Recharge and Transition Zone Exception Request Form Checklist

- 1. Edwards Aquifer Application Cover Page (TCEQ-20705)
- 2. General Information Form (TCEQ-0587)
 - Attachment A Road Map

Attachment B - USGS / Edwards Recharge Zone Map

Attachment C - Project Description

3. Geologic Assessment Form (TCEQ-0585)

Justification for Exception Request

4. Recharge and Transition Zone Exception Request Form (TCEQ-0628)

Attachment A - Nature of Exception

Attachment B - Documentation of Equivalent Water Quality Protection (Please see Permanent Stormwater Section (TCEQ-0600))

5. Temporary Stormwater Section (TCEQ-0602)

Attachment A - Spill Response Actions

Attachment B - Potential Sources of Contamination

Attachment C - Sequence of Major Activities

Attachment D - Temporary Best Management Practices and Measures

Attachment E - Request to Temporarily Seal a Feature (if sealing a feature)

Attachment F - Structural Practices

Attachment G - Drainage Area Map

Attachment H - Temporary Sediment Pond(s) Plans and Calculations

Attachment I - Inspection and Maintenance for BMPs

Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

6. Permanent Stormwater Section (TCEQ-0600)

Attachment A - 20% or Less Impervious Cover Waiver, if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site

Attachment B - BMPs for Upgradient Stormwater

Attachment C - BMPs for On-site Stormwater

Attachment D - BMPs for Surface Streams

Attachment E - Request to Seal Features, if sealing a feature

Attachment F - Construction Plans

Attachment G - Inspection, Maintenance, Repair and Retrofit Plan

Attachment H -Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the

Edwards Aquifer Rules: Technical Guidance for BMPs

Attachment I - Measures for Minimizing Surface Stream Contamination

- 7. Agent Authorization Form (TCEQ-0599), if application submitted by agent
- 8. Fee Application Form (TCEQ-0574)
- 9. Check Payable to the "Texas Commission on Environmental Quality"
- 10. Core Data Form (TCEQ-10400)

Texas Commission on Environmental Quality Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with <u>30 TAC 213</u>.

Administrative Review

1. <u>Edwards Aquifer applications</u> must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <u>http://www.tceq.texas.gov/field/eapp</u>.

- 2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
- 3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
- 4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

- 5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
- 6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

- 1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
- 2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

- 3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
- 4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: SAINT MARY ROMANIAN ORTHODOX CHURCH					2. Regulated Entity No.: N/A				
3. Customer Name: SAINT MARY ROMANIAN ORTHODOX CHURCH				4. Customer No.: N/A					
5. Project Type: (Please circle/check one)	New		Modification		Extension		Exception X		
6. Plan Type: (Please circle/check one)	WPAP	CZP	SC S	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential Non-residential		ential	X 8. Site (acres):		e (acres):	0.56		
9. Application Fee:	\$500		10. Permanent BMP(s):			P(s):	N/A		
11. SCS (Linear Ft.):	N/A	12. AST/UST (No. Tanks):		No.		N/A			
13. County:	Williamson		14. Watershed:			South Brushy Creek			

Application Distribution

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Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region					
County:	Hays	Travis	Williamson		
Original (1 req.)					
Region (1 req.)			_		
County(ies)					
Groundwater Conservation District(s)	Edwards Aquifer Authority Barton Springs/ Edwards Aquifer Hays Trinity Plum Creek	Barton Springs/ Edwards Aquifer	NA		
City(ies) Jurisdiction	Austin Buda Dripping Springs Kyle Mountain City San Marcos Wimberley Woodcreek	Austin Bee Cave Pflugerville Rollingwood Round Rock Sunset Valley West Lake Hills	Austin _ X _Cedar Park Florence Georgetown Jerrell Leander Liberty Hill Pflugerville Round Rock		

	S	an Antonio Region			
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)					
Region (1 req.)					
County(ies)					
Groundwater Conservation District(s)	Edwards Aquifer Authority Trinity-Glen Rose	Edwards Aquifer Authority	Kinney	EAA Medina	EAA Uvalde
City(ies) Jurisdiction	Castle Hills Fair Oaks Ranch Helotes Hill Country Village Hollywood Park San Antonio (SAWS)	Bulverde Fair Oaks Ranch Garden Ridge New Braunfels Schertz	NA	San Antonio ETJ (SAWS)	NA

Austin Dogion

Shavano Park

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Glenn Campbell

Print Name of Customer/Authorized Agent

4/28/23

Signature of Customer/Authorized Agent

Date

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed: Date Administratively Complete:				ete:
Received From:	Co	Correct Number of Copies:		
Received By: Distribution Date:				
EAPP File Number:	Co	mplex		
Admin. Review(s) (No.):	No	No. AR Rounds:		
Delinquent Fees (Y/N):	Re	Review Time Spent:		
Lat./Long. Verified:	SC	SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):	Fe	e	Payable to TCEQ (Y	/N):
Core Data Form Complete (Y/N):		Check: Signed (Y/N):		
Core Data Form Incomplete Nos.:		Less than 90 days old (Y/N):		ld (Y/N):

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Glenn Campbell

Date: 4/28/23

Signature of Customer/Agent:

Shen W. Caylu

Project Information

- 1. Regulated Entity Name: SAINT MARY ROMANIAN ORTHODOX CHURCH
- 2. County: Williamson
- 3. Stream Basin: Brazos River
- 4. Groundwater Conservation District (If applicable): _____
- 5. Edwards Aquifer Zone:

\times	Recharge Zone
	Transition Zone

6. Plan Type:

WPAP
SCS
Modification

☐ AST ☐ UST ∑ Exception Request

TCEQ-0587 (Rev. 02-11-15)

7. Customer (Applicant):

Contact Person: Mirela Ivan Glass Entity: Saint Mary Romanian Orthodox Church Mailing Address: 200 Monaco Dr City, State: Cedar Park, TX Zip: 78613 Telephone: 512.299.0404 Email Address: church@saintmaryaustin.org

FAX: <u>N/A</u>

8. Agent/Representative (If any):

Contact Person: <u>Glenn Cambell</u>			
Entity: <u>GWC Engineering LP</u>			
Mailing Address: <u>5999 Summerside Dr. Suite 200</u>			
City, State: <u>Dallas TX</u>	Zip: <u>75252</u>		
Telephone: <u>(972)490-2224</u>	FAX:		
Email Address: glenn.campbell@gwcengineering.com			

9. Project Location:

The project site is located inside the city limits of Cedar Park.

The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of .

The project site is not located within any city's limits or ETJ.

10. \times The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

200 Monaco Dr, Cedar Park, TX 78613

- 11. Attachment A Road Map. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.
- 12. Attachment B USGS / Edwards Recharge Zone Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

Project site boundaries.

🔀 USGS Quadrangle Name(s).

Boundaries of the Recharge Zone (and Transition Zone, if applicable).

Drainage path from the project site to the boundary of the Recharge Zone.

13. 🖂 The TCEQ must be able to inspect the project site or the application will be returned. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

Survey staking will be completed by this date:

- 14. Attachment C Project Description. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:
- Area of the site
 Offsite areas
 Impervious cover
 Permanent BMP(s)
 Proposed site use
 Site history
 Previous development
 Area(s) to be demolished
 15. Existing project site conditions are noted below:
 - Existing commercial site
 Existing industrial site
 Existing residential site
 Existing paved and/or unpaved roads
 Undeveloped (Cleared)
 Undeveloped (Undisturbed/Uncleared)
 Other: _____

Prohibited Activities

- 16. I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:
 - (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
 - (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
 - (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
 - (4) The use of sewage holding tanks as parts of organized collection systems; and
 - (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
 - (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.
- 17. I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:
 - (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
 - (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

- 18. The fee for the plan(s) is based on:
 - For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
 - For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
 - For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
 - A request for an exception to any substantive portion of the regulations related to the protection of water quality.
 - A request for an extension to a previously approved plan.
- 19. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

 Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
 San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

- 20. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 21. No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

Recharge and Transition Zone Exception Request Form

Texas Commission on Environmental Quality

30 TAC §213.9 Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Recharge and Transition Zone Exception Request Form** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: <u>Glenn Campbell</u> Date: <u>4/28/23</u> Signature of Customer/Agent:

Ghen W. Caybul

Regulated Entity Name: SAINT MARY ROMANIAN ORTHODOX CHURCH

Exception Request

- 1. Attachment A Nature of Exception. A narrative description of the nature of each exception requested is attached. All provisions of 30 TAC §213 Subchapter A for which an exception is being requested have been identified in the description.
- 2. Attachment B Documentation of Equivalent Water Quality Protection. Documentation demonstrating equivalent water quality protection for the Edwards Aquifer is attached.

Administrative Information

- 3. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 4. The applicant understands that no exception will be granted for a prohibited activity in Chapter 213.
- 5. The applicant understands that prior approval under this section must be obtained from the executive director for the exception to be authorized.

Request for an Exception to a Geologic Assessment Form TCEQ-0585

The entire site is currently developed with existing building, sidewalk, and driveway/parking spaces. An Exception to a Geologic Assessment is requested due to pre-existing site conditions and pre-development of the site.

Recharge and Transition Zone Exception Request Form

Texas Commission on Environmental Quality

30 TAC §213.9 Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature 2. f-0587_general_info_form

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Recharge and Transition Zone Exception Request Form** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: <u>Glenn Campbell</u> Date: <u>4/28/23</u> Signature of Customer/Agent:

Chem W. Caylul

Regulated Entity Name: N/A

Exception Request

- 1. Attachment A Nature of Exception. A narrative description of the nature of each exception requested is attached. All provisions of 30 TAC §213 Subchapter A for which an exception is being requested have been identified in the description.
- 2. X Attachment B Documentation of Equivalent Water Quality Protection. Documentation demonstrating equivalent water quality protection for the Edwards Aquifer is attached.

Administrative Information

- 3. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 4. The applicant understands that no exception will be granted for a prohibited activity in Chapter 213.
- 5. The applicant understands that prior approval under this section must be obtained from the executive director for the exception to be authorized.

Exception Request

Attachment A – Nature of Exception

The proposed Saint Mary Orthodox Church development requests an Exception from the permanent BMP.

The site is currently developed with one building, sidewalk, and driveway. The proposed non-residential project includes the demolition of the existing building and construction of a new building, which includes a church and an event area, with associated parking spaces and utilities.

A rainwater harvesting system is proposed at the site, which will collect the stormwater runoff from 6,296 square feet of rooftops. The remaining net increase in the impervious cover area will be approximately 0.16 acres. Self-treating permeable pavers will be used for the parking lot construction for an area of 0.22 acres.

The exception is being requested due to the minimal net increase in the impervious cover, and the equivalent water quality protection provided by the self-treating permeable pavers.

Exception Request Attachment B – Documentation of Equivalent Water Quality Protection

"Roof areas connected to a rainfall harvesting system do not need to be included, but the volume of the rainfall collection system must be sufficient to retain the runoff from a 1.5-inch rainfall and the system should be managed so that it is emptied at least weekly to provide storage for subsequent storms." – Complying with the Edwards Aquifer Rules Technical Guidance on Best Management Practices – RG-348; Section 3.3.2.

Calculations for the volume of the rainfall collection system are provided in Attachment C of the Permanent Stormwater Section.

Permeable pavers meeting the design criteria required by Section 3.4.19 of the RG-348 Addendum will be installed to treat the remaining of the 0.16-acres on impervious cover.

Design calculations and pavers details are also provided in Attachment C of the Permanent Stormwater Section.

Calculations for the volume of the rainfall collection system

Proposed Roof Area of the new Church= 6,296 sfRoof Area of Existing Church= 1,835 sfProposed Design Roof Surface area for Storage Tank= 6,296 sf - 1,835 sf = 4,461 sfProposed Design Volume of Storage Tank = 4,461 sf x $1\frac{1}{2}$ "/12= 558 cfVolume of Proposed 8 ft wide x 12 ft long x 6 ft high Storage Tank= 576 cfAnd 576 cf > 558 cf, so OK.= 576 cf

Design Calculations for Permeable Paver/4" Gravel Underground Storage

Proposed Parking/Drive Area w/ Permeable Pavers = 9,335 sfProposed (Water) Volume of 4" thick layer of gravel = 9,335 sf x 4"/12 x 40% = 1,232 cfVolume of Storage Required for 100-year storm = 645 cfAnd 1,232 cf > 645 cf, so OK

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Glenn Campbell

Date: 4/27/23

Signature of Customer/Agent:

Shen W. Cayler

Regulated Entity Name: SAINT MARY ROMANIAN ORTHODOX CHURCH

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

The following fuels and/or hazardous substances will be stored on the site: <u>N/A</u>

These fuels and/or hazardous substances will be stored in:

Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

- Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- Fuels and hazardous substances will not be stored on the site.
- 2. Attachment A Spill Response Actions. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. Attachment B Potential Sources of Contamination. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. Attachment C - Sequence of Major Activities. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: <u>N/A</u>

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

7. X Attachment D – Temporary Best Management Practices and Measures. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

 A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
 Attachment E - Request to Temporarily Seal a Feature. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature. There will be no temporary sealing of naturally-occurring sensitive features on the site.
Attachment F - Structural Practices. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
Attachment G - Drainage Area Map. A drainage area map supporting the following requirements is attached:
 For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided. For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used. For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area. There are no areas greater than 10 acres within a common drainage area that will be used in combination with other erosion and sediment controls within each disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed at one time.

There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

- 11. Attachment H Temporary Sediment Pond(s) Plans and Calculations. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
 - 🛛 N/A
- 12. Attachment I Inspection and Maintenance for BMPs. A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
- 13. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
- 14. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
- 15. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
- 16. 🖂 Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices. A schedule of the interim and permanent soil stabilization practices for the site is attached.

- 18. Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 19. Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

- 20. \square All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

Temporary BMP design criteria, maintenance requirements, and standard details - at Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices - Texas Commission on Environmental Quality - www.tceq.texas.gov Chapter 1, Pg 01-63 for construction entrance; pg. 1-66 for silt fence; and pg. 1-124 for concrete washout area (if needed).

Temporary Stormwater Section ATTACHMENT A

Spill Response Actions:

- 1. Contain the spill.
- 2. Immediately stake off area.
- 3. Notify Hazardous Material team (if necessary); notify TCEQ at (512) 339-2929 or Emergency line at 1-800-832-8224
- 4. Take necessary steps to clean up, i.e. notify remediation contractor if large spill, or small spills will be cleaned by the construction contractor. All site personnel will be made aware of the manufactures' recommended methods for spill cleanup, and the location of the information and cleanup supplies. Materials and equipment necessary for spill cleanup will be kept onsite in an accessible location known to site personnel.

All Spills will be cleaned up immediately upon discovery. Any spill of hydrocarbons or hazardous substances greater than 25 gallons will require notification to the fire Department Hazardous Materials Team and TCEQ. As with all spills, an effort shall be made to prevent material from entering surface streams and storm drains by using rock or earth berms to contain the material.

