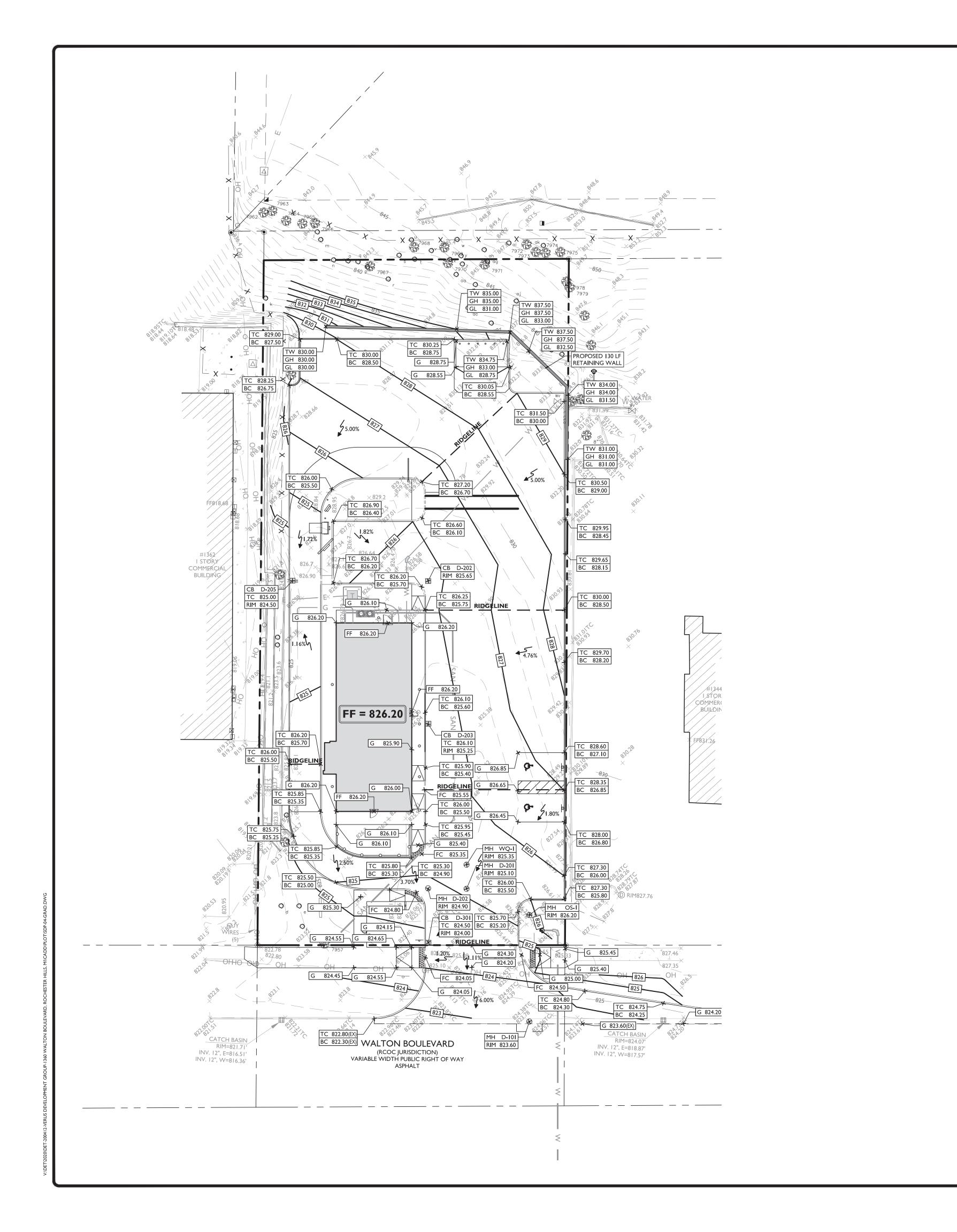
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CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

**SITE PLAN** 







# **SYMBOL DESCRIPTION** PROPERTY LINE RIDGELINE

PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT

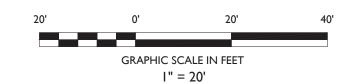
PROPOSED TOP OF WALL / BOTTOM OF WALL SPOT SHOT

**X** FC 100.00 PROPOSED FLUSH CURB SPOT SHOT

### **GRADING NOTES**

- I. ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. ANY GROUNDWATER DE-WATERING PRACTICES SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FOR THE DISCHARGE OF DE-WATERED GROUNDWATER. ALL SOIL IMPORTED TO THE SITE SHALL BE CERTIFIED CLEAN FILL. CONTRACTOR SHALL MAINTAIN RECORDS OF
- 2. THE CONTRACTOR IS REQUIRED TO PROVIDE TEMPORARY AND/OR PERMANENT SHORING WHERE REQUIRED DURING EXCAVATION ACTIVITIES, INCLUDING BUT NOT LIMITED TO UTILITY TRENCHES, TO ENSURE THE STRUCTURAL INTEGRITY OF NEARBY STRUCTURES AND
- INCHES ABOVE EXISTING GRADES UNLESS OTHERWISE NOTED. THE CONTRACTOR WILL SUPPLY ALL STAKEOUT CURB GRADE SHEETS TO STONEFIELD ENGINEERING & DESIGN, LLC. FOR REVIEW AND APPROVAL PRIOR TO POURING CURBS.
- 4. THE CONTRACTOR IS RESPONSIBLE TO SET ALL PROPOSED UTILITY COVERS AND RESET ALL EXISTING UTILITY COVERS WITHIN THE PROJECT LIMITS TO PROPOSED GRADE IN ACCORDANCE WITH ANY APPLICABLE MUNICIPAL, COUNTY, STATE AND/OR UTILITY
- 5. MINIMUM SLOPE REQUIREMENTS TO PREVENT PONDING SHALL BE AS FOLLOWS:
- 5. A MINIMUM SLOPE OF 1.00% SHALL BE PROVIDED AWAY FROM ALL BUILDINGS. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE BUILDING IS ACHIEVED AND SHALL NOTIFY STONEFIELD
- 6. FOR PROJECTS WHERE BASEMENTS ARE PROPOSED, THE DEVELOPER IS RESPONSIBLE TO DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED STRUCTURE. IF GROUNDWATER IS ENCOUNTERED WITHIN THE BASEMENT AREA, SPECIAL CONSTRUCTION METHODS SHALL BE UTILIZED AND REVIEWED/APPROVED BY THE CONSTRUCTION CODE OFFICIAL. IF SUMP PUMPS ARE UTILIZED, ALL DISCHARGES SHALL BE CONNECTED DIRECTLY TO THE PUBLIC STORM SEWER SYSTEM WITH APPROVAL FROM THE GOVERNING STORM SEWER SYSTEM AUTHORITY.

- 2. THE CONTRACTOR SHALL PROVIDE COMPLIANT SIGNAGE AT ALL
- THE PLAN SET.
- 4. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION AT ALL LANDINGS. LANDINGS INCLUDE, BUT ARE NOT LIMITED TO, THE TOP AND BOTTOM OF AN ACCESSIBLE RAMP, AT ACCESSIBLE BUILDING ENTRANCES, AT AN AREA IN FRONT OF A WALK-UP ATM, AND AT TURNING SPACES ALONG THE ACCESSIBLE PATH OF TRAVEL. THE LANDING AREA SHALL HAVE A MINIMUM CLEAR AREA OF 60 INCHES BY 60 INCHES UNLESS INDICATED
- 6. ACCESSIBLE RAMPS WITH A RISE GREATER THAN 6 INCHES SHALL CONTAIN COMPLIANT HANDRAILS ON BOTH SIDES OF THE RAMP AND SHALL NOT RISE MORE THAN 30" IN ELEVATION WITHOUT A LANDING AREA IN BETWEEN RAMP RUNS. LANDING AREAS SHALL ALSO BE PROVIDED AT THE TOP AND BOTTOM OF THE RAMP. 7. A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE
- ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS. VERTICAL AND 2 UNITS HORIZONTAL (2:1 SLOPE).



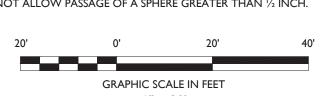
PROPOSED GRADING CONTOUR PROPOSED GRADING RIDGELINE PROPOSED DIRECTION OF DRAINAGE FLOW **X** G 100.00 PROPOSED GRADE SPOT SHOT

X TW 102.00

BW 100.00

- ALL FILL MATERIALS BROUGHT TO THE SITE. STABILITY OF THE SURROUNDING SOILS.
- 3. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 4 INCHES TO 7
- - CURB GUTTER:
  - CONCRETE SURFACES: 1.00%
  - ASPHALT SURFACES:
  - ENGINEERING & DESIGN, LLC. IF THIS CONDITION CANNOT BE MET.

- I. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION WITHIN THE ADA PARKING SPACES AND ACCESS
- ADA PARKING AREAS IN ACCORDANCE WITH STATE GUIDELINES. 3. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 5.00% RUNNING SLOPE AND A MAXIMUM OF 2.00% CROSS SLOPE ALONG WALKWAYS WITHIN THE ACCESSIBLE PATH OF TRAVEL (SEE THE SITE PLAN FOR THE LOCATION OF THE ACCESSIBLE PATH). THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE ACCESSIBLE PATH OF TRAVEL IS 36 INCHES WIDE OR GREATER UNLESS INDICATED OTHERWISE WITHIN
- OTHERWISE WITHIN THE PLAN SET. 5. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 8.33% RUNNING SLOPE AND A MAXIMUM 2.00% CROSS SLOPE ON ANY CURB RAMPS ALONG THE ACCESSIBLE PATH OF TRAVEL. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 10.00% IF A LANDING AREA IS PROVIDED AT THE TOP OF THE RAMP. FOR ALTERATIONS, A CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 8.33% IF A LANDING AREA IS NOT PROVIDED AT THE TOP OF THE RAMP. CURBS RAMPS SHALL NOT RISE MORE THAN 6 INCHES IN ELEVATION WITHOUT A HANDRAIL. THE CLEAR WIDTH OF A CURB RAMP SHALL BE NO LESS THAN 36 INCHES WIDE.
- 8. THE CONTRACTOR SHALL ENSURE A MAXIMUM OF 1/4 INCHES VERTICAL CHANGE IN LEVEL ALONG THE ACCESSIBLE PATH. WHERE A CHANGE IN LEVEL BETWEEN 1/4 INCHES AND 1/2 INCHES EXISTS, CONTRACTOR SHALL ENSURE THAT THE TOP 1/4 INCH CHANGE IN LEVEL IS BEVELED WITH A SLOPE NOT STEEPER THAN I UNIT
- 9. THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR HORIZONTAL SEPARATION) ALONG THE ACCESSIBLE PATH SHALL NOT ALLOW PASSAGE OF A SPHERE GREATER THAN 1/2 INCH.