Spill Prevention and Control

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees. The following steps will help reduce the stormwater impacts of leaks and spills:

Education

- Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.
- 2. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- 3. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

- 4. Establish a continuing education program to indoctrinate new employees.
- 5. Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

- 1. To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- 2. Store hazardous materials and wastes in covered containers and protect from vandalism.
- 3. Place a stockpile of spill cleanup materials where it will be readily accessible.
- 4. Train employees in spill prevention and cleanup.
- 5. Designate responsible individuals to oversee and enforce control measures.
- 6. Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean-up activities.
- 7. Do not bury or wash spills with water.
- 8. Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- 9. Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
- 10. Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- 11. Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- 12. Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- 1. Clean up leaks and spills immediately.
- 2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
- 3. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

- 1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- 2. Use absorbent materials on small spills rather than hosing down or burying the spill.
- 3. Absorbent materials should be promptly removed and disposed of properly.

- 4. Follow the practice below for a minor spill.
 - a. Contain the spread of the spill.
 - b. Recover spilled materials.
 - c. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities. Spills should be cleaned up immediately:

- 1. Contain spread of the spill.
- 2. Notify the project foreman immediately
- 3. If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
- 4. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- 5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

- Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
- 2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
- 3. Notification should first be made by telephone and followed up with a written report.
- 4. The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
- 5. Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.More information on spill rules and appropriate responses is available on the TCEQ website at: https://www.tceq.texas.gov/response/spills

Vehicle and Equipment Maintenance

- 1. If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the run on of stormwater and the runoff of spills.
- 2. Regularly inspect onsite vehicles and equipment for leaks and repair immediately
- 3. Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

- 4. Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- 5. Place drip pans or absorbent materials under paving equipment when not in use.
- 6. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- 7. Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- 8. Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- 9. Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- 1. If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- 2. Discourage "topping off" of fuel tanks.
- 3. Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Temporary Stormwater Section ATTACHMENT B - Potential Sources of Contamination:

Gasoline, Diesel, and Hydraulic Fluid from construction equipment, Construction Materials, Trash and Debris, Sediment. All materials shall be hauled in a manner consistent with the manufacturer's recommendations. Disposal of waste material shall be in conformance with all state and local laws.

Temporary Stormwater Section ATTACHMENT C - Sequence of Major Activities

- 1. Install and maintain Erosion Control and Tree Protection per the Approved Plans and specifications prior to any clearing and grubbing, grading, excavating, etc.
- Prior to beginning construction, the owner or his representative shall hold a Pre-Construction Conference between TCEQ, Williamson County, Contractor, and any other affected parties. Notify TCEQ at least 48 hours prior to the time of the conference and 48 hours prior to beginning construction. Prior to Pre-Construction Conference.
- 3. Hold Pre-Construction Conference with contractor, TCEQ, EV Inspector, Engineer, and owner or his representative.
- 4. Rough grade (Estimate of disturbed area = 0.56 ac)
- 5. Install all dry and wet utilities (Estimate of disturbed area = 0.56)
- 6. Building Construction (Estimate of disturbed area = 0.56)
- 7. Install curb and gutter. (Estimate of disturbed area = 0.22 ac)
- 8. Place concrete sidewalk. (Estimate of disturbed area = 0.22 ac)
- 9. Lay permeable pavers (Estimate of disturbed area = 0.22)
- 10. Clean site and revegetate all disturbed area according to the plans and specifications. Stabilization measures should include seeding and/or mulching.
- 11. Complete permanent erosion control and restoration of site vegetation.
- 12. Project Engineer to provide a written concurrence letter, and scheduling final inspection with EV Inspector, prior to the removal of erosion controls.
- 13. Remove and dispose of temporary erosion/sedimentation control measures.
- 14. Complete any necessary final dress up of areas disturbed by Item 13.
- 15. Conduct a final inspection and complete all punch list items.

Temporary Stormwater Section ATTACHMENT D - Temporary Best Management Practices and Measures

Install temporary erosion control measures, stabilized construction entrance, concrete washout area, and tree protection according to the plans and specifications prior to any clearing and grubbing, grading, excavating, etc. Upgradient stormwaters during construction crossing disturbed areas will be filtered utilizing standard Best Management Practices, such as erosion logs and silt fences, prior to leaving the site. The silt fences will be placed along down gradient areas of the site to prevent any sediment from entering storm sewers or surface streams.

Temporary Stormwater Section ATTACHMENT F - Structural Practices:

Structural erosion control and pollution prevention practices shall be implemented to limit runoff discharge of pollutants from exposed soils. The structural practices utilized include:

Silt Fence

Barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site.

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- 2. Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding 140.
- 3. Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

Fiber Rolls

Placed at the toe and on the face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff.

- 1. Core material: Core material should be biodegradable or recyclable. Material may be compost, mulch, aspen wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or similar materials.
- 2. Containment Mesh: Containment mesh should be 100% biodegradable, photodegradable or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or similar material. When the fiber role will remain in place as part of a vegetative system use biodegradable or photodegradable mesh. For temporary installation recyclable mesh is recommended.

Stabilized Construction Entrance

Stabilized pad of crushed stone located at any point traffic will be entering or leaving the construction site from a public right-of-way, street, alley, sidewalk or parking area.

- 1. The aggregate should consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan.
- 2. The aggregate should be placed with a minimum thickness of 8 inches.
- The geotextile fabric should be designed specifically for use as a soil filtration media with an approximate weight of 6 oz/yd2, a mullen burst rating of 140 lb/in 2, and an equivalent opening size greater than a number 50 sieve.
- 4. If a washing facility is required, a level area with a minimum of 4 inch diameter washed stone or commercial rack should be included in the plans. Divert wastewater to asediment trap or basin.

Concrete Washout

Prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout offsite, performing washout in a designated area, and training employees and subcontractors.

1. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

Temporary Stormwater Section ATTACHMENT G - Drainage Area Map:

An overall drainage area map is included within the plan set submitted with this application.

Temporary Stormwater Section ATTACHMENT H Temporary Sediment Pond

N/A

Temporary Stormwater Section

ATTACHMENT I - Inspection and Maintenance for Best Management Practices

The Best Management Practices installed during construction will be maintained in accordance with the requirements of the EPA's NPDES/TPDES storm water pollution prevention program (SWPPP). The following maintenance procedures shall be followed until permanent stabilization is complete.

Silt Fence

a. Inspect weekly or after each rainfall event and repair or replacement shall be made promptly as needed.

b. Silt Fence shall be removed when the site is completely stabilized so as to not block or impede storm flow or drainage.

c. Accumulated silt shall be removed when it reaches a depth of 6 inches. The Silt shall be disposed of on an approved site and in such a manner that will not contribute to additional siltation.

Fiber Rolls

a. Inspect prior to forecast rain, daily during extended rain events, after rain events, and weekly.

b. Repair of replace split, torn, unraveling, or slumping fiber rolls.

c. If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flows, sediment that accumulates behind the role shall be periodically removed tin order to maintain its effectiveness. Sediment shall be removed when the accumulation reaches one-half the designated sediment storage depth, usually one-half the distance between the top of the fiber roll and the adjacent ground surface. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed of at an appropriate location.

Stabilized Construction Entrance

a. The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto a public roadway. This may require periodic top dressing with additional stone as conditions demand, as well as repair and clean out of any devices used to trap sediment.

b. Entrance must be properly graded to incorporate a drain swale or similar measure to prevent

runoff from leaving the construction site.

Concrete Washout

a. Inspection shall be made daily or after each rainfall event to check for leaks, identify any plastic linings and sidewalls which have been damaged by construction activities.
b. When the washout container is filled over 75 % of its capacity, the washwater should be vacuumed off or allowed to evaporate to avoid overflows. When the remaining cementitious solids have hardened, they should be removed and recycled.
c. Damages to the container should be repaired promptly and as needed.

d. Before heavy rains, the washout containers liquid level should be lowered or the container should be covered to avoid an overflow during the rain event. The owner shall hire an E&S compliance company to inspect E&S measures and keep reports of onsite inspections with deficiencies and solutions.

Temporary Stormwater Section ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization Practices:

Soil Stabilization for all disturbed areas shall be accomplished by vegetation planting. Following is an outline to accomplish the required stabilization.

1. Preparing Seed Bed.

After the designated areas have been rough graded to the grades indicated in the engineering drawings or as provided for in other items of this contract and for any other soil area disturbed by the construction, a suitable seedbed shall be prepared. The seedbed shall consist of a minimum of either 4 inches (100 millimeters) of approved topsoil or 4 inches (100 millimeters) of approved salvaged topsoil, cultivated and rolled sufficiently to enhance the soil to a state of good health, when the soil particles on the surface are small enough and lie closely enough together to prevent the seed from being covered too deeply for optimum germination. Water shall be gently applied as required to prepare the seedbed prior to the planting operation either by broadcast seeding or hydraulic planting. Bare soils should be seeded or otherwise stabilized within 14 calendar days after final grading or where construction activity has temporarily ceased for more than 21 days. Seeding shall be performed in accordance with the requirements hereinafter described.

2. Watering.

Broadcast seeded areas shall immediately be watered as needed and in the manner and quantity as directed by the Engineer or designated representative. Hydraulic seeded areas and native grass seeded areas shall be watered as needed to keep the seedbed in a wet condition favorable for the growth of grass. Watering applications shall constantly maintain the seedbed in a wet condition favorable for the growth of grass. Watering shall continue until the grass is uniformly 1 1/2 inches (40 mm) in height and accepted by the Engineer or designated representative. Watering can be postponed immediately after a 1/2 inch (12.5 mm) or greater rainfall on the site but shall be resumed before the soil dries out.

3. Mulching

Mulch will be spread in a ground layer of chipped wood or brush to protect disturbed and unstable topsoil against erosion by storm water runoff by slowing run-off velocities, promoting sediment deposition, filtering sediment, and promoting increased ground infiltration rates. Mulching also provides the added benefits of reducing soil water loss, which is beneficial when attempting to establish newly planted vegetation. Applied in thicker layers and the size of mulch chips, mulching can also be used to prevent erosion on areas of steeper slope.

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Glenn Campbell

Date: <u>4/28/23</u>

Signature of Customer/Agent

Ghen W. Cayler

Regulated Entity Name: SAINT MARY ROMANIAN ORTHODOX CHURCH

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

1. Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.



2. These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

] The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____

🖂 N/A

3. Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

🖂 N/A

- 4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.
 - The site will be used for low density single-family residential development and has 20% or less impervious cover.
 - The site will be used for low density single-family residential development but has more than 20% impervious cover.
 - The site will not be used for low density single-family residential development.
- 5. The executive director may waive the requirement for other permanent BMPs for multifamily residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.
 - Attachment A 20% or Less Impervious Cover Waiver. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
 - The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
 - The site will not be used for multi-family residential developments, schools, or small business sites.
- 6. Attachment B BMPs for Upgradient Stormwater.

		 A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached. No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached. Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.
7.	\boxtimes	Attachment C - BMPs for On-site Stormwater.
		 A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached. Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.
8.		Attachment D - BMPs for Surface Streams. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.
	\boxtimes	N/A
9.		The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.
		 The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed. Attachment E - Request to Seal Features. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.
10.		Attachment F - Construction Plans. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:
		 Design calculations (TSS removal calculations) TCEQ construction notes All geologic features All proposed structural BMP(s) plans and specifications
	\boxtimes	N/A

11. Attachment G - Inspection, Maintenance, Repair and Retrofit Plan. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs an measures is attached. The plan includes all of the following:	d
 Prepared and certified by the engineer designing the permanent BMPs and measures Signed by the owner or responsible party Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit A discussion of record keeping procedures 	
□ N/A	
12. Attachment H - Pilot-Scale Field Testing Plan. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.	
⊠ N/A	
13. Attachment I -Measures for Minimizing Surface Stream Contamination. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.	

N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

🛛 N/A

15. A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

🖂 N/A

Attachment C - BMPs On-site Stormwater

BMP's proposed on site include rain water harvesting and permeable pavers. Pollution generated from flows onsite are treated at or above the required amount of pollution removal requirements for the site with the combination of these BMP's.

The total site area is 0.56 acre, with an existing impervious cover of 0.11 acres, The proposed impervious cover area for the project is 0.41 acres, out of which 0.14 acres are represented by rooftops.

The annual pollutant load is the product of the annual runoff volume and the average TSS concentration associated with a particular land use. The calculations will assume that the TSS load of landscaped areas within the development will be the same as those areas in the undeveloped condition. Consequently, the increase in TSS load will be solely a function of the net increase in impervious cover at the site.

The rooftop areas that are part of the rainwater harvesting system are excluded from the impervious cover area used for the purpose of TSS load reduction and BMP sizing, resulting in a net increase in the impervious cover of 0.16 acres.

Rainwater Harvesting (*please see RG.348 Chapter 3, Section 3.2.2 on pg 3-6 and* Section 3.3.2 on pg 3-27) Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices -Texas Commission on Environmental Quality - www.tceq.texas.gov

Stormwater retention practices are characterized by the capture and disposal of runoff without direct release of captured flow to receiving streams. Retention practices exhibit excellent pollutant removal but can be design and maintenance intensive. Collection of roof runoff for subsequent use (rainwater harvesting) also qualifies as a retention practice, but should be operated and sized to provide adequate capture volume. This technology, which emphasizes beneficial use of stormwater runoff, is particularly appropriate for the Edwards Aquifer area.

Roof areas connected to a rainfall harvesting system do not need to be included, but the volume of the rainfall collection system must be sufficient to retain the runoff from a 1.5-inch rainfall and the system shall be managed so that it is emptied at least weekly to provide storage for subsequent storms.

Provide tank volume calculations, indicate the tank size, and show tank location on site layout plan.

The TSS Removal Calculations spreadsheet for retention/irrigation can be attached for tank volume and irrigation area size <u>Calculation Spreadsheet: TSS Removal - Texas</u> Commission on Environmental Quality - www.tceq.texas.gov <u>Permeable Pavers</u> (*please see RG.348 Addendum, Section 3.4.19 on pg 54 of 81*) Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices -Texas Commission on Environmental Quality - www.tceq.texas.gov

Permeable pavers are constructed of relatively impermeable concrete so the infiltration of rainfall is dependent on the joint size and the type of material used to fill the paver joints. Paver joints should have a nominal width of approximately ¼". What makes this configuration appropriate for stormwater management is use of ASTM No. 8 or 9 aggregate in the openings and as a bedding course. On the recharge zone these pavements must be underlain with an impermeable liner and installed with an underdrain system to collect the filtered runoff for surface discharge. <u>Only rainfall that falls directly on the pavement may be treated; consequently, runoff from other portions of the site must be directed away from the permeable pavers.</u>

Additional design criteria can be added (pg 55-56 of 81). Provide storage capacity calculations, liner's characteristics and show the pavers' location on the site layout plan. Also, include the standard detail (Fig. 7) to the plans.

<u> Attachment G – Inspection, Maintenance, Repair and Retrofit Plan</u>

Permeable Pavers (please see RG.348 Addendum, Section 3.5.23 on pg 57 of 81)

The primary threat to the performance of permeable paver systems is clogging. The largest clogging threats to the system occur during construction and from landscaping. During construction, contractors may use pavement areas to store materials such as sand, gravel, soil, or landscape materials containing fines. The owner or supervising contractor must require all contractors to protect the pavement using heavy visqueen or plywood under these materials. The same materials are to be covered in order to prevent blowing and or washing away of such materials during wind and or rain events.