	12022 JRC / ECM REVISED PER CITY SECOND SITE PLAN REVIEW	/2021 JRC / ECM REVISED PER CITY SITE PLAN REVIEW	/2021 RAC / ECM SUBMISSION FOR SITE PLAN APPROVAL	RAC REVISED PER FIRE DEPARTMENT COMMENTS	/2021 ECM REVISED PER CITY COMMENTS	/2021 JRC SUBMISSION FOR PRE-APPLICATION MEETING	TE BY DESCRIPTION
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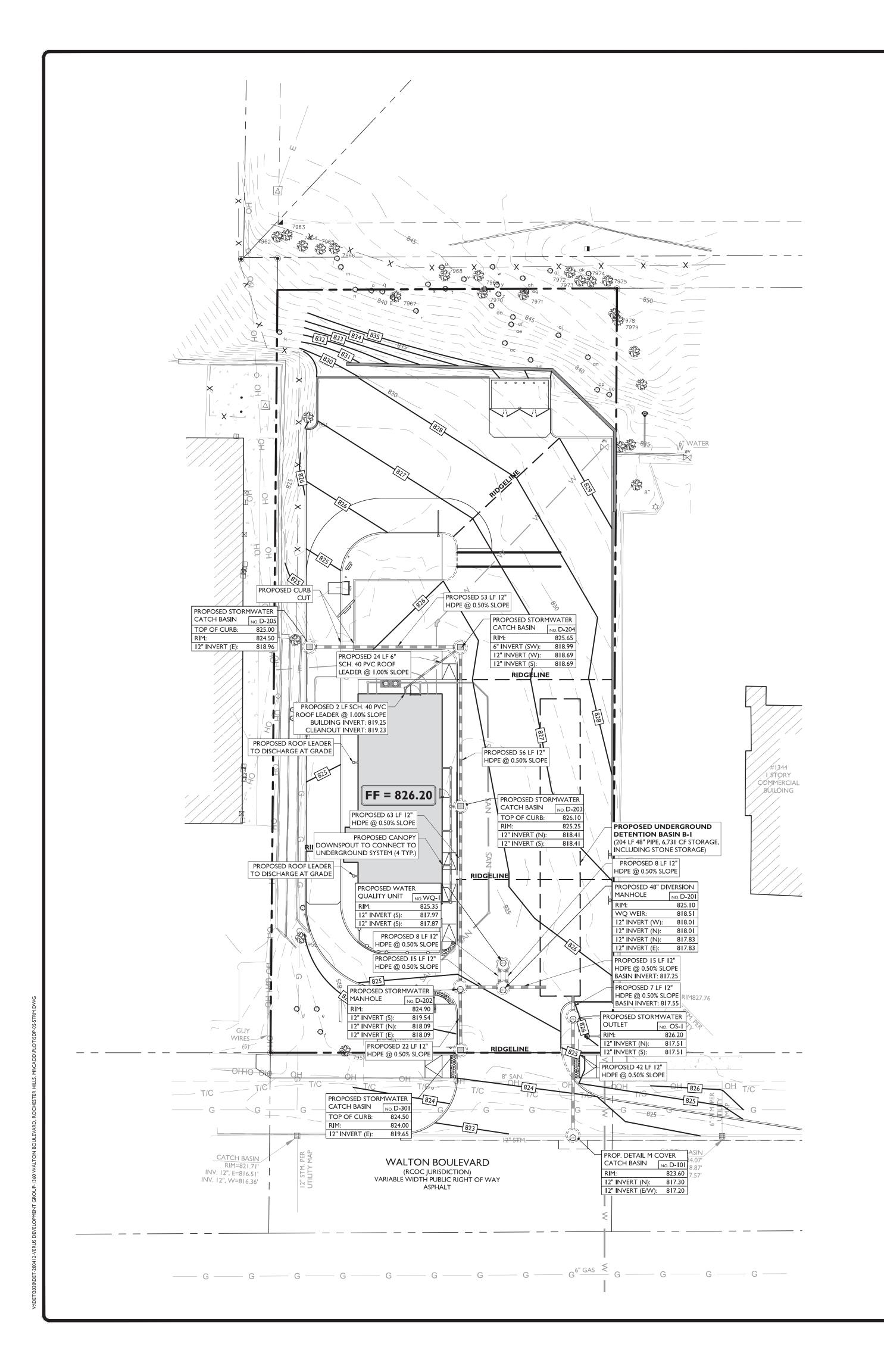


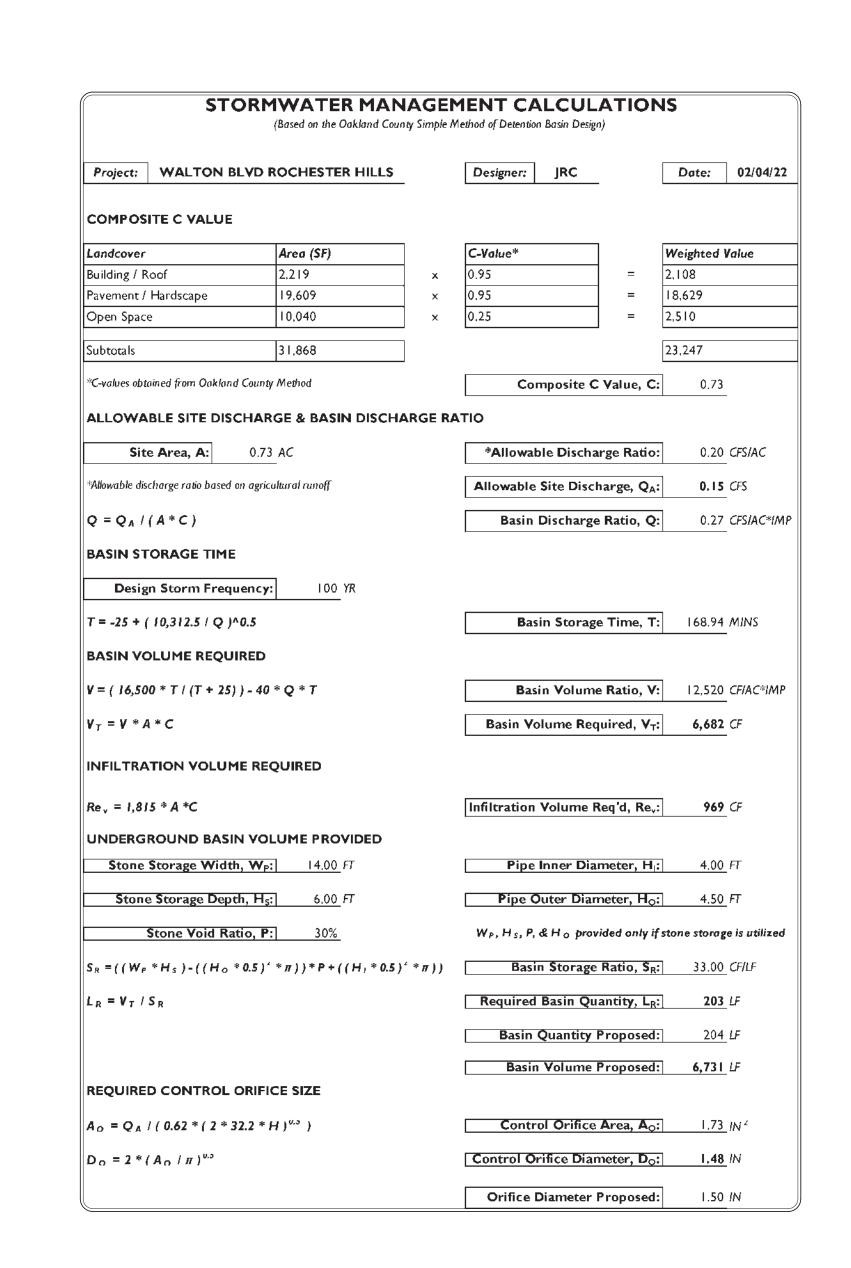
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CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

**GRADING PLAN** 







### **SYMBOL DESCRIPTION**

RIDGELINE

PROPERTY LINE

PROPOSED GRADING CONTOUR

PROPOSED STORMWATER STRUCTURES

PROPOSED STORMWATER PIPING

# PROPOSED GRADING RIDGELINE

NOT APPROVED FOR CONSTRUCTION

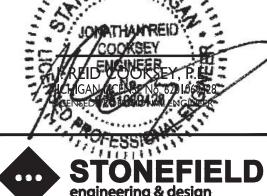




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engineering & design

CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412 TITLE:

**STORMWATER MANAGEMENT PLAN** 

DRAWING:

**DRAINAGE AND UTILITY NOTES** 

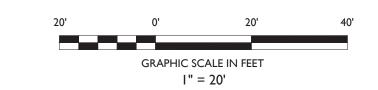
- I. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR STORMWATER IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING.
- 2. CONTRACTOR SHALL START CONSTRUCTION OF STORM LINES AT THE LOWEST INVERT AND WORK UP-GRADIENT. 3. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE
- AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IMMEDIATELY IN WRITING.
- 4. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

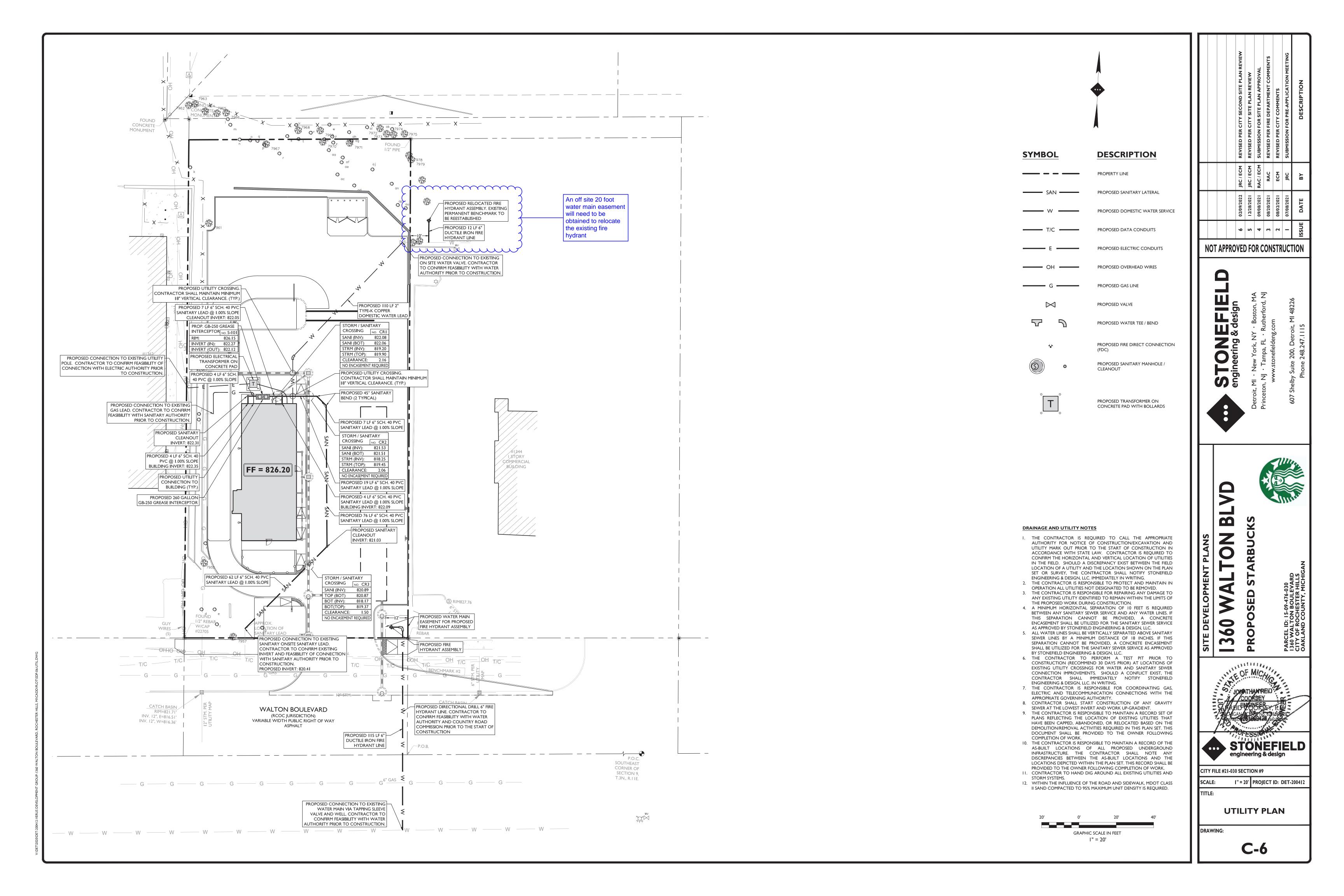
### **EXCAVATION, SOIL PREPARATION, AND DEWATERING NOTES**

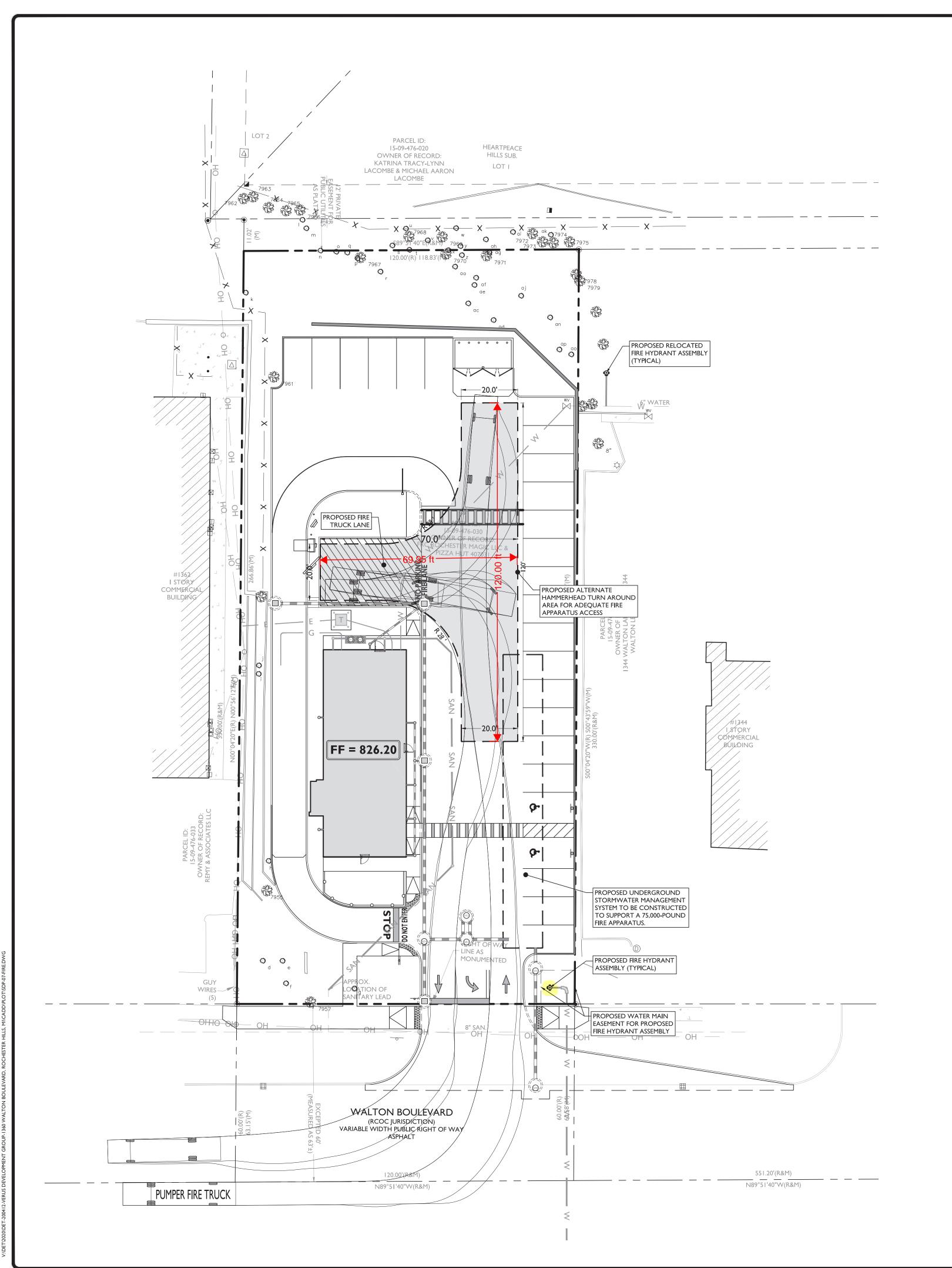
- I. THE CONTRACTOR IS REQUIRED TO REVIEW THE REFERENCED GEOTECHNICAL DOCUMENTS PRIOR TO CONSTRUCTION, THESE DOCUMENTS SHALL BE CONSIDERED A PART OF THE PLAN SET. 2. THE CONTRACTOR IS REQUIRED TO PREPARE SUBGRADE SOILS BENEATH ALL PROPOSED IMPROVEMENTS AND BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH RECOMMENDATIONS BY THE
- GEOTECHNICAL ENGINEER OF RECORD. 3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHORING FOR ALL EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL HAVE THE SHORING DESIGN PREPARED BY A QUALIFIED PROFESSIONAL. SHORING DESIGNS SHALL BE SUBMITTED TO STONEFIELD ENGINEERING & DESIGN, LLC. AND THE OWNER PRIOR TO THE START OF CONSTRUCTION.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OPEN EXCAVATIONS ARE PERFORMED AND PROTECTED IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING DESIGN AND OPERATIONS, AS REQUIRED, TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS AND GROUNDWATER

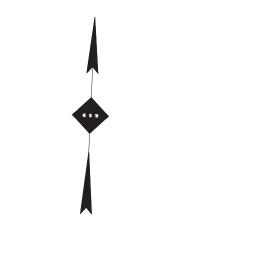
### STORMWATER UNDERGROUND BMP CONSTRUCTION NOTES

- I. THE CONTRACTOR SHALL INSTALL AND BACKFILL THE UNDERGROUND BMP IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- 2. UNDERGROUND BASINS SHALL UTILIZE A STONE BACKFILL WITH A MINIMUM VOID RATIO OF 40%.
- 3. NO CONSTRUCTION LOADING OVER UNDERGROUND BASINS IS PERMITTED UNTIL BACKFILL IS COMPLETE PER THE MANUFACTURER'S SPECIFICATIONS. NO VEHICLES SHALL BE STAGED OR OPERATE FROM A FIXED POSITION OVER THE BASIN.









**SYMBOL** 

02/28/2018

**DESCRIPTION** 

PROPERTY LINE

**Turning Performance Analysis** Chassis: Arrow XT Chassis, Aerials/Tankers, Tandem Axle Body: Aerial, HD Ladder 105', Alum Body Bid Number: 1102 **Department:** Citry of Rochester Hills Parameters: Inside Cramp Angle: Axle Track: 82.92 in. Wheel Offset: 4.68 in. Tread Width: 16.3 in. Additional Bumper Depth Chassis Overhang: 68.99 in. Additional Bumper Depth: 16 in. Wheel Offset Front Overhang: 84.99 in. Cramp Angle Chassis Overhang Wheelbase: 245.5 in. Tread Width Calculated Turning Radii: 19 ft. 5 in. Inside Turn: 35 ft. 3 in. Curb to curb: Wall to wall: 39 ft. 7 in. Comments: RHFD 105' turn radius Inside Turning Radius

Category	Option	Description
Axle, Front, Custom	0018453	Axle, Front, Oshkosh TAK-4, Non Drive, 22,800 lb, Qtm/AXT/DCF
Wheels, Front	0019611	Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot
Tires, Front	0594821	Tires, Front, Goodyear, G296 MSA, 425/65R22.50, 20 ply
Bumpers	0606536	Bumper, 16" Extended, Steel Painted, Arrow XT
Aerial Devices	0673137	Aerial, 105' Heavy Duty Ladder (500 dry/500 water)
Notes:		

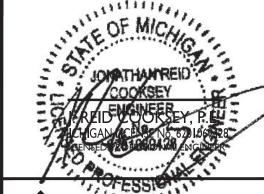
Actual Inside cramp angle may be less due to highly specialized options.

Curb to Curb turning radius calculated for 9.00 inch curb.

	3LVD	S	
	20	S	

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NOT APPROVED FOR CONSTRUCTION



STONEFIELD engineering & design

CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

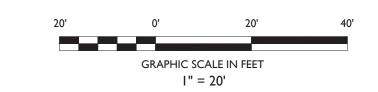
FIRE PROTECTION PLAN

DRAWING:

**C-7** 

### FIRE DEPARTMENT NOTES

- I. A KNOX KEY SYSTEM SHALL BE INSTALLED IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE FROM THE KNOX COMPANY AT WWW.KNOXBOX.COM - IFC 2006
- FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS, SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE" AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES - FIRE
- PREVENTION ORDINANCE CHAPTER 58, SEC. 503 3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14
- 4. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING OF SAND AND / OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES - FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 307.6.2 & 307.6.2.3

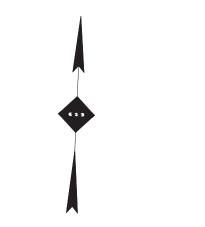


LIGHTING REQUIREMENTS				
CODE SECTION	REQUIRED	PROPOSED		
§ 138-10.201.A	ALL OUTDOOR LIGHTING SHALL BE SHIELDED	PROVIDED		
§ 138-10.201.B	MAXIMUM ILLUMINATION ON SITE:			
	10 FC	9.0 FC		
§ 138-10.201.B	MAXIMUM ILLUMINATION AT:			
	PROPERTY LINE: 0.5 FC	0.5 FC		
	RIGHT OF WAY PROPERTY LINE: I FC	0.9 FC		
§ 138-10.202	MINIMUM FIXTURE HEIGHT:			
	20 FT <sup>(1)</sup>	I8 FT		

(I) 15 FEET HIGH IF WITHIN 50 FEET OF A RESIDENTIAL PROPERTY

0.1 0.2 0.3  0.1 0.2 0.3  0.1 0.1 0.1 0.1  1#1362  1 157684  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
†0.0 †0.0 †0.0 †0.0 =	$     \begin{array}{ccccccccccccccccccccccccccccccccc$

	PROPOSED LUMINAIRE SCHEDULE									
SYMBOL	LABEL QUANTITY SECURITY LIGHTING DISTRIBUTION LLF MANUFACTURER				IES FILE					
	A	EATON LUMARK PREVAIL AND FIXTURE COMBO WITH HOUSE SIDE SHIELD		TYPE IV	0.9	EATON	PRV-C40-D-UNV-T4-BZ-7030-HSS.ies			
	В	I	I EATON LUMARK PREVAIL AND FIXTURE COMBO WITH HOUSE SIDE SHIELD TYPE IV 0.9 EATON		PRV-C25-D-UNV-T4-BZ-7030-HSS.ies					
	С	I	EATON LUMARK PREVAIL AND FIXTURE COMBO WITH HOUSE SIDE SHIELD (2 @ 90°)			EATON	PRV-C25-D-UNV-T4-BZ-7030-HSS.ies			
•	D	8	OXYGEN LEDA OUTDOOR SCONCE	TYPE IV	TYPE IV 0.9 EATON		3-712-222 Leda.ies			
	E	2	MIRADA LED WALL SCONCE - 8K LUMEN PACKAGE	FT	0.9	LSI INDUSTRIES	XWM-FT-LED-12L-40			
	F	I	MIRADA LED WALL SCONCE - 8K LUMEN PACKAGE	FT	0.9	LSI INDUSTRIES	XWM-3-LED-03-30			



### **SYMBOL**

# A (XX')

+X.X

**GENERAL LIGHTING NOTES** 

VARIABLE FIELD CONDITIONS.

LIGHTING FIXTURE MODEL.

HIGH PRESSURE SODIUM: `

METAL HALIDE:

LIGHT EMITTING DIODES (LED): 0.90

PROPOSED AREA LIGHT

**DESCRIPTION** 

PROPOSED LIGHTING FIXTURE

PROPOSED LIGHTING INTENSITY

PROPOSED BUILDING MOUNTED LIGHT

(MOUNTING HEIGHT)

(FOOTCANDLES)



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ENGINEERING & DESIGN, LLC. **ATM LIGHTING NOTES:** I. THE CONTRACTOR SHALL REPLACE LAMP COVERS, RE-LAMP AND RE-BALLAST EXISTING LIGHT FIXTURES AS INDICATED WITHIN THE

I. THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER. ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH ARE WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER

2. WHERE APPLICABLE, THE EXISTING LIGHT LEVELS DEPICTED WITHIN THE PLAN SET SHALL BE CONSIDERED APPROXIMATE. THE EXISTING LIGHT LEVELS ARE BASED ON FIELD OBSERVATIONS AND THE MANUFACTURER'S DATA OF THE ASSUMED OR MOST SIMILAR

3. UNLESS NOTED ELSEWHERE WITHIN THIS PLAN SET, THE LIGHT LOSS FACTORS USED IN THE LIGHTING ANALYSIS ARE AS FOLLOWS:

4. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY PROPOSED LIGHTING LOCATIONS THAT CONFLICT WITH EXISTING/ PROPOSED DRAINAGE, UTILITY, OR OTHER IMPROVEMENTS. 5. THE CONTRACTOR IS RESPONSIBLE TO PREPARE A WIRING PLAN AND PROVIDE ELECTRIC SERVICE TO ALL PROPOSED LIGHTING FIXTURES. THE CONTRACTOR IS REQUIRED TO PREPARE AN AS-BUILT PLAN OF WIRING AND PROVIDE COPIES TO THE OWNER AND STONEFIELD

PLAN SET. THE EXISTING FIXTURE HEIGHT SHALL BE MAINTAINED UNLESS INDICATED OTHERWISE. THE LIGHTING DESIGN IS SUBJECT TO CHANGE IF THE EXISTING LIGHT FIXTURES ARE NOT GREATER

THAN OR EQUAL TO THE FOLLOWING WATTAGE: FIXTURE 'X' = MINIMUM X WATTS 2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING IF THE EXISTING LIGHT FIXTURES ARE NOT THE MINIMUM WATTAGE SPECIFIED WITHIN THE PLAN SET.

3. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY EXISTING LIGHT POLES IDENTIFIED FOR REUSE WITH A PROPOSED LIGHT FIXTURE(S) SHALL BE IN ACCEPTABLE WORKING CONDITION AND HAVE THE CAPACITY TO SUPPORT THE PROPOSED LIGHT FIXTURE(S). ANY MOUNTING EQUIPMENT REQUIRED TO ATTACH THE PROPOSED LIGHTING FIXTURE TO THE EXISTING LIGHT POLE SHALL

BE PROVIDED BY THE CONTRACTOR. 4. THE CONTRACTOR SHALL CONFIRM THAT THE LOCATION OF ANY PROPOSED BUILDING MOUNTED LIGHTING FIXTURE WILL NOT CONFLICT WITH ANY EXISTING OR PROPOSED STRUCTURAL ELEMENT (E.G. CANOPY SUPPORT BEAMS). THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING OF ANY FIXTURE CONFLICT PRIOR TO THE START OF CONSTRUCTION.

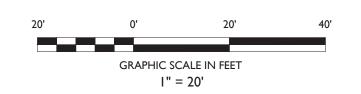
5. ALL EXISTING TREE LIMBS WITHIN THE 60 FOOT ATM RADIUS SHOWN IN THE PLAN SET SHALL BE TRIMMED TO A MINIMUM OF 6 FEET ABOVE GRADE. ALL SHRUBS WITHIN THE 60 FOOT ATM RADIUS SHALL BE TRIMMED TO A MINIMUM OF 36 INCHES ABOVE GRADE. ALL BRUSH SHALL BE REMOVED. THE CONTRACTOR SHALL CONSIDER ALL FUTURE GROWTH AND FULL BLOOM WHEN TRIMMING LANDSCAPING. EXISTING TREE LIMBS ADJACENT TO LIGHTING FIXTURES SHALL BE TRIMMED AS REQUIRED TO PREVENT LIGHT INTERFERENCE.

6. PRIOR TO BID, CONTRACTOR SHALL VERIFY EXISTING EXTERIOR LIGHTING CONDITIONS AFTER DUSK AND NOTIFY THE DEVELOPER/OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC. OF DAMAGED OR INOPERABLE LIGHTS. THE CONTRACTOR SHALL REPAIR ALL INOPERABLE LIGHTS UNLESS OTHERWISE NOTED WITHIN THIS PLAN SET.

7. THE ILLUMINATION LEVELS DEPICTED WITHIN THE PLAN SET ARE BASED ON REGULATORY STATE STANDARDS FOR SAFETY LIGHTING

AND ON CLIENT STANDARDS. 8. ALL LIGHTING FIXTURES, UNLESS OTHERWISE NOTED WITHIN THIS

PLAN SET, HAVE THE PHOTOCELL OPTION ENABLED. 9. EXISTING LIGHTING FIXTURES CONTROLLED BY OUTSIDE ENTITIES (E.G. LANDLORD) HAVE BEEN EXCLUDED FROM THE LIGHTING ANALYSIS REFLECTED WITHIN THE PLAN SET. THE PROPOSED LIGHT LEVELS HAVE BEEN DESIGNED TO COMPLY WITH ALL APPLICABLE ATM AND SAFETY LIGHTING REQUIREMENTS INDEPENDENT OF ANY UNCONTROLLED LIGHT FIXTURES.



# NOT APPROVED FOR CONSTRUCTION



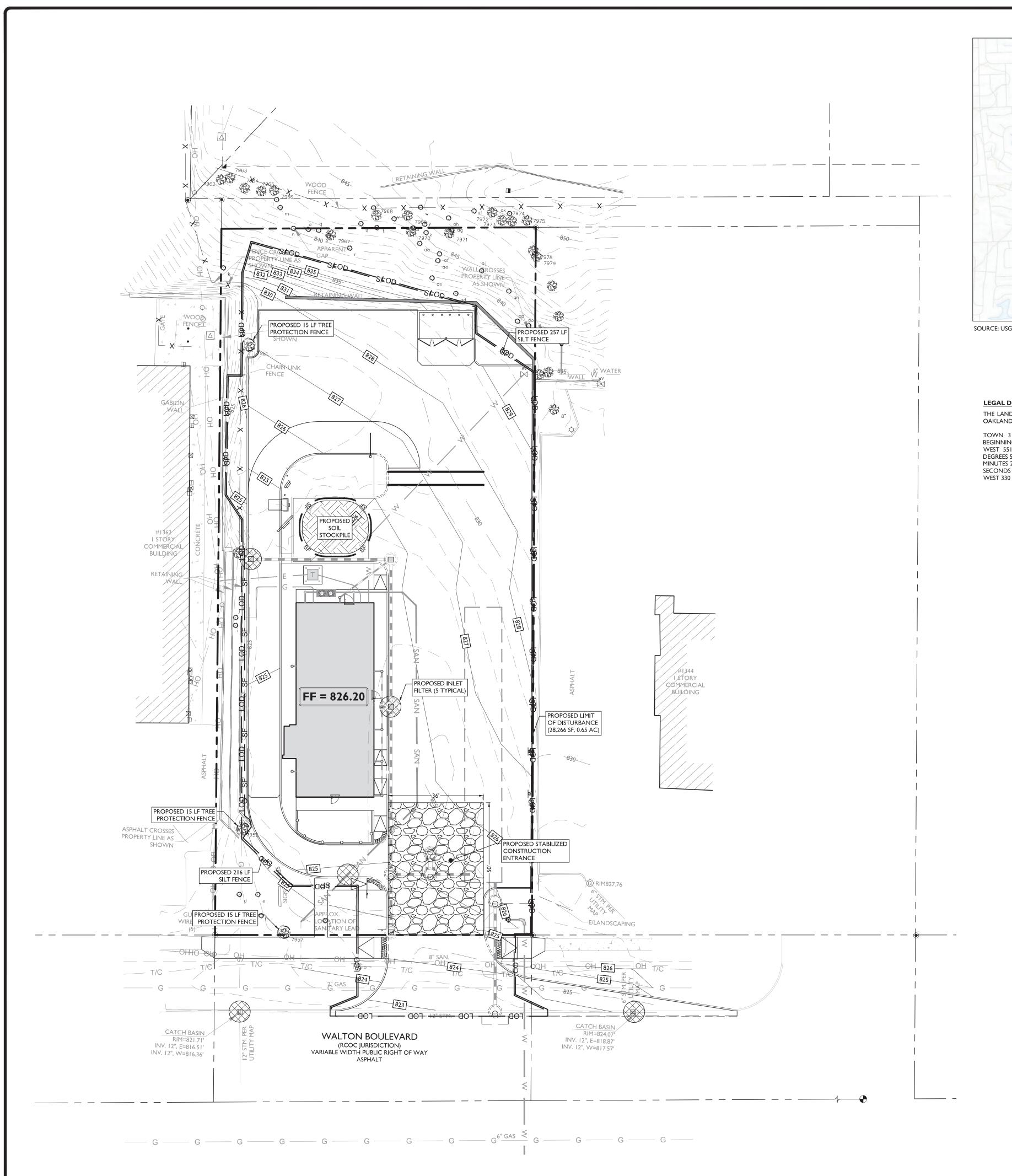


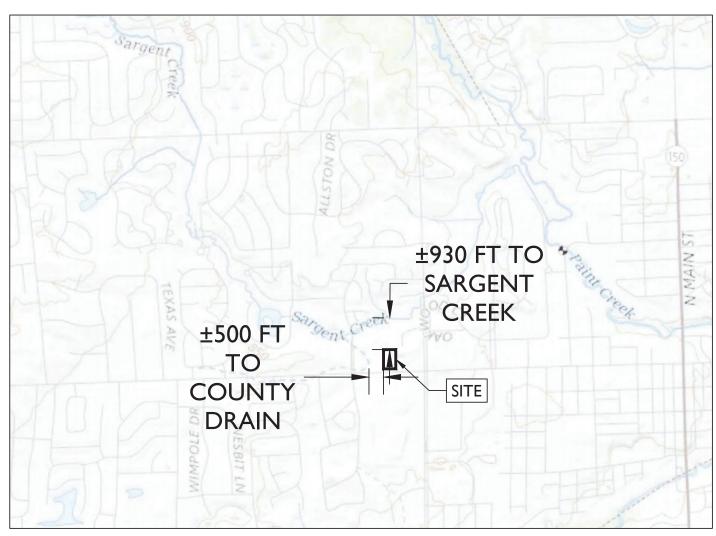
engineering & design

CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

**LIGHTING PLAN** 





SOURCE: USGS NATIONAL MAPPING SYSTEM

# **LOCATION MAP**

SCALE:  $I'' = 2,000' \pm$ 

THE LAND IS DESCRIBED AS FOLLOWS: CITY OF ROCHESTER HILLS, COUNTY OF OAKLAND, STATE OF MICHIGAN

TOWN 3 NORTH, RANGE II EAST, SECTION 9. PART OF SOUTHEAST 1/4 BEGINNING AT POINT DISTANCE NORTH 89 DEGREES 51 MINUTES 40 SECONDS WEST 551.20 FEET FROM SOUTHEAST SECTION CORNER, THENCE NORTH 89 DEGREES 51 MINUTES 40 SECONDS WEST 120 FEET, THENCE NORTH 00 DEGREES 04 MINUTES 20 SECONDS EAST 330 FEET, THENCE SOUTH 89 DEGREES 51 MINUTES 40 SECONDS EAST 120 FEET, THENCE SOUTH 00 DEGREES 04 MINUTES 20 SECONDS WEST 330 FEET TO BEGINNING, EXCEPT SOUTH 60 FEET IN ROAD.

# **SYMBOL DESCRIPTION** PROPERTY BOUNDARY ADJACENT PROPERTY BOUNDARY PROPOSED LIMIT OF DISTURBANCE PROPOSED SILT FENCE PROPOSED TREE PROTECTION FENCE

EQUIPMENT STORAGE PROPOSED STABILIZED CONSTRUCTION ENTRANCE

PROPOSED INLET PROTECTION FILTER

PROPOSED STOCKPILE &

/									
	SOIL CHARACTERISTICS CHART								
	TYPE OF SOIL	59 - URBAN LAND							
	PERCENT OF SITE COVERAGE	100%							
	HYDROLOGIC SOIL GROUP	N/A							
	DEPTH TO RESTRICTIVE LAYER	N/A							
	SOIL PERMEABILITY	N/A							
	DEPTH TO WATER TABLE	N/A							

### SEQUENCE OF CONSTRUCTION

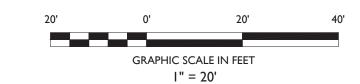
- INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE (2 DAYS). ROUGH GRADING AND TEMPORARY SEEDING (20 DAYS).
- EXCAVATE AND INSTALL DRAINAGE PIPING, AND INLET'S (20 DAYS). INSTALL INLET FILTERS (I DAY). BUILDING CONSTRUCTION AND SITE IMPROVEMENTS (90 DAYS).
- CONSTRUCT RIGHT OF WAY IMPROVEMENTS (2 DAYS).
- LANDSCAPING IMPROVEMENTS AND FINAL SEEDING (7 DAYS). REMOVE SOIL EROSION MEASURES (I DAY).
- NOTE: TIME DURATIONS ARE APPROXIMATE AND ARE INTENDED TO ACT AS A GENERAL GUIDE TO THE CONSTRUCTION TIMELINE. ALL DURATIONS ARE SUBJECT TO CHANGE BY CONTRACTOR. CONTRACTOR SHALL SUBMIT CONSTRUCTION SCHEDULE TO TOWNSHIP AND ENGINEER. CONTRACTOR SHALL PHASE CONSTRUCTION ACCORDINGLY



# Know what's **below Call** before you dig.

### SOIL EROSION AND SEDIMENT CONTROL NOTES

- I. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL 2. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL AIR QUALITY
- STANDARDS. 3. THE CONTRACTOR IS RESPONSIBLE TO INSPECT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER A PRECIPITATION EVENT GREATER THAN I INCH. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG ON SITE AND DOCUMENT CORRECTIVE ACTION TAKEN THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED.