It is recommended that protection of the permeable paver system be discussed at the project pre-construction meeting and be reinforced during interim construction. During construction and post construction of the permeable paver pavement, it is suggested that signs be posted in landscape areas and at entrances to the property as reminders of an ecologically sensitive pavement structure and that certain guidelines be adhered to including:

Dirt, sand, gravel, or landscape material must not be piled without first covering the pavement with a durable cover to protect the integrity of the pervious surface;
all landscape cover must be graded to prevent washing and/or floating of such materials onto or through the pervious surface; and

• all chemical spills (including petrochemicals, hydrocarbons, pesticides, and herbicides) should be reported to the owner so the owner can prevent uncontrolled migration. Chemical migration control may require flushing, or the introduction of microbiological organisms to neutralize any impacts to the soil or water.

Permeable paver pavements should be swept at least twice yearly to remove fine particles that has accumulated in the joints and reduced their permeability. Other periodic maintenance such as replacing cracked or worn pavers, minor settlement repairs, etc., assists in extending the service life of the pavement. Permeability testing of the pavement system should occur at least every three years to determine whether the pavement has become clogged. The test should be conducted with a double ring infiltrometer in one representative location for each 2000 ft2 of pavement. A minimum infiltration rate of five inches/hour is required. If the joints in the permeable pavers become clogged, the joint's aggregate and clogged materials can be vacuumed clean (removed) by a utility vacuum truck. The joint's aggregate and clogged materials are then replaced by spreading and vibrating new aggregate into the joints thereby restoring the permeability of the permeable paver system. All waste, including the removed materials, must be disposed of in accordance with local, state, and federal laws and regulations.

Acknowledged by: <u>Glenn W. Campbell, PE (applicant name</u>)

Ghen W. Carpler (applicant signature)

The above Inspection, Maintenance, Repair, and Retrofit Plan has been prepared by the undersigned Engineer, and I hereby certify that the above Plan meets the minimum requirements of the TCEQ Technical Guidance on Best Management Practices, RG-348.

Date:

PE seal and signature :

04/28/2023



Agent Authorization Form For Required Signature Edwards Aquifer Protection Program Relating to 30 TAC Chapter 213 Effective June 1, 1999

1	Mirela Ivan Glass
	Print Name
	Board President
	Title - Owner/President/Other
of	Saint Mary Romanian Orthodox Church
	Corporation/Partnership/Entity Name
have authorize	ed Glenn Cambell
nave dation_	Print Name of Agent/Engineer
of	GWC Engineering, LP
	Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

- 1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
- For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
- 3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
- 4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
- 5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

blen pplicant's Signature

5/22/23

Date

THE STATE OF TEXAS §

County of TRAVIS §

BEFORE ME, the undersigned authority, on this day personally appeared $\underline{M_1 (e)}_{1}$ $\underline{$

My Commission Eveling	fice on this D day of May , 2023 HAMINT + Mine NOTARY PUBLIC MAGUY T AMINE Typed or Printed Name of Notary
	MY COMMISSION EXPIRES: DS 01 2025

Application Fee Form

Texas Commission on Environmental Quality Name of Proposed Regulated Entity: N/A Regulated Entity Location: N/A Name of Customer: Saint Mary Romanian Orthodox Church Contact Person: Glenn Campbell Phone: 972.490.2224 Customer Reference Number (if issued):CN N/A Regulated Entity Reference Number (if issued):RN N/A Austin Regional Office (3373)									
Hays	Travis	🖂 Wil	liamson						
San Antonio Regional Office (336	2)								
🗌 Bexar	Medina	🗌 Uva	lde						
Comal	Kinney								
Application fees must be paid by o	check, certified check, o	r money order, payable	e to the Texas						
Commission on Environmental Q									
form must be submitted with you	ir fee payment . This pa	nyment is being submit	ted to:						
🔀 Austin Regional Office	Sa	n Antonio Regional Of	fice						
Mailed to: TCEQ - Cashier		vernight Delivery to: T(
Revenues Section		2100 Park 35 Circle	-						
Mail Code 214		uilding A, 3rd Floor							
P.O. Box 13088		ustin, TX 78753							
Austin, TX 78711-3088		12)239-0357							
Site Location (Check All That App									
Recharge Zone	Contributing Zone	Transiti	ion Zone						
Type of Pla	an	Size	Fee Due						
Water Pollution Abatement Plan	, Contributing Zone								
Plan: One Single Family Resident	ial Dwelling	Acres	\$						
Water Pollution Abatement Plan	, Contributing Zone								
Plan: Multiple Single Family Resid	dential and Parks	Acres	\$						
Water Pollution Abatement Plan	, Contributing Zone								
Plan: Non-residential		Acres	\$						
Sewage Collection System		L.F.	\$						
Lift Stations without sewer lines	Acres	\$							
Underground or Aboveground St	orage Tank Facility	Tanks	\$						
Piping System(s)(only)		Each	\$						
Exception		1 Each	\$ 500						
Extension of Time		Each \$							
Signature: Chem W. Caughen									

Application Fee Schedule

Texas Commission on Environmental Quality

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

Project	Project Area in Acres	Fee
One Single Family Residential Dwelling	< 5	\$650
Multiple Single Family Residential and Parks	< 5	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial,	< 1	\$3,000
institutional, multi-family residential, schools, and	1 < 5	\$4,000
other sites where regulated activities will occur)	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

Organized Sewage Collection Systems and Modifications

Project	Cost per Linear Foot	Minimum Fee- Maximum Fee		
Sewage Collection Systems	\$0.50	\$650 - \$6,500		

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	Cost per Tank or Piping System	Minimum Fee- Maximum Fee	
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500	

Exception Requests

Project	Fee
Exception Request	\$500

Extension of Time Requests

Project	Fee
Extension of Time Request	\$150



TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)										
New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)										
Renewal (Core Data Form should be submitted with the	Renewal (Core Data Form should be submitted with the renewal form) Other Exception									
2. Customer Reference Number (<i>if issued</i>) Follow this link to search for CN or RN numbers in										
CN	<u>Central Registry**</u>	RN								

SECTION II: Customer Information

4. General Customer Information 5. Effective Date for Customer Information Updates (mm/dd/yyyy)													
4. General et	S. Elective Date for customer mormation opulates (mm/dd/yyyy)												
New Customer Update to Customer Information Change in Regulated Entity Ownership									•				
Change in Le	Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)												
The Custome	r Name si	uhmitter	here may	he undated	automatical	lv hase	od on	what is c	urrent	and active	with th	ne Texas Seci	retary of State
The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).													
6. Customer	Legal Nan	ne (If an i	individual, pri	nt last name f	ïrst: eg: Doe, .	lohn)			<u>lf nev</u>	v Customer,	enter pre	evious Custom	<u>er below:</u>
Saint Mary Ron	nanian Ort	hodox Ch	urch										
7. TX SOS/CP	A Filing N	umber		8. TX State	• Tax ID (11 d	igits)			9. Fe	deral Tax I	D	10. DUNS	Number (if
0800123122				320081061	32				(9 dig	vits)		applicable)	
									06-16	649884			
11. Type of C	11. Type of Customer: Corporation Individual Partnership: General Limited												
Government:	City	County 🗌	Federal	Local 🗌 Stat	e 🗌 Other			Sole P	roprieto	orship	🛛 Ot	her: 501c.3	
12. Number	of Employ	vees							13. I	ndepender	ntly Ow	ned and Ope	erated?
⊠ 0-20 □ :	21-100 [101-25	50 🗌 251-	500 🗌 50	1 and higher				🖂 Ye	es (No		
14. Customer	r Role (Pro	posed or	Actual) – as i	it relates to th	e Regulated E	ntity list	ted or	n this form.	Please	check one of	the follo	owing	
Owner		🗌 Оре	erator	0 []	wner & Opera	ator				Othor:	Not a re	egulated entity	,
	al Licensee	🗌 Re	esponsible Pa	rty 🗌	VCP/BSA App	olicant					Notare		
	200 Mon	aco Dr											
15. Mailing													
Address:													
	City Cedar Park			State TX			ZIP 78613		3	ZIP + 4			
16. Country Mailing Information (if outside USA)					1	17. E-Mail Address (if applicable)				<u> </u>			
							gle	nn.campbe	ll@gwc	engneering.	com		
18. Telephone Number					19. Extensio	on or C	ode	ode 20. Fax Number (if applicable)					

SECTION III: Regulated Entity Information

21. General Regulated En	21. General Regulated Entity Information (If 'New Regulated Entity" is selected, a new permit application is also required.)							
New Regulated Entity Dpdate to Regulated Entity Name Dpdate to Regulated Entity Information								
The Regulated Entity Nar as Inc, LP, or LLC).	The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).							
22. Regulated Entity Nam	ne (Enter nam	e of the site where	e the regulated actior	n is taking pla	ce.)			
Saint Mary Romanian Orthoo	dox Church							
23. Street Address of the Regulated Entity:	200 Monaco Dr							
(No PO Boxes)								[
	City	Cedar Park	State	ТХ	ZIP	78756	ZIP + 4	
24. County	Williamson							
		If no Stree	t Address is provid	led, fields 2	5-28 are re	quired.		
25. Description to								
Physical Location:								
26. Nearest City					·	State	Near	rest ZIP Code
Latitude/Longitude are re used to supply coordinate	-	-	-		ata Standa	rds. (Geocoding of t	the Physical J	Address may be
27. Latitude (N) In Decimal: 30.47952 28. Longitude (W) In Decimal: -97.80562						2		
					ingitude (V			
Degrees	Minutes		Seconds	Degre		Minutes		Seconds
Degrees	Minutes		Seconds	Degre				
Degrees 29. Primary SIC Code		Secondary SIC C		31. Primar	es y NAICS Co	de 32. Sec	ondary NAIC	
29. Primary SIC Code (4 digits)	30.				es y NAICS Co	22.600	-	
29. Primary SIC Code (4 digits) 8661	30. (4 d	Secondary SIC C	Code	31. Primar (5 or 6 digit	es y NAICS Co s)	de 32. Sec	-	
29. Primary SIC Code (4 digits) 8661 33. What is the Primary E	30. (4 d Business of t	Secondary SIC C	Code	31. Primar (5 or 6 digit	es y NAICS Co s)	de 32. Sec	-	
29. Primary SIC Code (4 digits) 8661	30. (4 d Business of t Org.	Secondary SIC C igits) his entity? (Do	Code	31. Primar (5 or 6 digit	es y NAICS Co s)	de 32. Sec	-	
29. Primary SIC Code (4 digits) 8661 33. What is the Primary E Church / Nonprofit Religious	30. (4 d Business of t	Secondary SIC C igits) his entity? (Do	Code	31. Primar (5 or 6 digit	es y NAICS Co s)	de 32. Sec	-	
29. Primary SIC Code (4 digits) 8661 33. What is the Primary E	30. (4 d Business of t Org.	Secondary SIC C igits) his entity? (Do	Code	31. Primar (5 or 6 digit	es y NAICS Co s)	de 32. Sec	-	
29. Primary SIC Code (4 digits) 8661 33. What is the Primary E Church / Nonprofit Religious 34. Mailing	30. (4 d Business of t Org.	Secondary SIC C igits) his entity? (Do	Code	31. Primar (5 or 6 digit	es y NAICS Co s)	de 32. Sec	-	
29. Primary SIC Code (4 digits) 8661 33. What is the Primary E Church / Nonprofit Religious 34. Mailing	30. (4 d Business of t Org. 200 Monad	Secondary SIC C igits) his entity? (Do	Code not repeat the SIC or State	31. Primar (5 or 6 digit	es y NAICS Co s) iption.)	de 32. Sec (5 or 6 d	igits)	
29. Primary SIC Code (4 digits) 8661 33. What is the Primary E Church / Nonprofit Religious 34. Mailing Address:	30. (4 d Business of t Org. 200 Monad	Secondary SIC C igits) his entity? (Do co Dr Cedar Park	Code not repeat the SIC or State	31. Primar (5 or 6 digit	es y NAICS Co s) iption.) ZIP	de 32. Sec (5 or 6 d	ZIP + 4	

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

Dam Safety	Districts	Edwards Aquifer	Emissions Inventory Air	Industrial Hazardous Waste
Municipal Solid Waste	New Source Review Air	OSSF	Petroleum Storage Tank	D PWS
Sludge	Storm Water	🗌 Title V Air	Tires	Used Oil
Voluntary Cleanup	Wastewater	Wastewater Agriculture	Water Rights	Other:

SECTION IV: Preparer Information

40. Name:	Glenn Campbe	n Campbell			Civil Engineer
42. Telephone	Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(972) 490-2224			() -	glenn.campbell@gwcengineering.com	

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Saint Mary Romanian Orthodox Church	Job Title:	Board President		
Name (In Print):	Mirela Ivan Glass			Phone:	(512) 299- 0404
Signature:	Minele Juan Glass			Date:	4/28/23

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009	Project Name: ?
	Date Prepared: ?

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell. Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348. Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields will remove equations in the spreadsheet.

alculations fro	om RG-348	Pages 3-27 to 3-30
27.2(A _N x P)		
let increase in	impervious area for the project	osed development = 80% of increased load
Williamson 0.56 0.11 0.16 0.29 32	acres acres acres inches	
44	lbs.	
1		
basin):		
1		
0.56 0.11 0.16 0.29	acres acres acres	
	27.2(A _N x P) Required TSS Vet increase in Average annua Williamson 0.56 0.11 0.16 0.29 32 44 1 1 <u>basin):</u> 1 0.56 0.11 0.56 0.11 0.16	Required TSS removal resulting from the proport Net increase in impervious area for the project Average annual precipitation, inches Williamson 0.56 acres 0.11 acres 0.16 acres 0.29 32 inches 44 lbs. 1 <u>basin):</u> 1 0.56 acres 0.11 acres 0.16 acres 0.11 acres 0.16 acres

Proposed BMP = Retention / Irrigation Removal efficiency = 91 percent

Aqualogic Cartridge Filter Bioretention Contech StormFilter Constructed Wetland Extended Detention Grassy Swale Retention / Irrigation Sand Filter Stormceptor Vegetated Filter Strips Vortechs Wet Basin Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (BMP \text{ efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:

A _C = Total On-Site drainage area in	the BMP catchment area
---	------------------------

 A_I = Impervious area proposed in the BMP catchment area

 A_P = Pervious area remaining in the BMP catchment area

 L_R = TSS Load removed from this catchment area by the proposed BMP

A _C =	0.56	acres
A _I =	0.16	acres
A _P =	0.40	acres
L _R =	167	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M THIS BASIN} = 44$ lbs.

F = 0.26

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth =	0.16	inches
Post Development Runoff Coefficient =	0.25	
On-site Water Quality Volume =	81	cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = Off-site Impervious cover draining to BMP = Impervious fraction of off-site area =	• 0.00 • 0	acres acres
Off-site Runoff Coefficient = Off-site Water Quality Volume =		cubic feet
Storage for Sediment =	16	
Total Capture Volume (required water quality volume(s) x 1.20) =		cubic feet
The following sections are used to calculate the required water quality volu The values for BMP Types not selected in cell C45 will show NA.	ume(s) for the	Selected BMP.
7. Retention/Irrigation System	Designed as	Required in RG-348 Pages 3-42 to 3-46
Required Water Quality Volume for retention basin =	97	cubic feet
Irrigation Area Calculations:		
Soil infiltration/permeability rate = Irrigation area =		in/hr Enter determined permeability rate or assumed value of 0.1 square feet acres
8. Extended Detention Basin System	Designed as	Required in RG-348 Pages 3-46 to 3-51
Required Water Quality Volume for extended detention basin =	- NA	cubic feet
9. Filter area for Sand Filters	Designed as	Required in RG-348 Pages 3-58 to 3-63
9A. Full Sedimentation and Filtration System		
Water Quality Volume for sedimentation basin =	· NA	cubic feet
Minimum filter basin area =	• NA	square feet
Maximum sedimentation basin area = Minimum sedimentation basin area =		square feet For minimum water depth of 2 feet square feet For maximum water depth of 8 feet
9B. Partial Sedimentation and Filtration System		
Water Quality Volume for combined basins =	· NA	cubic feet
Minimum filter basin area = Minimum filter basin area for Single Chamber Basin = Maximum sedimentation basin area = Minimum sedimentation basin area =	#VALUE!	square feet square feet square feet For minimum water depth of 2 feet square feet For maximum water depth of 8 feet

10. Bioretention System

Designed as Required in RG-348

Pages 3-63 to 3-65

Required Water Quality Volume for Bioretention Basin =	NA	cubic feet		
11. Wet Basins	Designed as	Required in R	G-348	Pages 3-66 to 3-71
Required capacity of Permanent Pool = Required capacity at WQV Elevation =	NA NA	cubic feet cubic feet		Capacity is 1.20 times the WQV lould be the Permanent Pool Capacity QV.
12. Constructed Wetlands	Designed as	Required in R	G-348	Pages 3-71 to 3-73
Required Water Quality Volume for Constructed Wetlands =	NA	cubic feet		
<u>13. AquaLogic[™] Cartridge System</u>	Designed as	Required in R	G-348	Pages 3-74 to 3-78
** 2005 Technical Guidance Manual (RG-348) does not exempt the required	20% increas	se with mainte	nance contract wit	h AquaLogic [™] .
Required Sedimentation chamber capacity = Filter canisters (FCs) to treat WQV = Filter basin area (RIA _F) =	NA	cubic feet cartridges square feet		
14. Stormwater Management StormFilter® by CONTECH				
Required Water Quality Volume for Contech StormFilter System =	NA	cubic feet		
THE SIZING REQUIREMENTS FOR THE BMPs / LOAD REMOVALS ARE BA	SED UPON F	LOW RATES	NOT CALCULATE	D WATER QUALITY VOL
15. Grassy Swales	Designed as	Required in R	G-348	Pages 3-51 to 3-54
Design parameters for the swale:				
Drainage Area to be Treated by the Swale = A = Impervious Cover in Drainage Area = Rainfall intensity = i = Swale Slope = Side Slope (z) = Design Water Depth = y = Weighted Runoff Coefficient = C =	4. 1 0. 0.	00 acres 00 acres 1.1 in/hr 01 ft/ft 3 33 ft 54		
A_{CS} = cross-sectional area of flow in Swale =		17 sf		
P_W = Wetted Perimeter = R _H = hydraulic radius of flow cross-section = A _{CS} /P _W =		62 feet 32 feet		

n = Manning's roughness coefficient = 0.2

15A. Using the Method Described in the RG-348

Manning's Equation: Q =
$$1.49 A_{CS} R_{H}^{2/3} S^{0.5}$$

n

$$b = 0.134 \times Q$$
 - zy = 38.51 feet
 $y^{1.67} S^{0.5}$
 $Q = CiA = 4.71 cfs$

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{CS} = 0.36 ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = 107.24 feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

15B. Alternative Method using Excel Solver

Instructions

Design Q = CiA =	4.71 cfs		
Manning's Equation Q =	0.76 cfs	Error 1 =	3.95
Swale Width=	6.00 ft		

3.95

Instructions are provided to the right (green comments).

Flow Velocity Minimum Length =	0.36 ft/s 107.24 ft	
are provided to the right (blue comments).		
Design Width =	<mark>6</mark> ft	
Design Discharge =	0.76 cfs	Error 2 =
Design Depth =	0.33 ft	
Flow Velocity =	0.32 cfs	
Minimum Length =	97.48 ft	

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters may be modified and the solver rerun. If any of the resulting values still do not meet the design requirement set forth in RG-348, widening the swale bottom value may not be possible.

16. Vegetated Filter StripsDesigned as Required in RG-348Pages 3-55 to 3-57

There are no calculations required for determining the load or size of vegetative filter strips. The 80% removal is provided when the contributing drainage area does not exceed 72 feet (direction of flow) and the sheet flow leaving the impervious cover is directed across 15 feet of engineered filter strips with maximum slope of 20% or

across 50 feet of natural vegetation with a maximum slope of 10%. There can be a break in grade as long as no slope exceeds 20%.

If vegetative filter strips are proposed for an interim permanent BMP, they may be sized as described on Page 3-56 of RG-348.

17. Wet Vaults	Designed as Required in RG-348 Pages 3-30 to 3-32 & 3-79
Required Load Removal Based upon Equation 3.3	= NA lbs
First calculate the load removal at 1.1 in/hour	
RG-348 Page 3-30 Equation 3.4: Q = C	A
C = runoff coefficient for the drainage area i = design rainfall intensity A = drainage area in acres	= 1.1 in/hour
Q = flow rate in cubic feet per second	= 0.19 cubic feet/sec
RG-348 Page 3-31 Equation 3.5: V_{OR} = Q	A
Q = Runoff rate calculated above A = Water surface area in the wet vaul	
V _{OR} = Overflow Rate	= 0.00 feet/sec
Percent TSS Removal from Figure 3-1 (RG-348 Page 3-31)	= 53 percent
Load removed by Wet Vaul	= #VALUE! Ibs
If a bypass occurs at a rainfall intensity of less than 1.1 in/hours Calculate the efficiency reduction for the actual rainfall intensity rate	
Actual Rainfall Intensity at which Wet Vault bypass Occurs	= 0.5 in/hour
Fraction of rainfall treated from Figure 3-2 RG-348 Page 3-32 Efficiency Reduction for Actual Rainfall Intensity	•
Resultant TSS Load removed by Wet Vaul	= #VALUE! Ibs

18. Permeable Concrete	Designed as Required in RG-348 Pages 3-79 to 3-83			
PERMEABLE CONCRETE MAY ONLY BE USED ON THE CONTRIBUTING 2	ONE			
<u>19. BMPs Installed in a Series</u>	Designed as	Required in R	G-348 Pages 3-32	
Michael E. Barrett, Ph.D., P.E. recommended that the coeff	ficient for E ₂ b	e changed fro	om 0.5 to 0.65 on May 3, 2006	
E _{TOT} = [1 - ((1 - E ₁) X (1 - 0.65E ₂) x (1 - 0.25E ₃))] X 100 =	= 86.3	8 percent	NET EFFICIENCY OF THE BMPs IN THE SERIES	
EFFICIENCY OF FIRST BMP IN THE SERIES = E_1 :	= 75.0	0 percent		
EFFICIENCY OF THE SECOND BMP IN THE SERIES = E_2 :	= 70.0	0 percent		
EFFICIENCY OF THE THIRD BMP IN THE SERIES = E_3 :	= 0.0	0 percent		
THEREFORE, THE NET LOAD REMOVAL WOULD BE: (A ₁ AND A _P VALUES ARE FROM SECTION 3 ABOVE)				
L _R = E _{TOT} X P X (A _I X 34.6 X A _P X0.54) :	= 158.9	9 lbs		
20. Stormceptor Required TSS Removal in BMP Drainage Area: Impervious Cover Overtreatment: TSS Removal for Uncaptured Area = BMP Sizing Effective Area = Calculated Model Size(s) = Actual Model Size (if multiple values provided in Calculate Model Size or if you are choosing a larger model size) = Surface Area = Overflow Rate = Rounded Overflow Rate = BMP Efficiency % = L _R Value = TSS Load Credit =	= 0.0000 = 0.00 = NA = #N/A d 0 = #N/A = #VALUE! = #VALUE! = #VALUE! = #VALUE!	lbs ac lbs EA Model Size ft ² V _{or} V _{or} % lbs lbs		
TSS Treatment by BMP (LM + TSS Uncapt.)	-			
21. Vortech Required TSS Removal in BMP Drainage Areas		lbs		

	Impervious Cover Overtreatment= TSS Removal for Uncaptured Area =	0.0000 0.00	ac Ibs
BMP Sizing	Effective Area = Calculated Model Size(s) =	NA #N/A	EA
Actual Model	Size (if choosing larger model size) =	Vx1000	Pick Model Size
	Surface Area = Overflow Rate = Rounded Overflow Rate = BMP Efficiency % = L _R Value =	7.10 #VALUE! #VALUE! #VALUE! #VALUE!	ft ² V _{or} % Ibs
	TSS Load Credit =	#VALUE!	lbs
Is Sufficient Treatment A	vailable? (TSS Credit <u>></u> TSS Uncapt.)	#VALUE!	
TSS Trea	atment by BMP (LM + TSS Uncapt.) =	#VALUE!	

CIVIL ENGINEERING PLA FOR **ST. MARY ROMANIAN ORTHODOX CHURCH 200 MONACO DRIVE** CEDAR PARK, TX 76813 LOTS 336-A AND 336-B OF RIVIERA SPRINGS NORTH, SECTION B

SITE ARCHITECT

TERZYAN DESIGN, LLC 1712 HACKBERRY BRANCH DR. **ALLEN, TX 75002** 240.535.2507 STEPANTERZYAN@GMAIL.COM

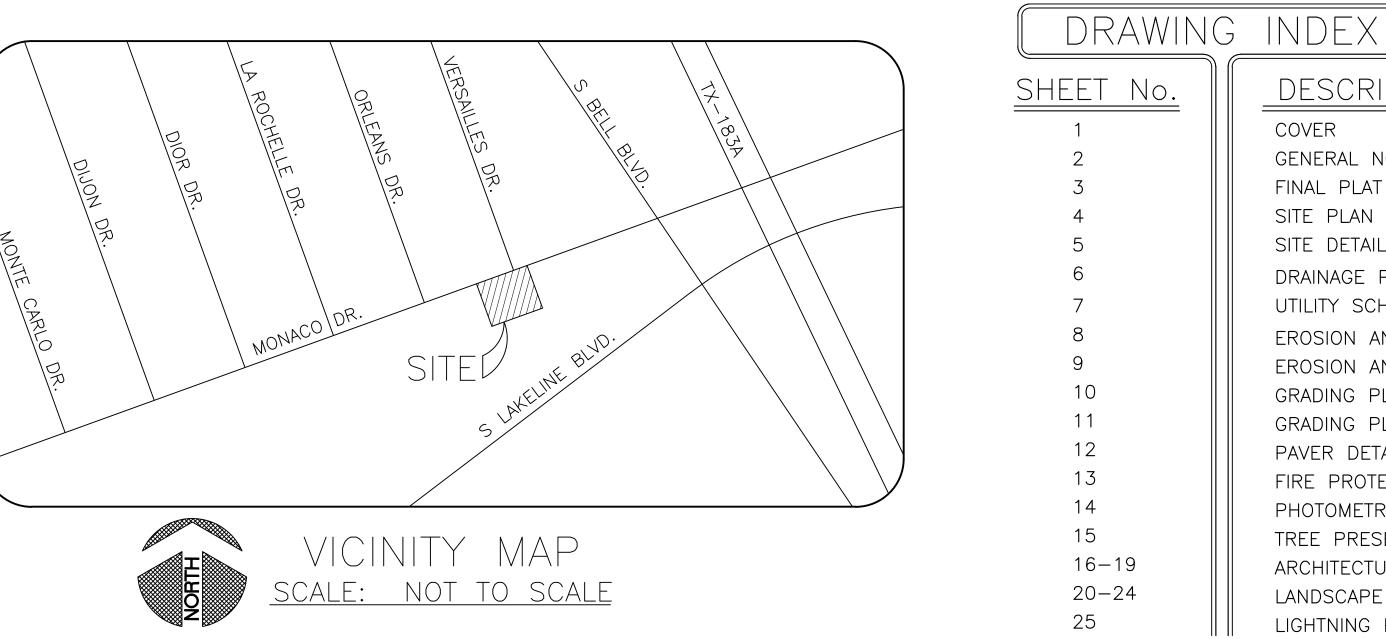
DEVELOPER & OWNER

St. Mary Romanian c/o Andrew Guiette Orthodox Church 200 Monaco Drive Cedar Park, TX 76813 972-880-9855

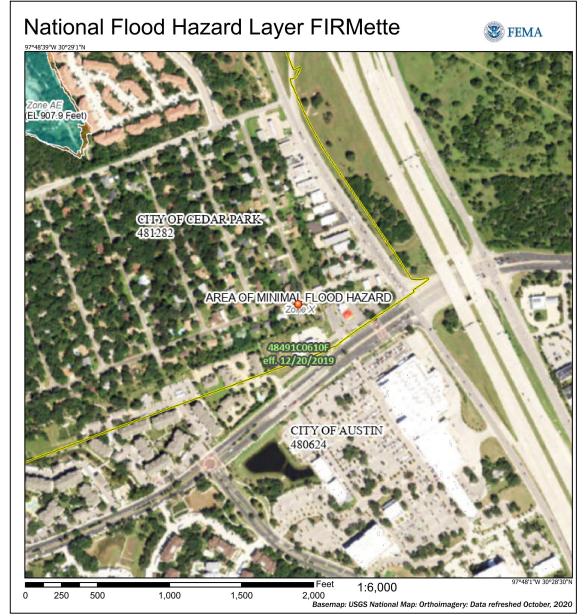


REVIEWED FOR CODE COMPLIANCE SIGNATURE REQUIRED FROM ALL DEPARTMENTS

PLANNING	DATE
ENGINEERING SERVICES	
INDUSTRIAL PRETREATMENT	DATE
FIRE PREVENTION	DATE
ADDRESSING	DATE
SITE DEVELOPMENT PERMIT NUMBER	



FEMA FLOODPLAIN PANEL ID: 0610



PROJECT DESCRIPTION

The St.Mary Church and Community buildings are designed as type IIB construction with noncombustible exterior walls and structural framing. The parking lot accommodates up to 27 vehicles and has two entrances from Monaco Road, providing easy access for congregation members and visitors. Due to ordinance requirements, the parking lot will utilize pervious pavers with underground piping rather than concrete. The main Church building consists of the sanctuary space, two offices from both sides of the entry lobby, the main altar area, and two vestry rooms from both sides of the main altar. The church building is designed to hold up to 108 people, providing ample space for the congregation. The interior is designed to be welcoming and open, with natural lighting and a peaceful atmosphere. The church and community buildings are connected by an interior courtyard, providing easy access between the two buildinas.

The church building is 2790 sq.ft.

The top of the roof for the church building is 26'-2". Top of the dome for the church dome is 44'-0".