02/09/2022 JRC / ECM REVISED PER CITY SECOND SITE PLAN REV	12/28/2021 JRC / ECM REVISED PER CITY SITE PLAN REVIEW	09/08/2021 RAC / ECM SUBMISSION FOR SITE PLAN APPROVAL	08/20/2021 RAC REVISED PER FIRE DEPARTMENT COMMENT	08/02/2021 ECM REVISED PER CITY COMMENTS	07/08/2021 JRC SUBMISSION FOR PRE-APPLICATION MEETI	DATE BY DESCRIPTION
9	-	4 0	3	2 0	0	ISSUE

NOT APPROVED FOR CONSTRUCTION



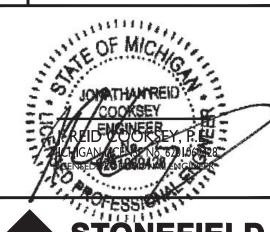
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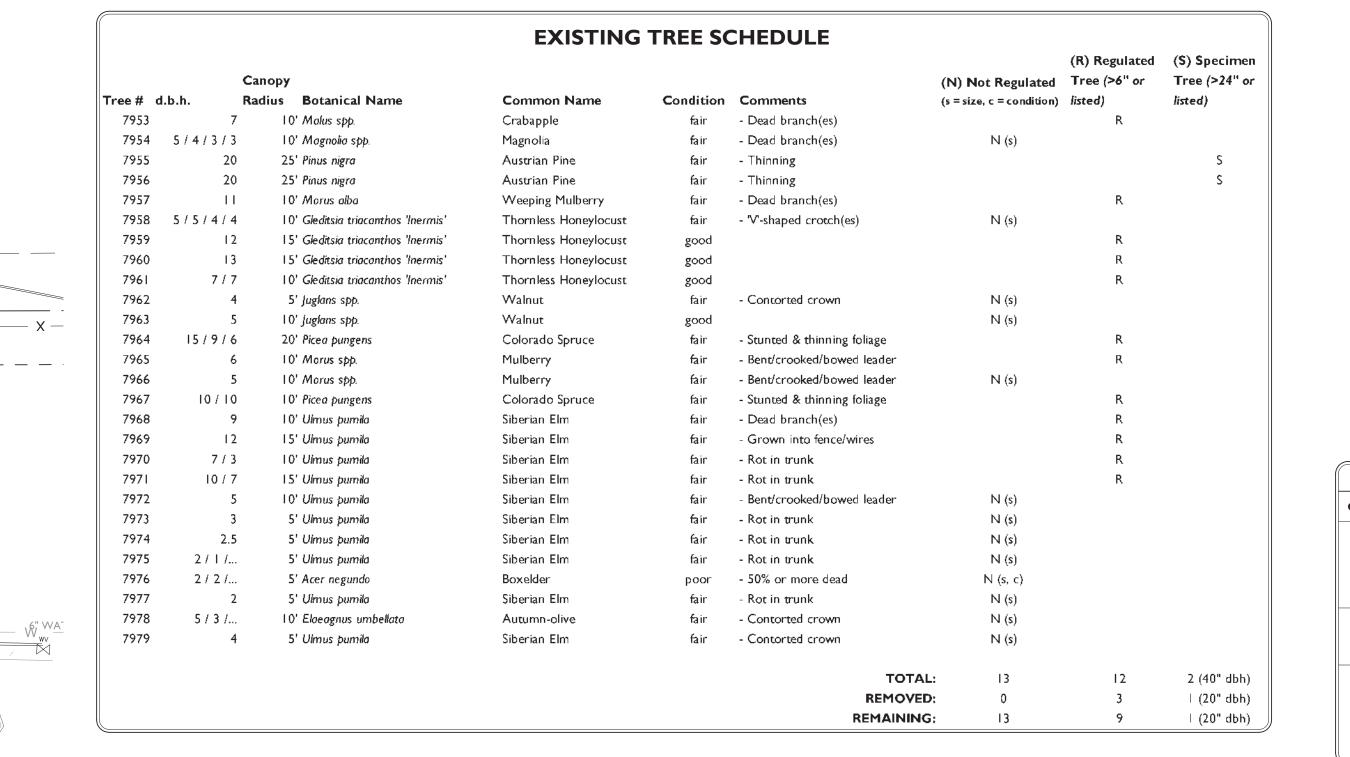


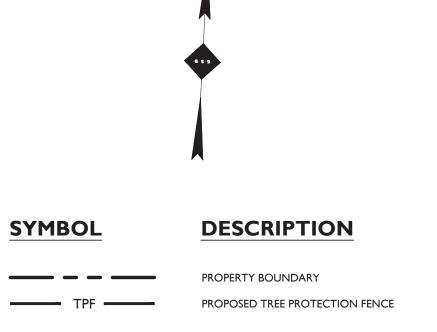
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CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

**SOIL EROSION & SEDIMENT CONTROL PLAN** 





	TREE MITIGATION REQUIRE	MENTS						
CODE SECTION	REQUIRED	PROPOSED						
§ 126-327(2)	MINIMUM PRESERVATION PERCENTAGE:	9 REGULATED TREES TO						
	40% PRESERVATION OF REGULATED TREES	BE PRESERVED (75%)						
	12 REGULATED TREES							
	12 TREES X 0.40 = 5 REGULATED TREES TO BE PRESERVED							
§ 126-397	REGULATED TREE REPLACEMENT:	3 TREES						
	1:1							
	3 TREES REMOVED = 3 TREES REQUIRED							
§ 126-397(3)	SPECIMEN TREE REPLACEMENT:	8" DBH (4 TREES @ 2" EACH)						
	50% OF TOTAL DBH TO BE REPLACED							
	(20" TOTAL DBH)X(0.50)=10" DBH							
	I SPECIMEN TREE PRESERVED=2" CREDIT							
	(10" DBH)-(2" CREDIT)=8" DBH REQUIRED							

LAN	DSCAPE AND BUFFER REQU	JIREMENTS		
CODE SECTION	REQUIRED	PROPOSED		
§ 138-12.300	BUFFER REQUIREMENTS: B-2 TO R-2			
	BUFFER WIDTH W/O 6 FT WALL: <b>25 FT</b>	25.0 FT		
	DECIDUOUS TREES PER 100 LF: 2.5 EA			
	(119 LF)/(100) = 1.19			
	(1.19 * 2.5) = 3 TREES REQUIRED	3 EXISTING TREES		
	ORNAMENTAL TREES PER 100 LF: 1.5 EA			
	(1.19 * 1.5) = 2 TREES REQUIRED	2 EXISTING TREES		
	EVERGREEN TREES PER 100 LF: 5 EA			
	(1.19 * 5) = 6 TREES REQUIRED	6 PROPOSED TREES		
	SHRUBS PER 100 LF: 8 EA			
	(1.19 * 8) = 10 SHRUBS REQUIRED	10 EXISTING SHRUBS		
§ 138-12.301(A)(1)	INTERIOR LANDSCAPING:			
	5% OF PARKING LOT AREA			
	$(15,530 \text{ SF})\times(0.05) = 777 \text{ SF}$	1,272 SF		
	I TREE PER 150 SF			
	(777 SF / I50 SF) = <b>5 TREES</b>	5 TREES (I EXISTING)		
§ 138-12.301(A)(2)	TERMINAL ISLANDS:			
	MIN. 144 SF, 18 FT LONG			
	I TREE PER ISLAND	PROVIDED		
§ 138-12.301(A)(3)	INTERIOR ISLANDS:			
	MIN. 160 SF, 8 FT WIDTH			
	I TREE PER ISLAND	PROVIDED		
§ 138-12.301(B)(1)	PERIMETER LANDSCAPING:			
	I DECIDUOUS TREE PER 25 LF			
	(18.5 LF /25) = <b>I TREE</b>	I EXISTING TREE		
	I ORNAMENTAL TREE PER 35 LF			
	(18.5 LF /35) = <b>I TREE</b>	I EXISTING TREE		
§ 138-12.301(B)(2)	PARKING LOT WITHIN 30 FT OF ROW:			
	CONTINUOUS SHRUB HEDGE 30" O.C.	PROVIDED		
	RIGHT-OF-WAY LANDSCAPING:			
§ 138-12.304(A)(1)	I DECIDUOUS TREE PER 35 LF			
	(120 LF / 35 LF)= <b>4 TREES</b>	4 TREES (I EXISTING)		
§ 138-12.304(B)	I ORNAMENTAL TREE PER 60 LF			
	(120 LF / 60 LF) = <b>2 TREES</b>	2 PROPOSED TREES		

LANDSCAPE BRUSH

AREA TO REMAIN

PROPOSED 15 FT CORNER |

WALTON BOULEVARD

(RCOC JURISDICTION)

VARIABLE WIDTH PUBLIC RIGHT OF WAY

**ASPHALT** 

CLEARANCE (TYPICAL)

EXISTING INTERIOR TREE TO REMAIN

#1362 1 STØRY COMMERCIAL BUILDING

EXISTING PERIMETER TREE TO REMAIN

EXISTING PERIMETER

TREE TO REMAIN

nclude Road and Pathway Sight Lines. ee attached details and include with the olan detail sheets.

The response letter indicates the submission of a landscape cost estimate but this could not be identified in the plans. A landscape planting cost estimate including irrigation should be provided.

	PROPOSED PLANT SCHEDULE									
DECIDUOUS TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING			
(+)	GIN	6	GINKGO BILOBA `AUTUMN GOLD`	AUTUMN GOLD MAIDENHAIR TREE	2.5" - 3" CAL	B&B	AS SHOWN			
ORNAMENTAL TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING			
	QUE	4	malus x 'indian summer'	INDIAN SUMMER CRABAPPLE	2.5" - 3" CAL	B&B	AS SHOWN			
	CER	2	CERCIS CANADENSIS	EASTERN REDBUD	2.5" - 3" CAL	B&B	AS SHOWN			
EVERGREEN TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING			
	THU	12	THUJA X `GREEN GIANT`	GREEN GIANT ARBORVITAE	8'-10' (2" DBH MINIMUM FOR REPLACEMENT TREES)	B&B	AS SHOWN			
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING			
$\otimes$	ILE	8	ILEX CRENATA 'COMPACTA'	DWARF JAPANESE HOLLY	24" - 30"	B&B	AS SHOWN			
$\odot$	ILEX	16	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	24" - 30"	POT	AS SHOWN			

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

### **IRRIGATION NOTES:**

- I. IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA, PRIOR TO CONSTRUCTION. DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.
- 2. ALL LANDSCAPE AREAS MUST BE IRRIGATED. WATERLING WILL ONLY OCCUR
- BETWEEN THE HOURS OF 12:00 AM AND 5:00 AM. 3. IRRIGATION OVERSPRAY SHALL NOT BE BROADCAST ONTO CITY PATHWAYS

### MAINTENANCE NOTES:

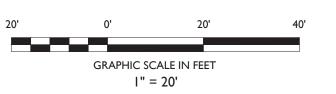
- I. LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.
- 2. PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER
- MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE. 3. ALL DEAD, DAMAGED, OR DISEASED PLANT MATERIAL SHALL BE REMOVED IMMEDIATELY AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. FOR PURPOSES OF THIS SECTION, THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH I AND JUNE I AND FROM OCTOBER I UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH I AND JUNE I. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE. THE CITY MAY NOTIFY PROPERTY
- OWNERS OF THE NEED TO REPLACE DEAD, DAMAGED, OR DISEASED MATERIAL. 4. THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD AND INTEGRAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED IN ACCORDANCE WITH THE AFOREMENTIONED PROCEDURES, ANY REVISIONS TO OR REMOVAL OF PLANT MATERIALS, OR NON-COMPLIANCE WITH THE MAINTENANCE REQUIREMENTS OF THIS SECTION 138-12.109 WILL PLACE THE PARCEL IN NON-CONFORMITY WITH THE APPROVED LANDSCAPE PLAN AND BE A
- VIOLATION OF THIS ORDINANCE. 5. IF PROTECTED TREES ARE DAMAGED, A FINE SHALL BE ISSUED ON AN INCH-BY-INCH BASIS AT A MONETARY RATE AS DEFINED BY THE FORESTRY DEPARTMENT.

### LANDSCAPING NOTES

- THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE
- WITHIN THE PLAN SET. THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A
- MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED. 3. THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH.

THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE

- 3 FEET HORIZONTAL TO I FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. 5. THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR
- SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE. 6. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN
- ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS. PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB ON THE PUBLIC
- RIGHT-OF-WAY. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC ROAD. (TREES MUST BE PLANTED AT LEAST 15' AWAY FROM CURB OR ROAD EDGE WHÈRE THE SPEED LIMIT IS MORE THAN 35 MPH.) SHADE TREES AND SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF THE PUBLIC WALKWAY. EVERGREEN AND ORNAMENTAL TREES MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC WALKWAY. NO TREES OR SHRUBS MAY BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY STREET RIGHT-OF-WAY LINES AT A DISTANCE ALONG EACH LINE OF 25' FROM THEIR POINT OF INTERSECTION. NO TREES OR SHRUBS MAY BE PLANTED IN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY DRIVEWAY WITH A PUBLIC WALKWAY AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT. SHADE AND EVERGREEN TREES MUST BE AT LEAST 15' AWAY FROM THE NEAREST OVERHEAD WIRE. TREES MUST BE PLANTED A MINIMUM OF 5' FROM AN UNDERGROUND UTILITY, UNLESS THE CITY'S LANDSCAPE ARCHITECT REQUIRES A GREATER DISTANCE. PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS FORESTRY UNIT NEEDS TO INSPECT ALL TREES, EXISTING OR PLANTED, TO IDENTIFY ANY THAT POSE A HAZARD TO THE SAFE USE OF THE PUBLIC RIGHT-OF-WAY. FORESTRY MAY REQUIRE THE DEVELOPER TO REMOVE, AND POSSIBLY REPLACE, ANY SUCH TREES. THE ABOVE REQUIREMENTS ARE INCORPORATED INTO THE
- 8. PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS MUST INSPECT ALL LANDSCAPING PLANTINGS.

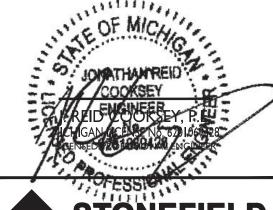


NOT APPROVED FOR CONSTRUCTION



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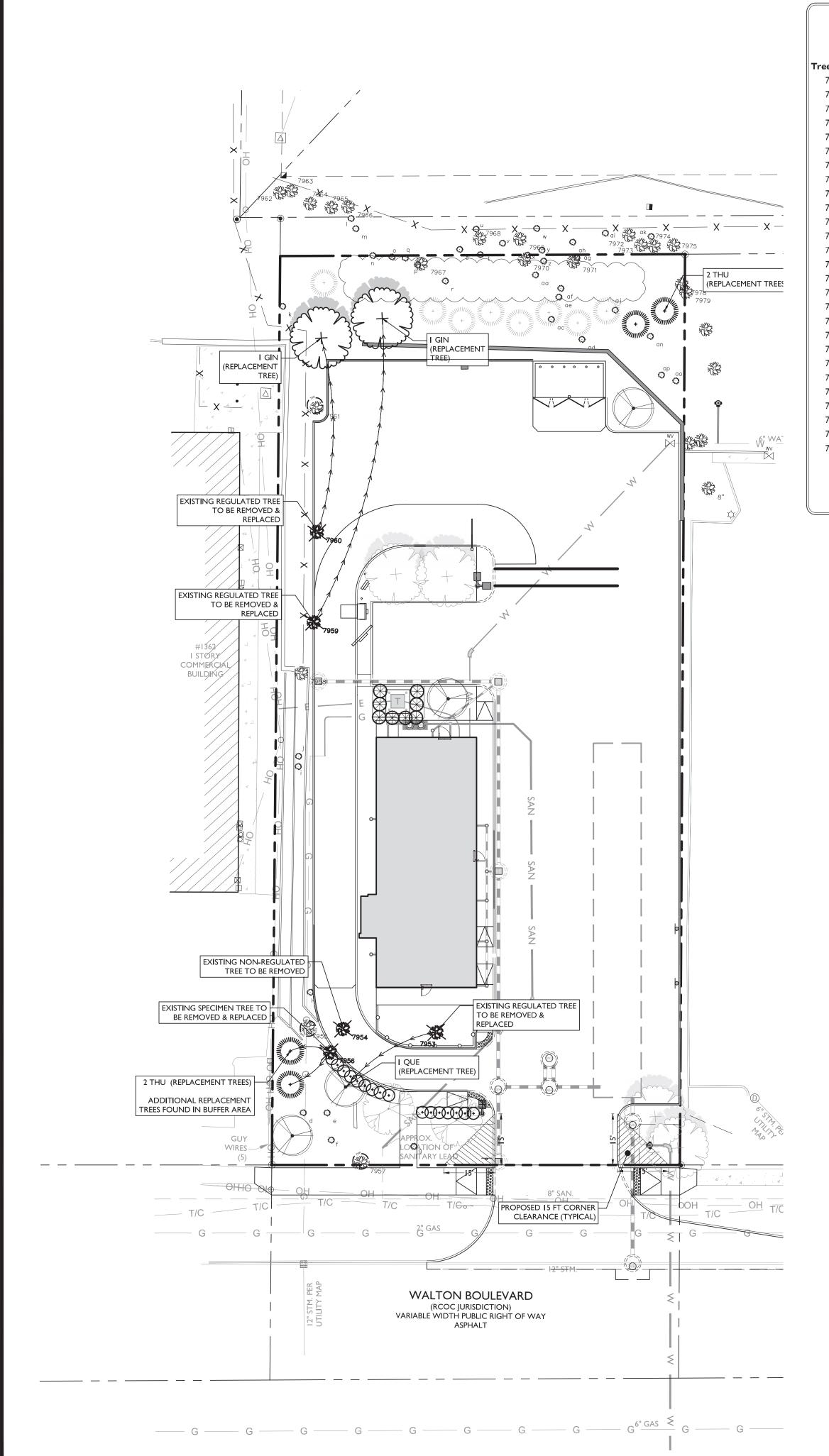




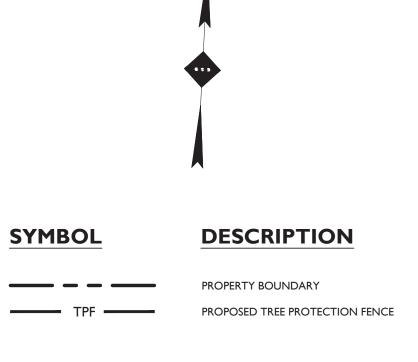
CITY FILE #21-030 SECTION #9

I" = 20' PROJECT ID: DET-200412

LANDSCAPING PLAN







TREE MITIGATION REQUIREMENTS							
CODE SECTION	REQUIRED	PROPOSED					
§ 126-327(2)	MINIMUM PRESERVATION PERCENTAGE:	9 REGULATED TREES TO					
	40% PRESERVATION OF REGULATED TREES	BE PRESERVED (75%)					
	12 REGULATED TREES						
	12 TREES X 0.40 = 5 REGULATED TREES TO BE PRESERVED						
§ 126-397	REGULATED TREE REPLACEMENT:	3 TREES					
	1:1						
	3 TREES REMOVED = 3 TREES REQUIRED						
§ 126-397(3)	SPECIMEN TREE REPLACEMENT:	8" DBH (4 TREES @ 2" EACH)					
	50% OF TOTAL DBH TO BE REPLACED						
	(20" TOTAL DBH)X(0.50)=10" DBH						
	I SPECIMEN TREE PRESERVED=2" CREDIT						
	(10" DBH)-(2" CREDIT)=8" DBH REQUIRED						

LAN	DSCAPE AND BUFFER REQU	JIREMENTS
CODE SECTION	REQUIRED	PROPOSED
§ 138-12.300	BUFFER REQUIREMENTS: B-2 TO R-2	
	BUFFER WIDTH W/O 6 FT WALL: <b>25 FT</b>	25.0 FT
	DECIDUOUS TREES PER 100 LF: 2.5 EA	
	(119 LF)/(100) = 1.19	
	(1.19 * 2.5) = 3 TREES REQUIRED	3 EXISTING TREES
	ORNAMENTAL TREES PER 100 LF: 1.5 EA	
	(I.19 * I.5) = 2 TREES REQUIRED	2 EXISTING TREES
	EVERGREEN TREES PER 100 LF: 5 EA	
	(1.19 * 5) = 6 TREES REQUIRED	6 PROPOSED TREES
	SHRUBS PER 100 LF: 8 EA	
	(1.19 * 8) = <b>10 SHRUBS REQUIRED</b>	10 EXISTING SHRUBS
§ 138-12.301(A)(1)	INTERIOR LANDSCAPING:	
	5% OF PARKING LOT AREA	
	(15,530 SF)X(0.05) = <b>777 SF</b>	1,272 SF
	I TREE PER 150 SF	
	(777 SF / 150 SF) = <b>5 TREES</b>	5 TREES (I EXISTING)
§ 138-12.301(A)(2)	TERMINAL ISLANDS:	
	MIN. 144 SF, 18 FT LONG	
	I TREE PER ISLAND	PROVIDED
§ 138-12.301(A)(3)	INTERIOR ISLANDS:	
	MIN. 160 SF, 8 FT WIDTH	
	I TREE PER ISLAND	PROVIDED
§ 138-12.301(B)(1)	PERIMETER LANDSCAPING:	
	I DECIDUOUS TREE PER 25 LF	
	(18.5 LF /25) = <b>I TREE</b>	I EXISTING TREE
	I ORNAMENTAL TREE PER 35 LF	
	(18.5 LF /35) = <b>I TREE</b>	I EXISTING TREE
§ 138-12.301(B)(2)	PARKING LOT WITHIN 30 FT OF ROW:	
	CONTINUOUS SHRUB HEDGE 30" O.C.	PROVIDED
	RIGHT-OF-WAY LANDSCAPING:	
§ 138-12.304(A)(1)	I DECIDUOUS TREE PER 35 LF	
	(I20 LF / 35 LF)= <b>4 TREES</b>	4 TREES (I EXISTING)
§ 138-12.304(B)	I ORNAMENTAL TREE PER 60 LF	
	(120 LF / 60 LF) = <b>2 TREES</b>	2 PROPOSED TREES

	PROPOSED PLANT SCHEDULE									
DECIDUOUS TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING			
£+3	GIN	6	GINKGO BILOBA `AUTUMN GOLD`	AUTUMN GOLD MAIDENHAIR TREE	2.5" - 3" CAL	B&B	AS SHOWN			
ORNAMENTAL TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING			
	QUE	4	malus X 'Indian Summer'	INDIAN SUMMER CRABAPPLE	2.5" - 3" CAL	B&B	AS SHOWN			
	CER	2	CERCIS CANADENSIS	eastern redbud	2.5" - 3" CAL	B&B	as shown			
EVERGREEN TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING			
	THU	12	THUJA X `GREEN GIANT`	GREEN GIANT ARBORVITAE	8'-10' (2" DBH MINIMUM FOR REPLACEMENT TREES)	B&B	AS SHOWN			
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING			
$\otimes$	ILE	8	ILEX CRENATA 'COMPACTA'	DWARF JAPANESE HOLLY	24" - 30"	B&B	AS SHOWN			
$\odot$	ILEX	16	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	24" - 30"	РОТ	AS SHOWN			

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

⊥ (20" dbh)

### **IRRIGATION NOTES:**

**REMAINING:** 

- I. IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS,
- CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS. 2. ALL LANDSCAPE AREAS MUST BE IRRIGATED. WATERLING WILL ONLY OCCUR
- BETWEEN THE HOURS OF 12:00 AM AND 5:00 AM. 3. IRRIGATION OVERSPRAY SHALL NOT BE BROADCAST ONTO CITY PATHWAYS

### MAINTENANCE NOTES:

- I. LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.
- 2. PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER
- MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE. 3. ALL DEAD, DAMAGED, OR DISEASED PLANT MATERIAL SHALL BE REMOVED IMMEDIATELY AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. FOR PURPOSES OF THIS SECTION, THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH I AND JUNE I AND FROM OCTOBER I UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH I AND JUNE I. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE. THE CITY MAY NOTIFY PROPERTY
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### LANDSCAPING NOTES

LANDSCAPING AREAS.

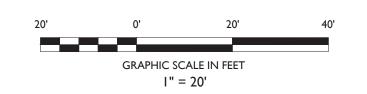
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	REVISED PER CITY SECOND SITE PLAN REVIEW	REVISED PER CITY SITE PLAN REVIEW	SUBMISSION FOR SITE PLAN APPROVAL	REVISED PER FIRE DEPARTMENT COMMENTS	REVISED PER CITY COMMENTS	SUBMISSION FOR PRE-APPLICATION MEETING	DESCRIPTION
	JRC / ECM	JRC / ECM	RAC / ECM	RAC	ECM	JRC	ВҮ
	02/09/2022	12/28/2021	09/08/2021	08/20/2021	08/02/2021	07/08/2021	DATE
	9	2	4	3	2	-	ISSUE
NOT APP	ROVE	FC	R C	ON	STR	UC <sup>-</sup>	TION

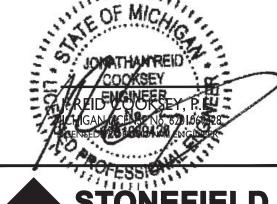
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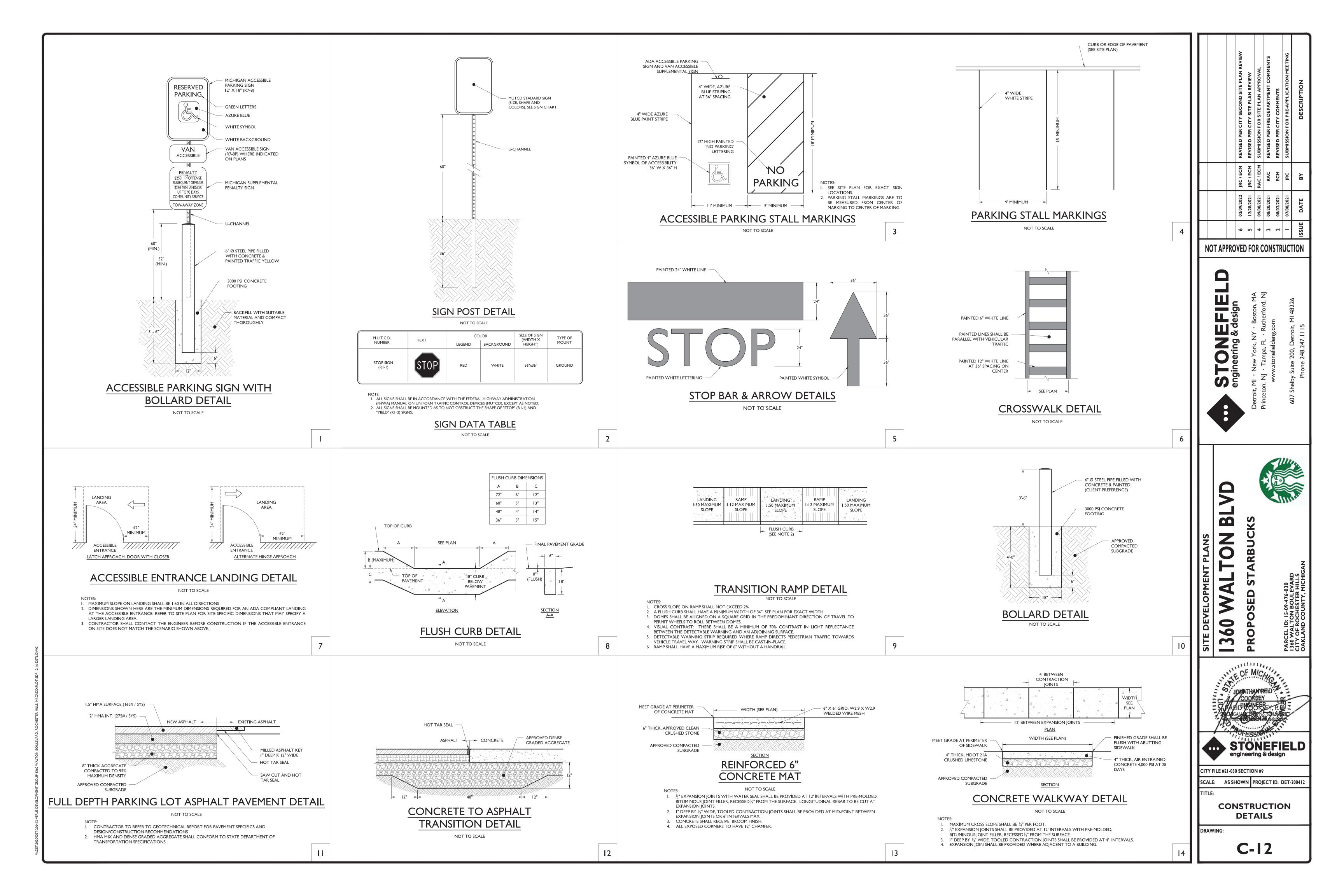
CITY FILE #21-030 SECTION #9

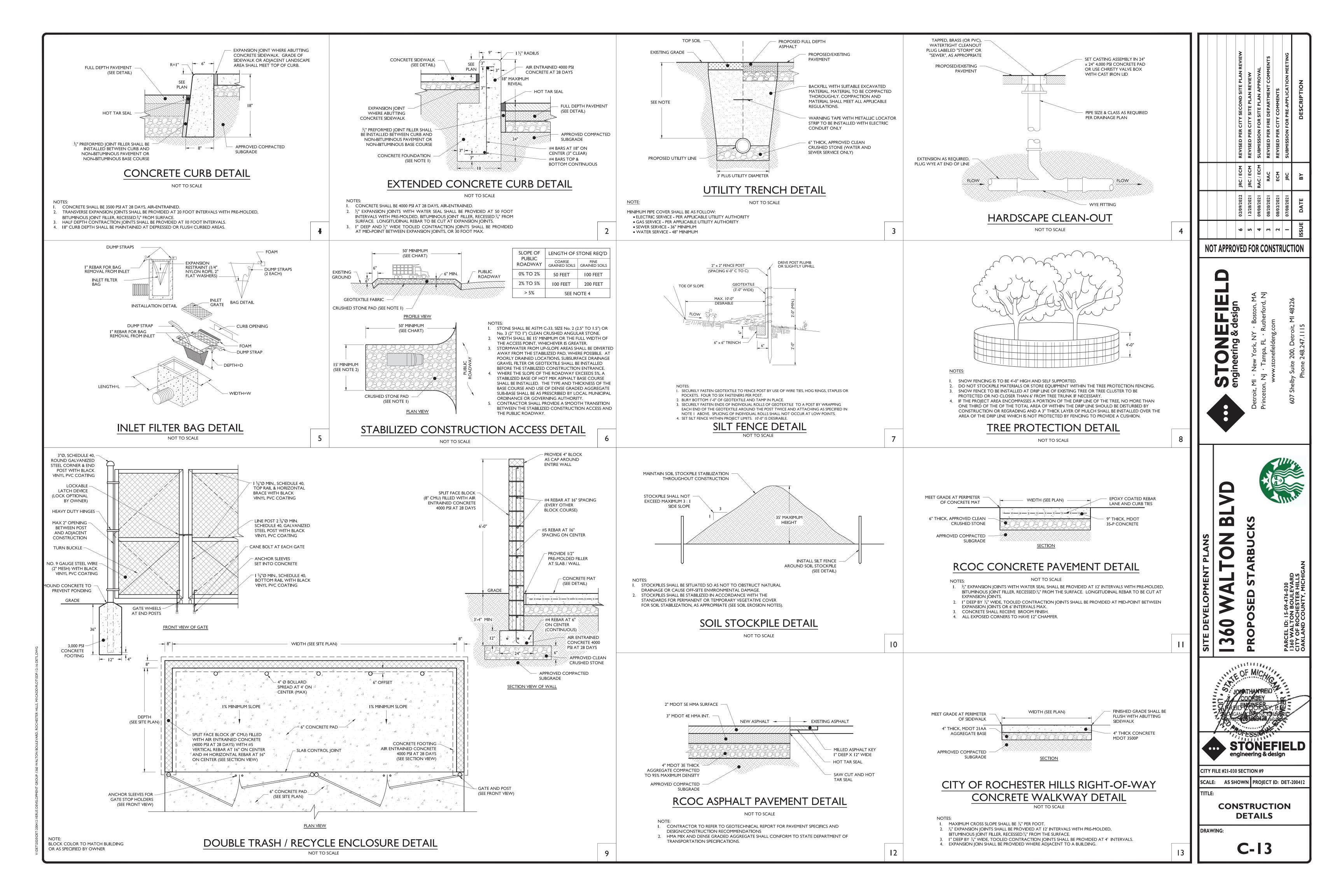
I" = 20' PROJECT ID: DET-200412

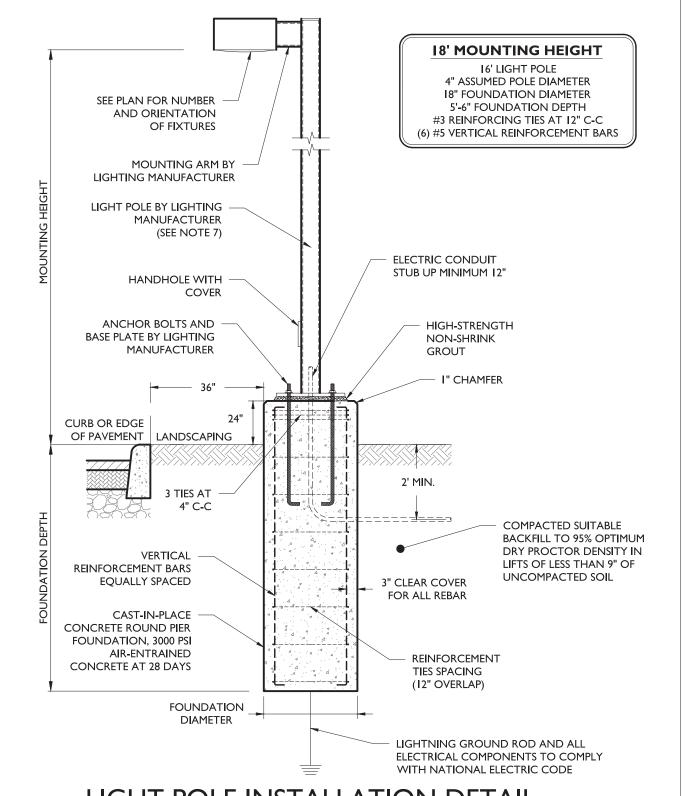
TREE REPLACEMENT

DRAWING:

PLAN



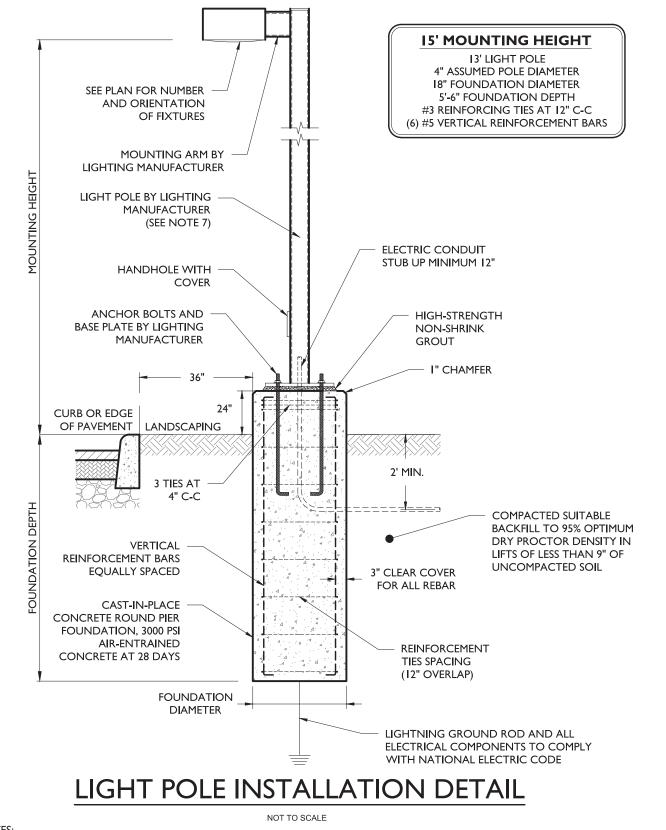




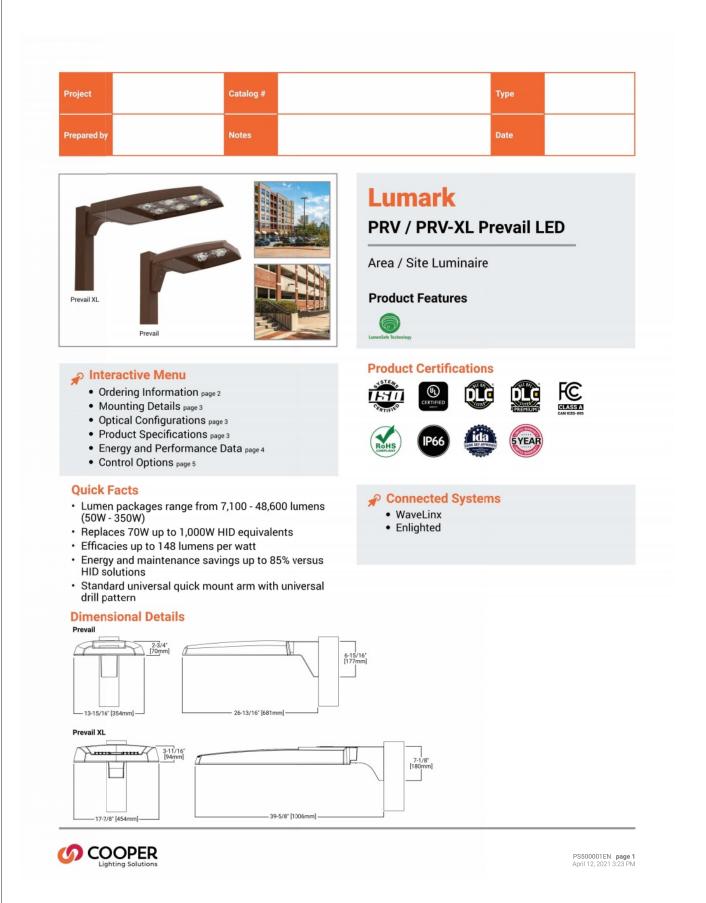
## LIGHT POLE INSTALLATION DETAIL

### NOT TO SCALE NOTES:

- I. MINIMUM SOIL BEARING PRESSURE OF 1500 PSF, SOIL FRICTION ANGLE OF 30 DEGREES, AND SOIL DRY UNIT WEIGHT OF 120 PCF SHALL BE CONFIRMED IN THE FIELD BY A QUALIFIED PROFESSIONAL.
- 2. CAST-IN-PLACE CONCRETE SHALL BE CONSOLIDATED USING VIBRATOR. ALL REBAR TO BE NEW GRADE 60 STEEL.
- PRE-CAST PIERS ACCEPTABLE UPON WRITTEN APPROVAL OF SHOP DRAWING BY ENGINEER. 5. CONCRETE TO BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO INSTALLING LIGHT POLE. POURED CONCRETE MIX
- REOUIRED TO OBTAIN 80% OF DESIGN STRENGTH PRIOR TO INSTALLING LIGHT POLE. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" (WITHIN I" TOLERANCE). POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED
- 8. POUR TO BE TERMINATED AT A FORM.
- WORK SHALL CONFORM TO ACI BEST PRACTICES FOR APPROPRIATE TEMPERATURE AND WEATHER CONDITIONS. 10. CONTRACTOR TO TEMPORARILY SUPPORT ADJACENT SOIL AND STRUCTURES DURING EXCAVATION IF REQUIRED.



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- ALL REBAR TO BE NEW GRADE 60 STEEL PRE-CAST PIERS ACCEPTABLE UPON WRITTEN APPROVAL OF SHOP DRAWING BY ENGINEER.
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### LIGHT FIXTURES 'A-C' SPECIFICATIONS

NOT TO SCALE



### LIGHT FIXTURE 'D' SPECIFICATIONS

water tight pickable

FLOW

Safety Star® Access Pumpout Port

Cover Adapters with

up to 4" of Adjustability

Inlet Diffuser Outlet Diffuser -

-- Ø 24-1/2" TYP --

**TOP VIEW** 

**SECTION A-A** 

- 1. 4" FPT with 4" plain end adapters, single inlet and triple outlet

  2. Unit weight - w/cast iron covers: 376 lbs.;
- w/composite covers: 266 lbs. (For wet weight add 2,310 lbs.) 3. Maximum operating temperature:

**SPECIFICATIONS** 

- 4. Capacities Liquid: 277 gal.; @100 GPM Grease: 1,895 lbs. @200 GPM Grease: 1,196 lbs. Solids: 69 gal.

  5. This unit does not require flow control for 100 GPM applications. Built-in Flow control is provided for 200 GPM applications. For series
- installations, only install flow control on the first unit in the series if necessary. For gravity drainage applications only. o not use for pressure applications. 8. Cover placement allows full access to tank for
- proper maintenance. Vent not required unless per local code.
- 10. Engineered inlet and outlet diffusers are removable to inspect / clean piping.

  11. Integral air relief / Anti-siphon /
- Sampling access.

  12. Adjustable cover adapters provide up to 4" of
- additional height.

  13. Fixed outlet models (-FO) have inlet and
- outlet permanently welded at the factory in the straight-through (B) positions.

  14. Flow rates are based on 2-minute drain time.
- 15. Safety Star®, access restrictor built into each

### cover adapter, prevents accidental entry to tanks (450 lb rating) **DIFFUSION FLOW TECHNOLOGY**

The inlet diffuser reduces turbulence, creates laminar low and allows the entire tank volume to be utilized for efficient grease separation and minimal The inlet diffuser can be attached to any of the three inlets provided to ease job site piping layouts The integral air relief / anti-siphon at the outlet

### unit during operation. The outlet diffuser can easily be attached to any of the three outlets provided to ease job site piping layouts. **ENGINEER SPECIFICATION GUIDE**

Schier Great Basin™ grease interceptor model # GB-250 shall be lifetime guaranteed and made in USA of seamless, rotationally-molded polyethylene Interceptor shall be furnished for above or below grade installation. Interceptor shall be certified to ASME A112.14.3 (Type D for 100 GPM, type C for 200 GPM) and CSA B481.1, with adjustable cover adapters, Safety Star® access restrictor built into each cover adapter, built-in flow control (for 200 GPM only) and three outlet options. Interceptor flow rate shall be 100 or 200 GPM. Interceptor grease capacity shall be 1,895 lbs. @ 100 GPM or 1,196 GPM

### @ 200 GPM. Cover shall provide water/ gas-tight seal and have minimum 16,000 lbs. load capacity CERTIFIED PERFORMANCE

Great Basin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481.1 arease interceptor standards and greatly exceed requirements for grease separation and storage They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

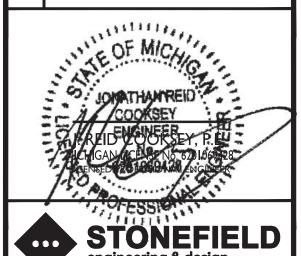
INLET END VIEW Piped in Series A -No. of Removal Efficiency Units in 100 GPM 200GPM Series 96.7% 93.5% 5,685 lbs. 3,588 lbs. 7.580 lbs. 4.790 lbs.

PART #: 4055-001-02 DWG BY: B. Karrer DATE: 8/28/2020 REV © Copyright 2020 Schier Products Compo 500 Woodend Road | Edwardsville, KS 66111 | 913-951-3300 | schierproducts.com

**GB-250 GREASE INTERCEPTOR DETAIL** 

NOT TO SCALE

0 (optional) Integral Air Relief / Anti Siphon and Static 9 Rated Grease Capacities for Units



NOT APPROVED FOR CONSTRUCTIO

engineering & design

CITY FILE #21-030 SECTION #9

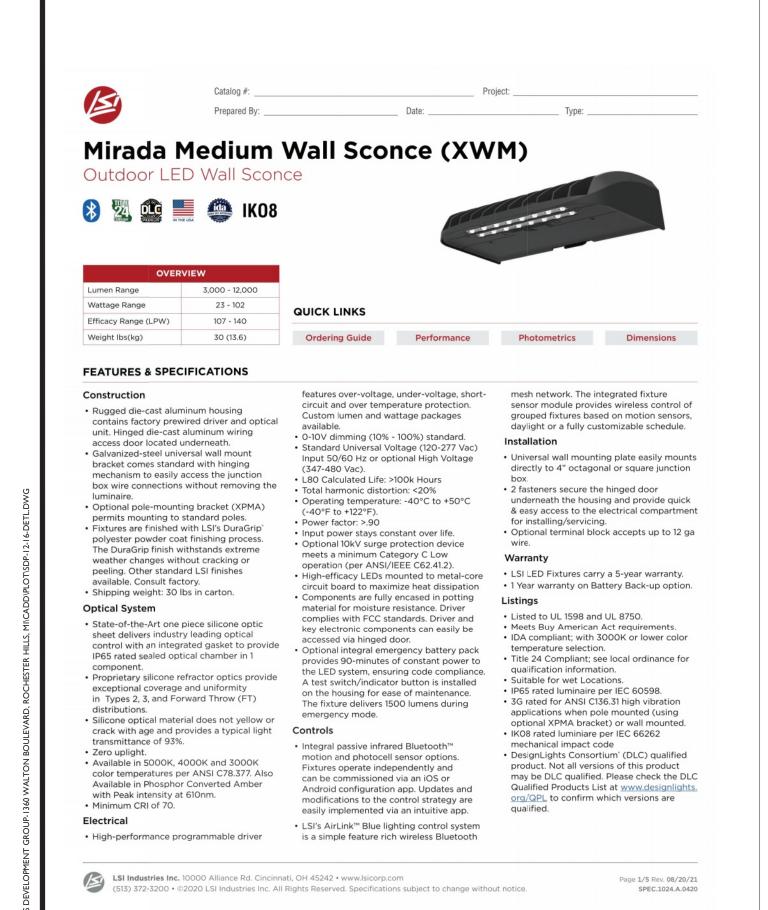
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> **CONSTRUCTION DETAILS**

DRAWING: **C-14** 

page 4 of 4

3,790 lbs. 2,392 lbs.



LIGHT FIXTURES 'E & F' SPECIFICATIONS

NOT TO SCALE

Standard Details: Standard Notes: -1 1/2" HMA, 5E03 1. Maximum grade of 8.33% along pathway [PG 58-22 (Final Grade)] (less than 5% is recommended). 92% to 96% of the Theoretical 2. 1% cross slope (i.e. super elevation) for Maximum Density (TMD) drainage off and away from pathway and -Apply bituminous bond tack graded shoulders (2% maximum cross-slope). coat SS-1H at an application 60' minimum center line radii for pathway rate of 0.10 gallons/sq.yd. horizontal alignment. or adjusted by the engineer Graded 4. Provide a minimum of 3' horizontal clearance Shoulder (Typ.) as conditions warrant and 8' vertical clearance from all fixed 2 1/2" HMA, 4E03 objects and the edge of pathway surface. [PG 58-22 (Final Grade)] Relocation of existing objects (i.e. mail 92% to 96% of the Theoretical boxes, signs, etc.) shall be considered Maximum Density (TMD) incidental work items. Pathway ramps shall be constructed in -4" (CIP) of 21AA aggregate base 5. accordance with MDOT standard detail R-28 (98% Maximum Density) Typical 8' Pathway Section Apply Pramitol 25E Series and shall have a minimum clear -Compacted existing subgrade or equivalent (as opening of 8' wide. (95% Maximum Density) approved by the 6. A clean saw cut joint shall be provided engineer) in wherever new pavement matches existing accordance with pavement (incidental work item). manufacturer's 7. Utility structures shall be adjusted in recommendations Minimum vertical clearance within accordance with the City of Rochester Hills the influence of the pathway standards and shall match the proposed grade of the pathway. 8. Pathway shall be 6 inch thick HMA or concrete through residential drives and 3' minimum horizontal clearance 9 inch thick HMA or 8 inch thick concrete between edge of pathway and all through commercial drives. fixed objects 9. Pathway asphalt shall be paid for as "Shared Use Path, HMA" when part of public improvement project. 10. Ramps and landings shall be 6 inch thick 1% cross slope for drainage — 8' Pathway ——— concrete. off and away from pathway ADA detectable warning plates shall be and graded shoulders. Crosspreformed and brick red in color. Acceptable Graded slope shall not exceed 2%) products included ADA Solutions, Inc., Shoulder Armor-Tile, ej, or approved equal. Typical Pathway and Graded Shoulder Shoulder Drainage Profile

> CITY OF ROCHESTER HILLS PATHWAY **CONSTRUCTION DETAILS**