The community building is equipped with a commercial kitchen and restrooms, making it an ideal space for events. The event hall features skylights that allow for indirect natural lighting, creating a warm and inviting atmosphere. The community building total area is 2,548 sq.ft. The top of the roof for the community building is 19'-8". Top of the dome for the church dome is 31'-6".

The grand total for both buildings combined is 5,338 sq.ft.

Both the church and community buildings are designed with the same exterior materials, while retaining their distinct functions. The brick facade and metal roof of both buildings create a cohesive visual identity. The courtyard between the buildings serves as a gathering space for the congregation and the main entry from the parking lot to both buildings.

DESCRIPTION COVER GENERAL NOTES FINAL PLAT SITE PLAN SITE DETAILS DRAINAGE PLAN UTILITY SCHEMATIC PLAN EROSION AND SEDIMENT CONTROL PLAN EROSION AND SEDIMENT CONTROL DETAILS GRADING PLAN - SURFACE GRADING PLAN - SUBSURFACE PAVER DETAILS FIRE PROTECTION PLAN PHOTOMETRIC PLAN TREE PRESERVATION PLAN ARCHITECTURAL ELEVATIONS LANDSCAPE PLANS LIGHTNING PLAN

ENGINEER'S STATEMENT

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Construction Notes for Subdivisions and Site Plans Construction Notes for Subdivisions & Site Plans City of Cedar Park Revised March 23, 2023 General Notes:

1. General Contractor shall call for all utility locates prior to any construction. Contractor shall delineate areas of excavation using white paint (white lining) in accordance with 16 TAC 18.3. Water & wastewater owned by the City of Cedar Park can be located by calling Texas 811 at 1-800-344-8377.

Allow three business days for utility locates by the City of Cedar Park. 2. All construction shall be in accordance with the latest City of Austin Standard Specifications. City of Austin

standards shall be used unless otherwise noted. 3. Design procedures shall be in general compliance with the City of Austin Drainage Criteria Manual. All

variances to the manual are listed below:

4. Benchmarks should be tied to the City of Cedar Park benchmarks and be correctly "georeferenced" to state plane coordinates. A list of the City's benchmarks can be found at:

http://www.cedarparktexas.gov/index.aspx?page=793. 5. Prior to issuance of a certificate of occupancy for a site development permit, the right of way between the property line and edge of pavement / back of curb shall be revegetated according to COA specification 602S and 606S. Prior to City acceptance of subdivision improvements all graded and disturbed areas shall be re-vegetated in accordance with the City of Austin Specification Item #604 native seeding unless non-native is specifically

approved. 6. The Contractor shall provide the City of Cedar Park copies of all test results prior to acceptance of subdivision improvements.

7. City, owner, engineer, contractor, representatives of all utility companies, and a representative from the testing lab shall attend pre-construction conference prior to start of construction. The contractor shall schedule the meeting with the City of Cedar Park Engineering Department a minimum of 48 hours prior to this pre-construction meeting (512-401-5000). Final construction plans shall be delivered to Engineering a minimum of seven business days prior to requesting a pre-construction meeting.

8. Excess soil shall be removed at the contractor's expense. Notify the City of Cedar Park if the disposal site is inside the City's jurisdictional boundaries.

9. Burning is prohibited.

10. Any changes or revisions to these plans must first be submitted to the City by the design engineer for review and written approval prior to construction of the revision. All changes and revisions made to the design of utilities or impacts utilities shall use revision clouds to highlight all revisions or changes with each submittal. Revision triangles shall be used to mark revisions. All clouds and triangle markers from previous revisions may be removed Revision information shall be updated in the appropriate areas of the Title Block.

11. Minimum setback requirements for existing and newly planted trees from the edge of pavement to conform to the requirements as shown in Table 6-1 of the City of Austin's Transportation Criteria Manual.

12. The Contractor will reimburse the City for all cost incurred as a result of any damage to any City utility or any infrastructure within the Right-of-Way by the Contractor, regardless of these plans. 13. An engineer's concurrence letter and electronic 22"x34" record drawings shall be submitted to the

Engineering Department prior to the issuance of certificate of occupancy or subdivision acceptance. The Engineer and Contractor shall verify that all final revisions and changes have been made to record drawings prior to City submittal. Record construction drawings, including roadway and all utilities, shall be provided to the City in AutoCad ". dwg" files and ".PDF" format on a CD or DVD. Line weights, line types and text size shall be such that if half-size prints (11"x 17") were produced, the plans would still be legible. All required digital files shall contain a minimum of two (2) control points referenced to the State Plane Grid Coordinate System – Texas Central Zone (4203), in US feet and shall include rotation information and scale factor required to reduce surface coordinates to grid coordinates in US feet.

14. The City of Cedar Park has not reviewed these plans for compliance with the Americans With Disabilities Act. It is the responsibility of the owner to provide compliance with all legislation related to accessibility within the limits of construction shown in these plans.

15. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

16. No blasting is allowed on this project.

17. A traffic control plan, in accordance with the Texas Manual on Uniform Traffic Control Devices, shall be submitted to the City for review and approval prior to any partial or complete roadway closures. Traffic control plans shall be site specific and seal by a registered professional engineer.

18. The contractor shall keep the site clean and maintained at all times, to the satisfaction of the City. The subdivision will not be accepted (or Certificate of Occupancy issued) until the site has been cleaned to the satisfaction of the City.

19. Signs are not permitted in Public Utility Easements, Set Backs or Drainage Easements.

20. It shall be the responsibility of the Contractor to inspect temporary erosion controls on a daily basis. Adjust the controls and/or remove any sediment buildup as necessary. A stop work order and/or fine may be imposed if the erosion controls are not maintained.

21. A final certificate of occupancy will not be issued on commercial sites until all disturbed areas have been re-vegetated. Substantial grass cover, as determined by Engineering Department, must be achieved prior to the issuance of a final certificate of occupancy. All erosion controls must remain in place and maintained until all disturbed areas have been re-vegetated to the acceptance of the City of Cedar Park Engineering Department. Prior to issuance of a certificate of occupancy for a site development permit, the right of way between the property line and edge of pavement / back of curb shall be revegetated according to COA specification 602S and 606S. 22. Contractor will be responsible for keeping roads and drives adjacent to and near the site free from soil,

sediment and debris. Contractor will not remove soil, sediment or debris from any area or vehicle by means of water, only shoveling and sweeping will be allowed. Contractor will be responsible for dust control from the site. Failure to comply with this requirement may result in a stop work order or a fine.

23. All wet utilities shall be installed and all densities must have passed inspection(s) prior to the installation of dry utilities.

24. A minimum of seven days of cure time is required for HMAC prior to the introduction of vehicular traffic to any streets.

25. Prior to plan approval, the Engineer shall submit to the Engineering Department documentation of subdivision/site registration with the Texas Department of Licensing and Regulations (TDLR) and provide documentation of review and compliance of the subdivision/site construction plans with Texas Architectural Barriers Act (TABA).

26. Prior to subdivision/site acceptance, the engineer/developer-owner shall submit to the Engineering Department documentation that the subdivision/site was inspected by TDLR or a registered accessibility specialist (RAS) and the subdivision/site is in compliance with the requirements of the TABA.

27. All construction and construction related activities shall be performed Monday thru Friday from 7:00 A.M. to 6:00 P.M. However, construction activities within one hundred feet (100') of a dwelling or dwelling unit shall be performed between the hours of 8:00 a.m. and 6:00 p.m. Otherwise all construction and construction related activities shall conform to City of Cedar Park Code of Ordinances, specifically ARTICLE 8.08.

28. Approval for construction activities performed on Owner's Holidays, and/or Saturdays, outside of Monday through Friday 8 am to 5 pm, or in excess of 8 hours per day shall be obtained in writing 48 hours in advance, and inspection fees at 1.5 times the hourly inspection rate shall be billed directly to the contractor. There shall be no construction or construction related activities performed on Sunday. The City reserves the right to require the contractor to uncover all work performed without City inspection.

29. All poles to be approved by City and PEC, no conduit shall be installed down lot lines / between homes. All conduit shall be located in the public ROW or in an easement adjacent to and parallel to the public ROW. 30. Dry utilities shall be installed after subgrade is cut and before first course base. No trenching of compacted

base. If necessary dry utilities installed after first course base shall be bored across the full width of the ROW. 31. No ponding of water shall be allowed to collect on or near the intersection of private driveway(s) and a public street. Reconstruction of the driveway approach shall be at the Contractor's expense.

32. All driveway approaches shall have a uniform two percent slope within the ROW unless approved in writing by the Engineering Department.

33. Contractors on site shall have an approved set of plans at all times. Failure to have an approved set may result in a stop work order. 34. Contractor to clear five feet beyond all right of way to prevent future vegetative growth into the sidewalk

areas. 35. There shall be no water or wastewater appurtenances, including but not limited to, valves, fittings, meters,

clean-outs, manholes, or vaults in any driveway, sidewalk, traffic or pedestrian area. 36. Sidewalks shall not use curb inlets as a partial walking surface. Sidewalks shall not use traffic control boxes,

meter or check valve vaults, communication vaults, or other buried or partially buried infrastructure as a vehicular or pedestrian surface.

<u>Street Notes:</u>

L. No trenching of compacted base will be allowed. A penalty and/or fine may be imposed to the general contractor if trenching of compacted base occurs without City approval, regardless of who performed the trenching.

2. All sidewalks shall comply with the Americans With Disabilities Act. The City of Cedar Park has NOT reviewed these plans for compliance with the Americans With Disabilities Act, or any other accessibility legislation, and does not warranty or approve these plans for any accessibility standards. Street barricades shall be installed on all dead end streets and as necessary during construction to maintain job safety.

4. Any damage caused to existing pavement, curbs, sidewalks, ramps, etc., shall be repaired by the contractor to the satisfaction of the City prior to acceptance of the subdivision. At intersections, which have valley drainage, the crown to the intersecting street will be culminated at a

distance of 40 ft. from the intersecting curb line unless otherwise noted. The subgrade material was tested by (Capital Geotechnical Services, PLLC; 13200 Pong Springs Rd. Suite G56, Austin, TX 78759; 512-237-7402 on April 17, 2023) the pavement sections were designed accordingly. The pavement sections are to be constructed as follows: 6" thick jointed reinforced concrete (JRCP) (3,500 psi mix) with 4" crushed stone base Type A Grade 1 or Grade 2 on proof-rolled subgrade.

7. Density testing of compacted subgrade material, first course and second course compacted base, shall be made at 500 foot intervals.

8. All density testing is the responsibility of the owner or contractor and shall be witnessed by the City of Cedar Park's project representative. The contractor is to notify the City 48 hours prior to scheduled density testing.

9. Traffic control signs and pavement markings shall be in accordance with the Texas Manual on Uniform Traffic Control Devices and installed as directed by the City of Cedar Park prior to City acceptance of the Subdivision.

10. Slope of natural ground adjacent to the right-of-way shall not exceed 3:1. If a 3:1 slope is not possible, a retaining wall or some other form of slope protection approved by the City shall be placed in a location acceptable to the City.

11. The City, engineer, contractor, and a representative from the asphalt testing lab shall attend a pre-paving conference prior to the start of HMAC paving. The contractor shall give the City a minimum of 48 hours notice prior to this meeting (512-401-5000)

12. The Contractor or owner is responsible for conducting tests on asphalt pavement in accordance with the requirements set forth in the City of Austin Standard Specification No. 340. Any re-testing of the asphalt pavement shall be conducted under the supervision of the engineer and the City of Cedar Park. Re-testing of the asphalt pavement shall be limited to one retest per project.

13. All pavement markings and signage shall comply with MUTCD standards. Street name letter sizing shall be in accordance with MUTCDTable2D-2.Pavement markings shall be thermoplastic unless otherwise noted. 14. All street name signs shall be high intensity retro grade.

diameter lines or critical infrastructure, subsidiary to pipe installation. 15. No Fencing or Wall is allowed to be constructed so that it obstructs the sight lines of drivers from an 11. Density testing of compacted backfill shall be made at a rate of one test per two foot lifts per 500 feet of intersecting public roadway or from an intersecting private driveway. Sight lines are to be maintained as described installed pipe. in City Code Section 14.05.007. Installing a fence or wall which does not comply with the City's Sight Distance 12. Contractor to obtain a water meter from the City of Cedar Park for any water that may be required during Requirements or Fencing Regulations is a violation of the City's Ordinance and may be punishable pursuant to construction. (512-401-5000) Section 1.01.009 of City Code.

16. Temporary rock crushing operations are not allowed. All sources for flexible base material are required to be approved by the City. Prior to base placement all current triaxial test reports for the proposed stockpiles are to be submitted to the City's project representative for review and approval. 17. Utility service boxes or other utility facilities shall not be installed within areas determined to be required sight lines of two intersecting public streets or within sight lines of a private driveway. Sight lines are to be maintained compliant with Table 1-1 of the Austin Transportation Criteria Manual. Utilities determined by the Director of Engineering to be placed within required sight lines may be required to be relocated at the expense of the contractor prior to the City issuing a Certificate of Occupancy or prior to the City's Acceptance of the Project

Improvements.

18. All lane closures shall occur only between the hours of 9 AM and 4 PM. Any night time lane closures require public streets, at the owner's expense by the contractor with City inspection. All utility adjustments shall be approval by the Director of Engineering and shall occur between the hours of 8 PM and 6 AM. Lane closures completed prior to final paving construction. observed by City during the peak hours of 6 AM to 9 AM, or 4 PM to 8 PM will be subject to fine per Chapter 1 of 15. The location of any existing utility lines shown on these plans is the best available and may not be accurate. City Ordinance, and/or subsequent issuance of Work Stoppage. Any damage to existing utility lines, both known and unknown, shall be repaired at the expense of the contractor. 19. Improvements that include reconstruction of an existing Type II driveway shall be done in a manner which 16. All iron pipe and fittings shall be wrapped with at least 8 mil. Polyethylene wrap. retains operations of not less than half of the driveway at all times. Full closure of such driveway can be 17. All water mains, wastewater mains and service lines shall meet City of Austin Specifications for minimum considered with written authorization retained by the Contractor from the property owner(s) or access easement cover requirements. All streets are to be cut to subgrade prior to installation of water mains or cuts will be issued right holder(s) of the driveway allowing full closure of the driveway. by the engineer. 20. Trees must not overhang within 10' vertically of a sidewalk, or 18' vertically of a roadway or driveway. 18. City to be given 48 hours notice prior to all testing of water and wastewater lines. City inspection is required for all testing of water and wastewater lines.

<u>Wastewater Notes:</u>

Refer to the City of Cedar Park Public Works Utility Policy and Specifications manual. Manhole frames and covers and water valve boxes shall be raised to finished pavement grade at the owner's expense by the contractor with the City approval. All utility adjustments shall be completed prior to final paving construction.

The location of any existing utility lines shown on these plans may not be accurate. Any damage to existing utility lines, both known and unknown, shall be repaired at the expense of the contractor. The contractor shall locate all utilities prior to bidding the project.

4. All iron pipe and fittings shall be wrapped with at least 8 mil. Polyethylene wrap. All water mains, wastewater mains and service lines shall meet City of Austin minimum cover specifications. All streets are to be cut to subgrade prior to installation of water mains or cuts will be issued by the engineer. 6. Where 48-inches of cover below subgrade cannot be achieved for wastewater service lines alternate

materials may be used. A minimum of 36-inches of cover below subgrade shall be achieved. Any wastewater service line with cover between 36-inch and 48- inches shall be SDR-26 PVC pressure pipe. Gasketed PVC sewer main fittings are used to connect SDR-35 PVC to SDR-26 PVC pressure pipe or C-900. Pipe materials to be used for construction of utility lines:

Wastewater- PVC, SDR-26 Force Main- Epoxy-lined DI

(Note: If using PVC, SDR-26 is required, SDR-35 WW is not allowed. Forcemains shall be epoxy lined ductile iron) All sanitary sewers, excluding service lines, shall be mandrel tested per TCEQ (Texas Commission on Environmental Quality) criteria. A mandrel test will not be performed until backfill has been in place for a minimum of 30 days.

10. All wastewater lines 10" and larger shall be video inspected in accordance with City of Cedar Park Public Works Department Utility Policy and Standard Specifications Manual Appendix E: Requirements for Video Inspection of Wastewater Lines at the Contractor's expense. No separate pay unless noted on the bid form. 11. All sanitary sewers, including service lines, shall be air tested per City of Austin Standard Specifications. 12. Density testing of compacted backfill shall be made at a rate of one test per two foot lifts per 500 feet of installed pipe.

13. City shall be given 48 hours notice prior to all testing of water and wastewater lines. City inspection is required for all testing of water and wastewater lines.

14. Where a water or wastewater line crosses above (or below) a storm sewer structure and the bottom (or top) of the pipe is within 18 inches of the top (or bottom) of the utility structure, the pipe shall be encased with concrete for a distance of at least 1 ft. on either side of the ditch line of the utility structure or the storm sewer. Concrete encasement will not be required for ductile iron (thickness Class 50), AWWA C-900 (SDR- 18) 150 psi rated PVC in sizes to 12 inches or AWWA C-905 (SDR-25) 165 psi rated PVC in sizes larger than 12 inches. Concrete encasement shall conform to C.O.A. standard detail 505-1.

15. The allowable (maximum) adjustment for a manhole shall be 12" (inches) or less. 16. Where a sewer line crosses a water line, the sewer line shall be one 20 ft. joint of 150 psi rated PVC centered on crossing.

17. All manhole and inlet covers shall read "City of Cedar Park". 18. Contractor to notify, and obtain approval from, the City of Cedar Park 48 hours prior to connecting to existing City utilities.

19. All pipe bedding material shall conform to City of Austin Standard Specifications. 20. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~28-days), and all reinforcing steel to be ASTM A615 60.

21. All wastewater manholes to be coated with organic materials and procedures listed in City of Austin All pipe bedding material shall conform to City of Austin Standard Specifications. Qualified Products List No. WW-511 (WW-511A and WW-511B are not allowed unless manhole is being 8. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~28-days), and all structurally rehabilitated with approval by Public Works). All manholes will be pre-coated or coated AFTER testing. reinforcing steel to be ASTM A615 60. 22. Polybrid Coatings on wastewater manholes will not be allowed. Any other product appearing on the COA 9. Contractor to install and maintain geo-textile fabric barrier (inlet protection) around storm sewer leads and

SPL WW-511 is acceptable. 23. All penetrations of existing wastewater manholes are required to be re-coated in accordance with the specifications listed in Note 20.

24. All manholes will be vacuum tested only.

25. Tracer tape AND marking tape shall be installed on all water and wastewater mains in accordance with City of Austin Standards, regardless of the type of pipe.

26. All pressure pipe shall have mechanical restraint and concrete thrust blocking at all valves, bends, tees, plugs, and other fittings.

Water Notes:

Refer to the City of Cedar Park Public Works Utility Policy and Specifications manual

2. The top of valve stems shall be at least 18", and no more than 36", below finished homes. Valve stem risers shall be welded on each end to the City's satisfaction.

3. Fire hydrant leads to be ductile iron, Class 350, and installed per City of Austin standard specifications and detail.

4. Prior to installation of fire hydrants, the engineer will provide the Contractor one (1) cut from a hub pin, establishing the elevation of the bury line.

5. The engineer shall provide cuts for all water lines at all storm sewer crossings to the City of Cedar Park. 6. Pipe materials to be used for construction of utility lines: Water - PVC, DR-14

Copper pipe and fittings are not permitted within the Right-of-Way. Minimum DR-14 12" dia and smaller. Minimum class 250 DI larger than 12" dia.

7. Approved 5 ¼" fire hydrants:

American Flow Control, B84B Mueller Company, Super Centurion 250

Clow Medallion Hydrant

Requirements for private fire hydrants (Behind Double Check Backflow Prevention Assembly): Must be in accordance with City of Austin specifications.

All fire hydrants must meet City of Cedar Park thread specifications (National Thread)

Blue reflector markers shall be located on the centerline of the pavement across from all fire hydrants. Pavement markers at intersections shall be four-sided.

8. Should a Tapping Saddle be approved by Public Works, the saddle shall be Smith-Blair 662 Stainless Steel Tapping Sleeves with all stainless hardware, or approved equal. Requests for alternate providers shall be made to the City of Cedar Park Public Works. No tap exceeding 2" in diameter will be approved.

9. All water lines, including service lines, shall be pressure and leak tested per City of Austin Standard Specifications and witnessed by the City of Cedar Park representative. All testing is to be the responsibility of the contractor, and the contractor may be required to re-test lines if the testing is not witnessed by the City. Contractor must notify the City of Cedar Park 48 hours prior to any testing.

10. All water lines shall be sterilized and bacteriologically tested in accordance with City of Austin Standards. The contractor is responsible for sterilization and the City of Cedar Park is responsible for submitting bacteriological samples to the State. Public Works will require a contractor specialized in disinfection for large

13. ALL WATER METER BOXES SHALL BE FORD GULF METER BOX WITH LOCKING LID.

• SINGLE G-148-233

- DUAL DG-148-243
- 1" METER YL111 444

• 1 ½" – 2" METER 1730-R (LID) & 1730-12 (BOX)/ACCEPTABLE BOXES FOR THIS SIZE OF METER

14. Manhole frames and covers and water valve boxes shall be raised to finished pavement grade, when in

19. Where a water or wastewater line crosses above (or below) a storm sewer structure and the bottom (or top) of the pipe is within 18 inches of the top (or bottom) of the utility structure, the pipe shall be encased with concrete for a distance of at least 1 ft. on either side of the ditch line of the utility structure or the storm sewer. Concrete encasement will not be required for ductile iron (thickness Class 50), AWWA C-900 (SDR- 18) 150 psi rated PVC in sizes to 12 inches or AWWA C-905 (SDR-25) 165 psi rated PVC in sizes larger than 12 inches. Concrete encasement shall conform to C.O.A. standard detail 505-1.

20. Contractor to notify the City of Cedar Park 48 hours prior to connecting to existing utilities.

21. All pipe bedding material shall conform to City of Austin Standard Specifications.

22. Tracer tape shall be installed on all water and wastewater mains regardless of the type of pipe or depth of pipe installed.

23. Unless otherwise specified by the Engineer all concrete is to be Class "A" (5 sack, 3000 psi ~ 28-days), and all reinforcing steel to be ASTM A615 60.

24. The City considers protection of its water system paramount to construction activities. City personnel will operate, or authorize the contractor to operate, all water valves that will pass through the City's potable water. The contractor may not operate any water valve, existing or proposed, that will allow water from the City's water system to flow to a proposed or existing water system without the express consent of the City. Notify the City two business days in advance of any request to operate a water valve. The general contractor may be fined \$500 or more, including additional theft of water fines, if a water valve is operated in an unauthorized manner, regardless of who operated the valve.

25. All water valves over 24" in size shall have a by-pass line and valve installed. By-pass valves and lines are subsidiary to the cost of the valve unless specifically identified on the bid form.

26. All water valves, including those over 12" in size, shall be gate valves. 27. A double check backflow device in a vault shall be installed at the property line on all private fire lines. A detector water meter will be installed on this backflow device, and it must be a Sensus SRII 3/4" meter with AMI radio read capability. The City will provide this meter. Please reference the City of Cedar Park Double Check Backflow Prevention Assembly Detail.

28. All potable water system components installed after January 4, 2014, shall be "lead free" according to the United States Safe Drinking Water Act. The only components exempt from this requirement are fire hydrants. Components that are not clearly identified by the manufacturer as meeting this requirement by marking, or on the product packaging, or by pre-approved submittal, will be rejected for use. A NSF certification will be adequate if the certification has not expired as of January 4, 2014 and remains unexpired at the time of construction. 29. All pressure pipe shall have mechanical restraint and concrete thrust blocking at all valves, bends, tees,

plugs, and other fittings. Storm Sewer Notes:

1. Manhole frames and covers and water valve boxes shall be raised to finished pavement grade at the owner's expense by the contractor with City inspection. All utility adjustments shall be completed prior to final paving construction. Contractor shall backfill around manholes and junction boxes with Class A concrete.

 All manhole lids shall be 32" or larger, unless expressly approved in writing by the Engineering Department. 3. The location of any existing utility lines shown on these plans is the best available and may not be accurate. Any damage to existing utility lines, both known and unknown, shall be repaired at the expense of the contractor. 4. Pipe materials to be used for construction of utility lines: Unless otherwise specified by the Engineer, all

- storm sewer RCP shall be Class III. Corrugated Metal Pipe is not permitted. All manhole and inlet covers shall read "City of Cedar Park".
- Contractor to notify the City of Cedar Park 48 hours prior to connecting to existing utilities.

inlets to prevent silt and other material from entering the storm sewer collection system. 10. Install concrete safety end treatments to all culverts and ends of drainage pipe. 11.All curb inlets shall have an Almetek 4" Disc "No Dumping Drains to Waterway" marker.

<u>Sequence of Construction Notes:</u>

The following sequence of construction shall be used for all development. The applicant is encouraged to provide any additional details appropriate for the particular development.

1. Temporary erosion and sedimentation controls are to be installed as indicated on the approved site plan or subdivision construction plan and in accordance with the Erosion Sedimentation Control Plan (ESC) and Stormwater Pollution Prevention Plan (SWPPP) that is required to be posted on the site. Install tree protection and initiate tree mitigation measures.

2. The General Contractor must contact the City Inspector at 512-401-5000, 72 hours prior to the scheduled date of the required on-site preconstruction meeting.

3. The General Contractor will follow the Erosion Sedimentation Control Plan (ESC) and Storm Water Pollution Prevention Plan (SWPPP) posted on the site. Temporary erosion and sedimentation controls will be revised, if needed, to comply with City Inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion plan.

4. Rough grade the pond(s) at 100% proposed capacity. Either the permanent outlet structure or a temporary outlet must be constructed prior to development of embankment or excavation that leads to ponding conditions. The outlet system must consist of a sump pit outlet and an emergency spillway meeting the requirements of the City of Austin Drainage Criteria Manual, as required. The outlet system shall be protected from erosion and shall be maintained throughout the course of construction until installation of the permanent water quality pond(s).

5. Temporary erosion and sedimentation controls will be inspected and maintained in accordance with the Erosion Sedimentation Control Plan (ESC) and Storm Water Pollution Prevention Plan (SWPPP) posted on the site. Begin site clearing/construction (or demolition) activities.

Underground utilities will be installed, including fire hydrants. Fire Department access will be installed where required by approved site plan.

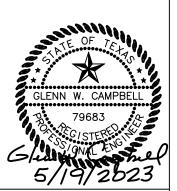
Vertical construction may occur after the Pre-vertical Inspection has been cleared by the Fire Marshal. 10. Permanent water quality ponds or controls will be cleaned out and filter media will be installed prior to/concurrently with revegetation of site.

11. Complete construction and start revegetation of the site and installation of landscaping.

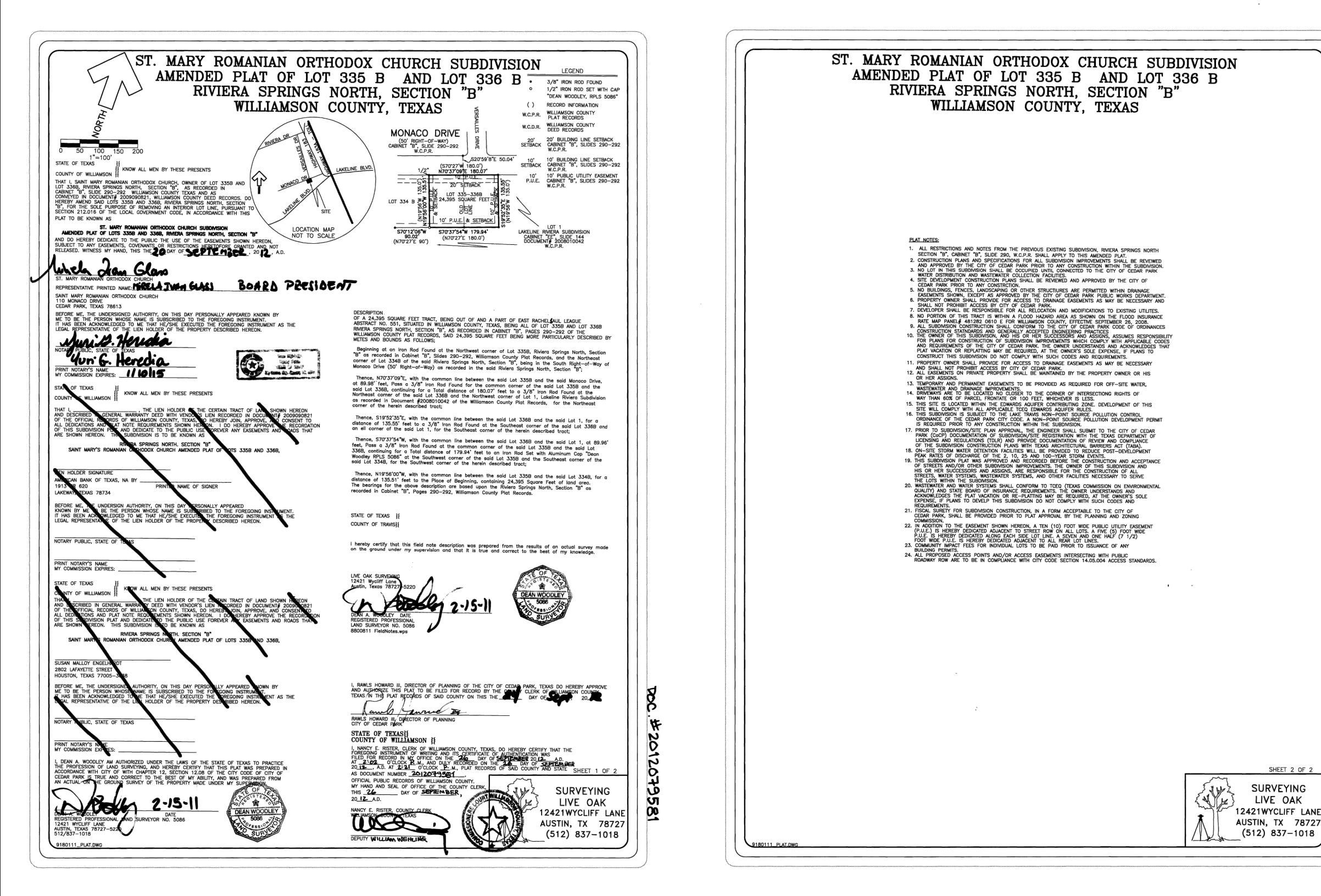
12. Upon completion of the site construction and revegetation of a project site, the design engineer shall submit an engineer's letter of concurrence bearing the engineer's seal, signature, and date to the City indicating that construction, including revegetation, is complete and in substantial compliance with the approved plans. After receiving this letter, a final inspection will be scheduled by the City Inspector.

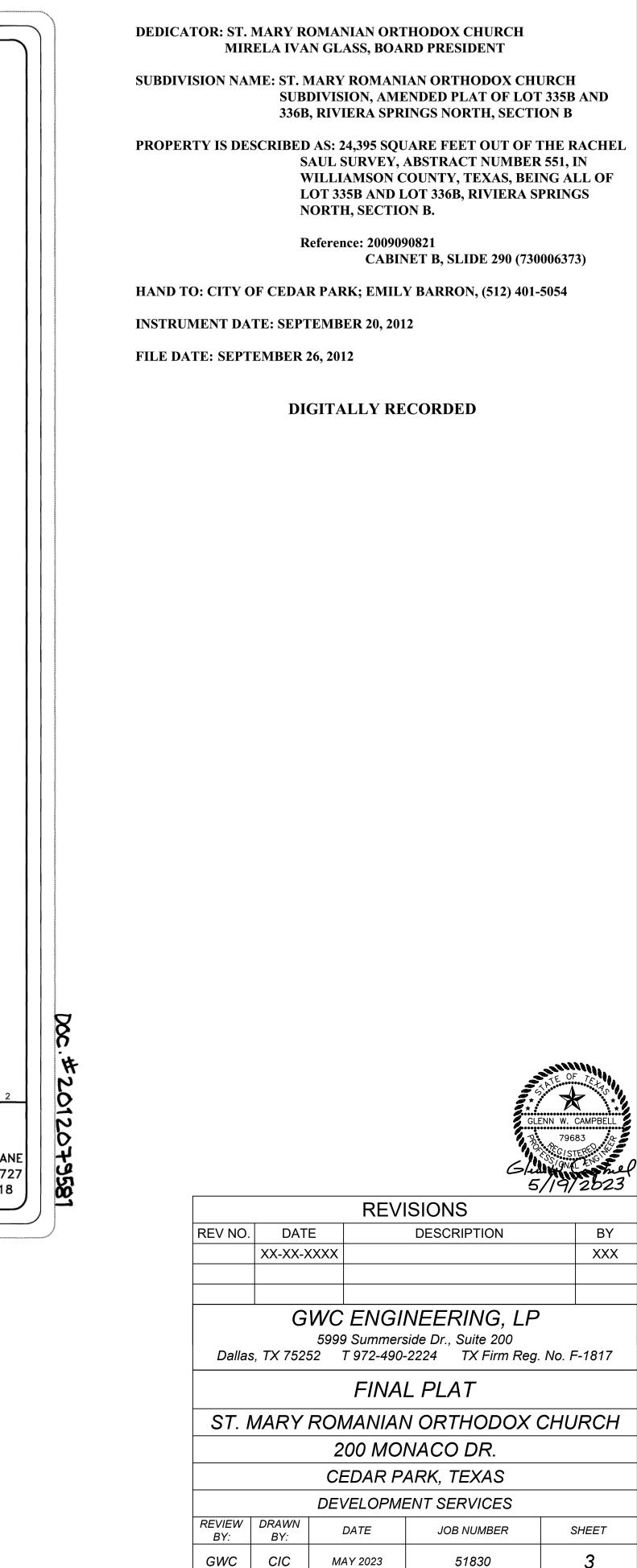
13. Upon completion of landscape installation of a project site, the Landscape Architect shall submit a letter of concurrence to the City indicating that the required landscaping is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the City Inspector.

14. After a final inspection has been conducted by the City Inspector and with approval from the City Inspector, remove the temporary erosion and sedimentation controls and complete any necessary final revegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the water quality ponds or controls.

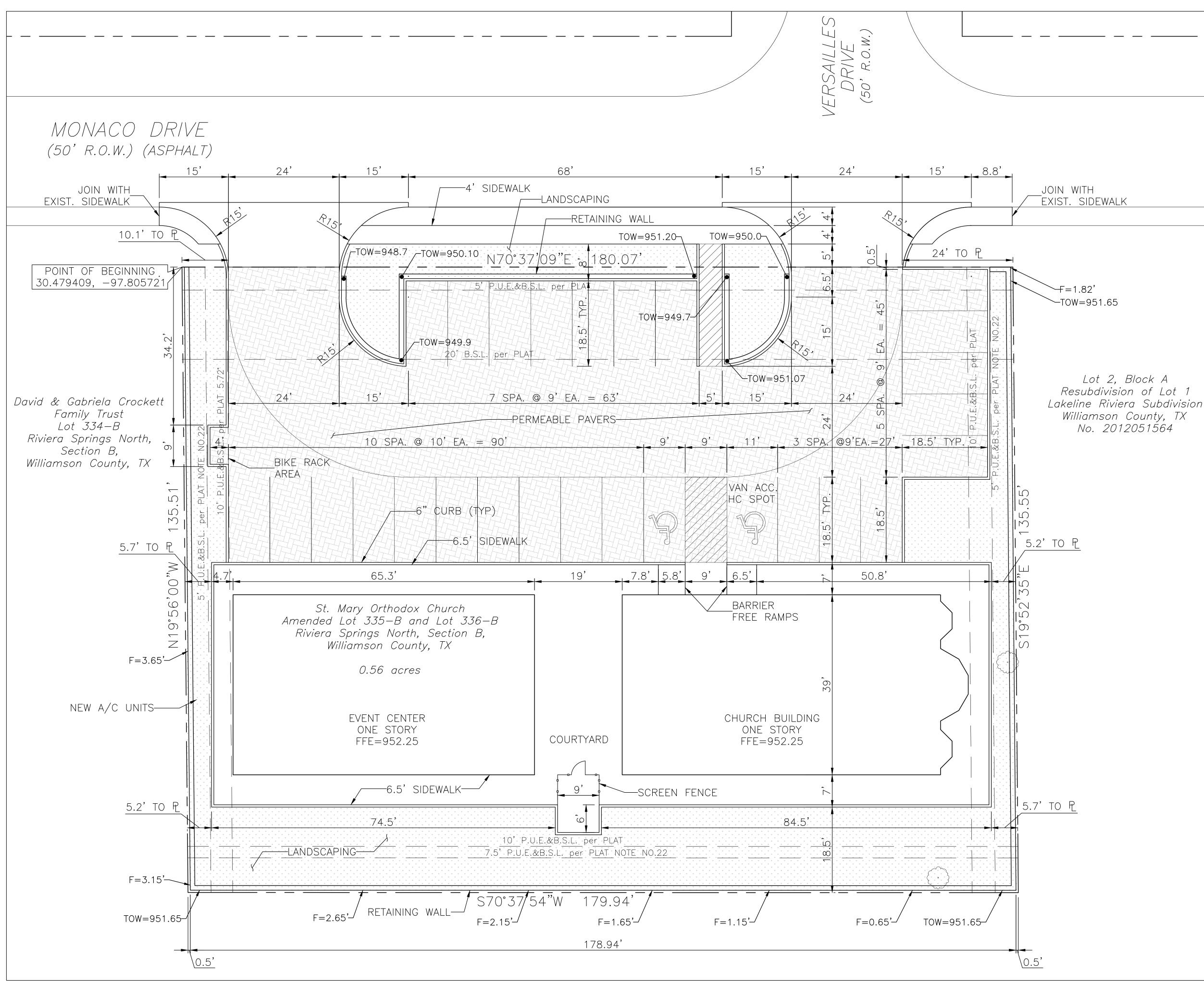


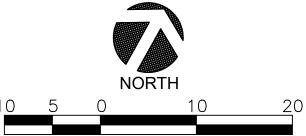
REVISIONS								
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GWC ENGINEERING, LP 5999 Summerside Dr., Suite 200 Dallas, TX 75252 T 972-490-2224 TX Firm Reg. No. F-1817								
		GENER	AL NOTES					
ST. I	MARY	ROMANIAI	N ORTHODOX (CHURCH				
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DEVELOPMENT SERVICES								
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PLAT MAP RECORDING SHEET

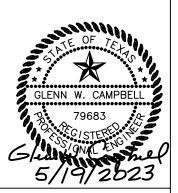




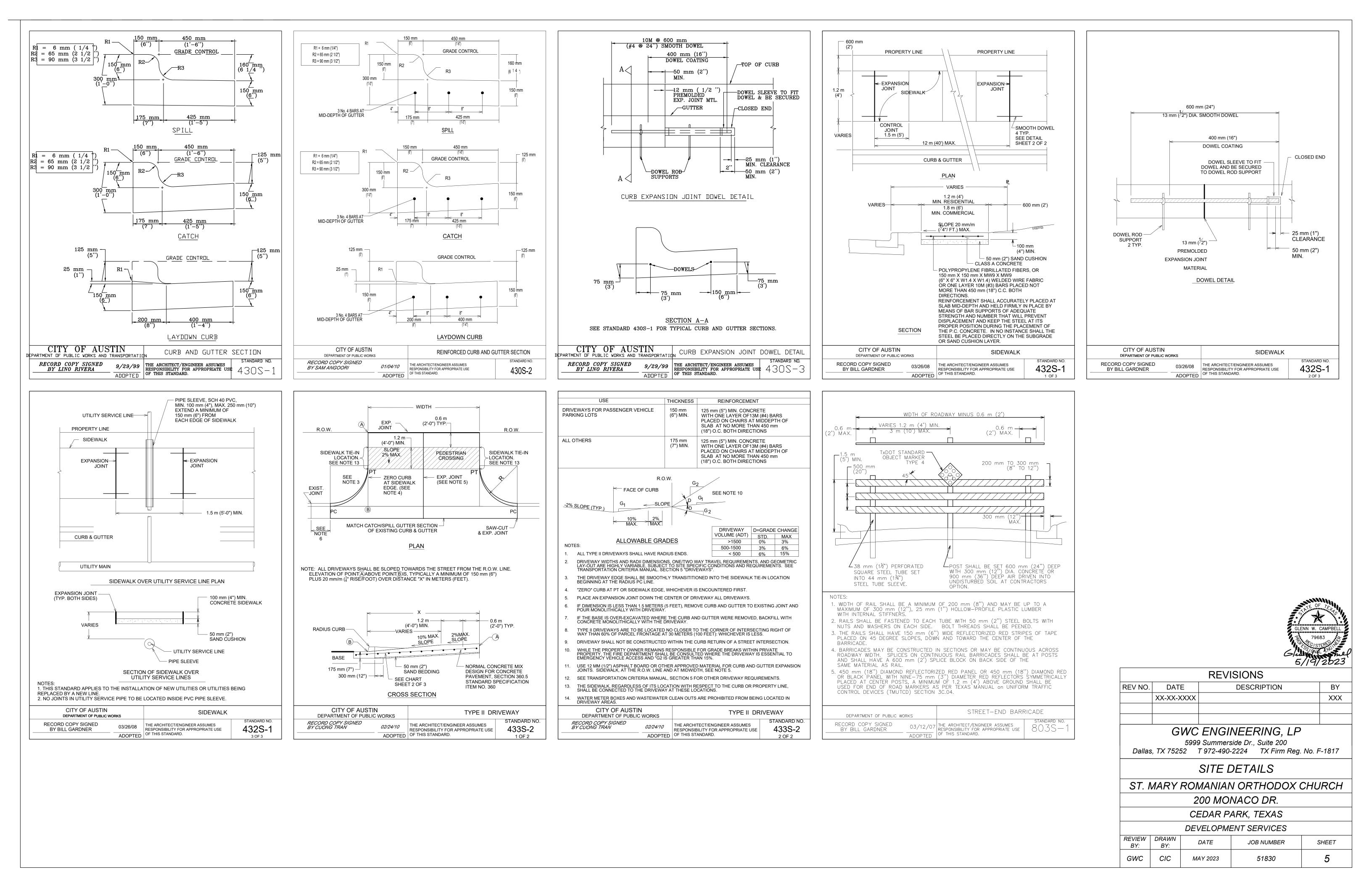
GRAPHIC SCALE IN FEET

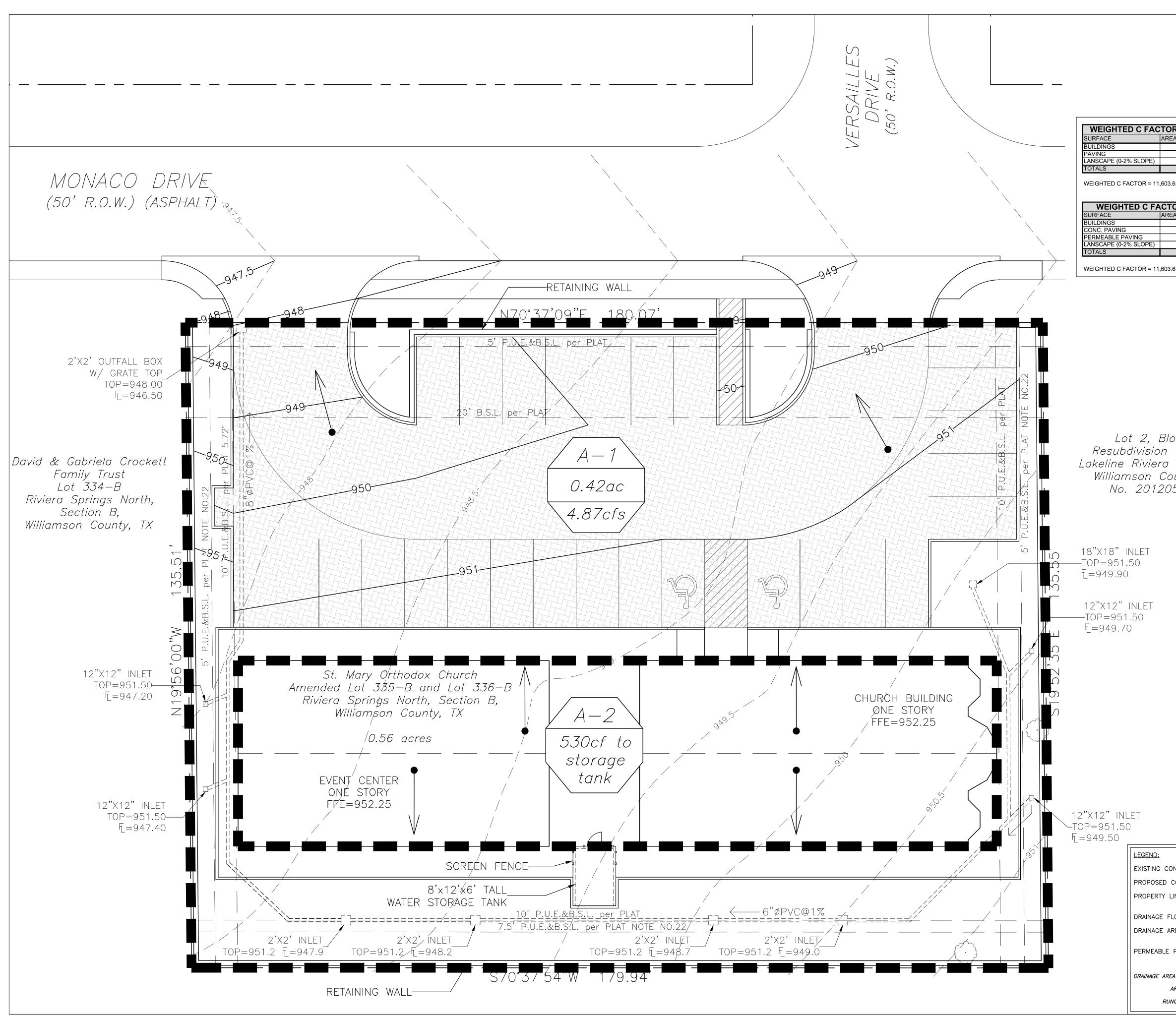
<u>GENERAL NOTES:</u>

- CURB RADIUS DIMENSIONS SHOWN HAVE BEEN APPROVED THROUGH VARIANCE GRANTED BY CITY OF CEDAR PARK.
 ON-SITE FIRE LANE IS NOT REQUIRED DUE TO CLOSE PROXIMITY OF BUILDING TO STREET.
 SEE TYPICAL PAVING DETAILS ON SHEET 5.

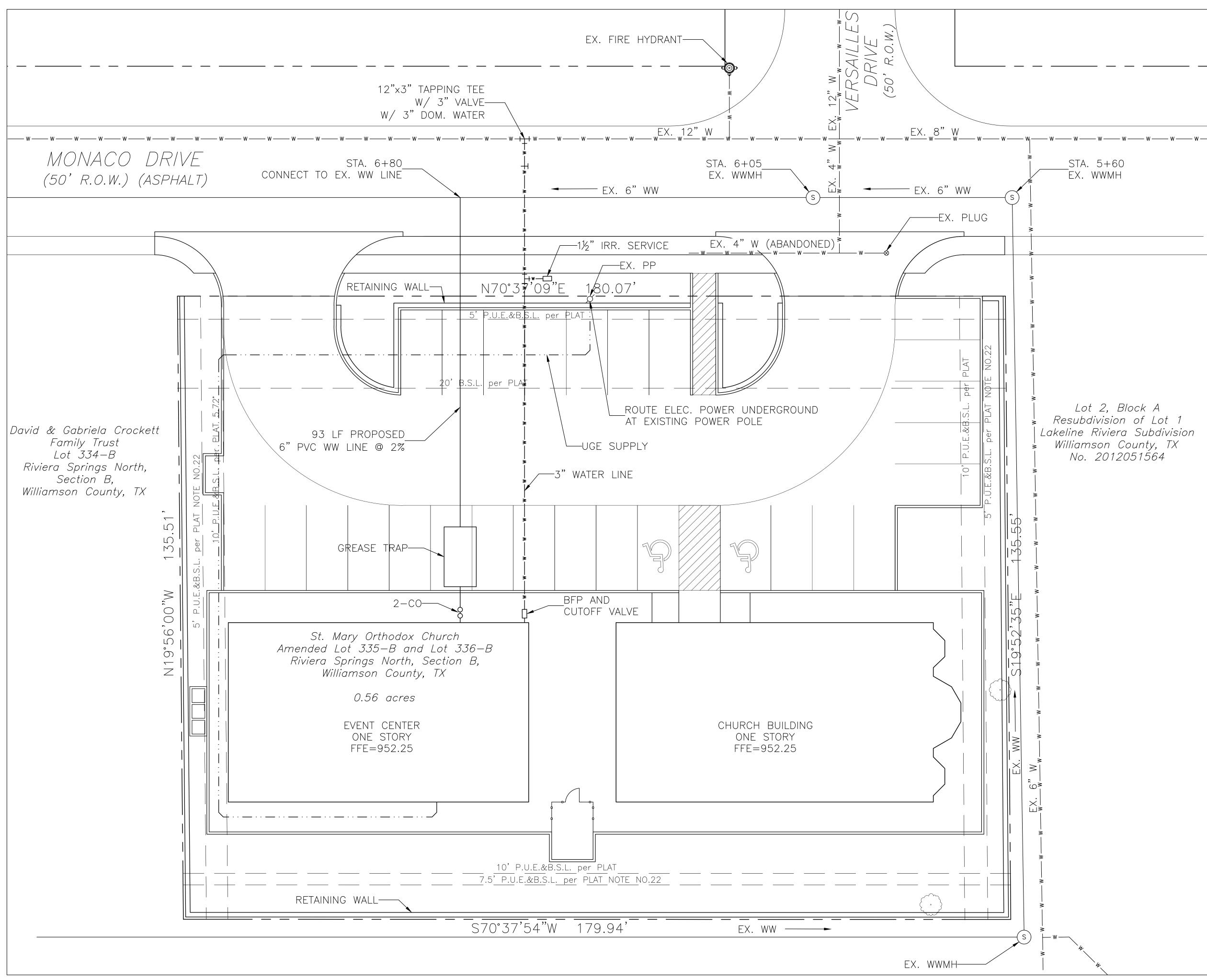


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3.6 / 24300 =	0.48		4. STORAGE REQUIR DETENTION ARE	EA = 0	.56 AC					
,	P. CONDI	TIONS A * C	ALLOWABLE ST PROPOSED COE TIME OF CONCE STORM DURATI	EFFICIENT OF I	RUNOFF		N: 3.28	CFS		
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CEDAR PARK, TEXAS									
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GWC	CIC	MAY 2023	51830	7					

GENERAL NOTES:

1. IT IS THE INTENT OF THE INFORMATION PROVIDED ON THIS SHEET AND WITHIN THE SPECIFICATIONS TO BE USED AS THE GENERAL GUIDELINES OF THE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT TO ESTABLISH A MINIMUM BASIS OF COMPLIANCE WITH FEDERAL AND THE STATE OF TEXAS REGULATIONS. THE CONTRACTOR SHALL PREPARE THE STORM WATER POLLUTION PREVENTION PLAN AND BE SOLELY RESPONSIBLE FOR ITS IMPLEMENTATION. THE STORM WATER POLLUTION PREVENTION PLAN SHALL MEET THE REQUIREMENTS SET FORTH IN THE ENVIRONMENTAL PROTECTION AGENCY'S (EPA) NPDES GENERAL PERMITS FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITES' PUBLISHED IN THE SEPTEMBER 9, 1992 FEDERAL REGISTER AND THE TCEQ REQUIREMENTS AS OUTLINED IN THE TDPES AS WELL AS ANY REQUIREMENTS IDENTIFIED BY THE CITY OF DALLAS.

 2. THE STORM WATER POLLUTION PREVENTION PLAN SHALL ADDRESS THREE GOALS:
 A) DIVERSION OF UPSLOPE WATER AROUND DISTURBED AREAS OF THE SITE

B) LIMIT THE EXPOSURE OF DISTURBED AREAS TO THE SHORTEST DURATION POSSIBLE; AND

C) REMOVAL OF SEDIMENT FROM STORM WATER BEFORE IT LEAVES THE SITE.

3. THE CONTRACTOR SHALL MAKE THE STORM WATER POLLUTION PREVENTION PLAN AVAILABLE, UPON REQUEST, TO THE EPA.

4. THE CONTRACTOR MUST AMEND PLANS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE PLAN, OR WHEN THE EXISTING PLAN PROVES INEFFECTIVE. MODIFICATIONS INCLUDING DESIGN AND ALL ADDITIONAL MATERIALS AND WORK SHALL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

5. STABILIZATION MEASURES ARE TO BE INSPECTED AT A MINIMUM OF ONCE EVERY 7 DAYS AND WITHIN 24 HOURS AFTER ANY STORM GREATER THAN 0.5 INCHES. REPAIRS AND INADEQUACIES REVEALED BY THE INSPECTION MUST BE IMPLEMENTED WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION.

6. AN INSPECTION REPORT THAT SUMMARIZES INSPECTION ACTIVITIES AND IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE RETAINED AND MADE PART OF THE PLAN.

7. ALL CONTRACTORS AND SUBCONTRACTORS IDENTIFIED IN THE PLAN MUST CERTIFY AS TO AN UNDERSTANDING OF THE NPDES GENERAL PERMIT BEFORE CONDUCTING ANY ACTIVITY IDENTIFIED IN THE POLLUTION PREVENTION PLAN.

8. THE CONTRACTOR SHALL ADOPT APPROPRIATE CONSTRUCTION SITE MANAGEMENT PRACTICES TO PREVENT THE DISCHARGE OF OILS, GREASE, PAINTS, GASOLINE, AND OTHER POLLUTANTS TO STORM WATER. APPROPRIATE PRACTICES CAN INCLUDE: DESIGNATING AREAS FOR EQUIPMENT MAINTENANCE AND REPAIR; REGULAR COLLECTION OF WASTES; CONVENIENTLY LOCATED WASTE RECEPTACLES; AND DESIGNATED AND CONTROLLING EQUIPMENT WASHDOWN.

9. THE CONTRACTOR SHALL AMEND OR MODIFY THIS PLAN AS REQUIRED BY CONSTRUCTION MEANS, METHODS AND SEQUENCE. MODIFICATIONS SHALL NOT COMPROMISE THE INTENT OF THE REQUIREMENTS OF THE LAW AND THIS PLAN. MODIFICATIONS SHALL NOT BE BASIS FOR ADDITIONAL COST TO THE OWNER.

10. AREAS OF CONSTRUCTION ELSEWHERE ON THE JOB SITE SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS.

11. BORROW AREAS, IF EXCAVATED, SHALL BE PROTECTED AND STABILIZED UTILIZING THE PLAN DETAILS. ALL WORK SHALL CONFORM TO GOVERNMENTAL REQUIREMENTS AND BECOME PART OF THE STORM WATER POLLUTION PREVENTION PLAN (SWP3). THIS WORK SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

12. ALL NON-PAVED AREAS SHALL BE MULCHED AND SEEDED WITH EROSIONS PROTECTION IMMEDIATELY UPON COMPLETION OF FINAL GRADING. THIS INCLUDES ALL DITCHES AND EMBANKMENTS. THE CONTRACTOR SHALL MAINTAIN FINAL GRADING AND KEEP SEEDED AREAS WATERED UNTIL FULLY ESTABLISHED AND ACCEPTED BY OWNER.

13. THE CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION EXIT AT ALL TRAFFIC EXIT POINTS PRIOR TO EXITING ONTO ANY PAVED ROADWAY. EXIT SHALL BE CONSTRUCTED AS DETAILED THIS SHEET.

14. THE CONTRACTOR SHALL CONSTRUCT A REINFORCED FILTER BARRIER (RFB) AT ALL LOCATIONS SHOWN ON PLANS. THE RFB SHALL BE CONSTRUCTED AS DETAILED THIS SHEET.

15. THE CONTRACTOR SHALL DESIGNATE MATERIAL AND EQUIPMENT STORAGE AREAS MUTUALLY AGREED TO BY OWNER. THE STORAGE AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE AND THE SURFACE STABILIZED WITH A MINIMUM OF 2 INCHES OF CRUSHED ROCK OR GRAVEL. REINFORCED FILTER BARRIER SHALL BE INSTALLED AROUND THE STORAGE AREAS TO PREVENT ANY EROSION FROM LEAVING THE SITE.

16. A LINED, BERMED, LIQUID-TIGHT AREA SHALL BE PROVIDED (PER THE CITY FIRE CODE) FOR THE STORAGE OF TEMPORARY FUEL TANKS PLACED ON-SITE DURING CONSTRUCTION.

17. WHILE REMOVING WATER FROM PONDED/EXCAVATED AREAS, PUMPED WATER SHALL BE FILTERED TO REMOVE SEDIMENT AND OTHER POLLUTANTS (PETROLEUM PRODUCTS, ADMIXES, ETC.) BEFORE THE WATER LEAVES THE SITE OR ENTERS THE STORM DRAIN SYSTEM. SILT BARRIERS SHALL NOT BE BYPASSED.

18. ALL RUNOFF FROM SUBGRADE STABILIZATION OPERATIONS TO THAT WHICH CAN BE MIXED AND COMPACTED BY THE END OF EACH WORKDAY.

19. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ALL REQUIRED PERMITS AND ABIDE BY SUCH PERMITS AND REQUIREMENTS.

EROSION CONTROL NOTES:

1. PERMANENT VEGETATIVE SEEDING SHALL BE APPLIED AT A RATE OF 4.0 POUNDS TOTAL SEED PER 1000 SQUARE FEET (EQUIVALENT RATE OF 175 TOTAL POUNDS PER ACRE). IF HYDROSEEDING, THE SEED RATE SHALL BE INCREASED BY 25%.

2. MULCHING SHALL BE SALT HAY OR SMALL GRAIN STRAW APPLIED AT A RATE OF 70 TO 90 POUNDS PER 1000 SQUARE FEET TO BE APPLIED ACCORDING TO THE CITY OF DALLAS STANDARDS. MULCH SHALL BE SECURED BY AN APPROVED METHOD SUCH AS LIQUID MULCH BINDER, CRIMPING, PEG AND TWINE, ETC.

3. THE EROSION CONTROL DESIGN IS BASED ON AN ESTIMATED PROJECT DURATION OF NINE MONTHS. EROSION CONTROL MEASURES SHALL BE INSTALLED AT THE ONSET OF CONSTRUCTION, AND SHALL BE MAINTAINED DURING THE ENTIRE PROJECT DURATION.

4. WHEREVER THERE IS POTENTIAL FOR SEDIMENT DISCHARGE TO ADJACENT PROPERTIES, STREETS, OR DRAINAGE FACILITIES (INCLUDING AREAS DISTRIBUTED BY STORAGE, STAGING, STOCKPILES, BORROW, SOIL DISPOSAL, VEHICULAR TRAFFIC, PARKING, ETC.), A SEDIMENT BARRIER SHALL BE INSTALLED AS DETAILED THIS SHEET.

5. ALL PERIMETER SEDIMENT BARRIERS AND CONSTRUCTION EXITS, SHALL BE IN PLACE BEFORE THE START OF ANY DISTURBING SOIL ACTIVITY. WHILE INSTALLING SEDIMENT BARRIERS, TRENCHES SHALL NOT BE WITHIN THE DRIP LINE OF TREES TO BE SAVED.

6. FLOATABLE AND WINDBLOWN WASTE MATERIALS SHALL BE KEPT IN AN ENCLOSURE SUCH THAT THESE ITEMS WILL BE RETAINED UNTIL PROPER OFF-SITE DISPOSAL CAN BE PERFORMED. ADJACENT AREAS SHALL BE VISUALLY INSPECTED DAILY FOR THE ESCAPE OF SUCH WASTE ITEMS. MATERIAL THAT HAS ESCAPED THE CONSTRUCTION PROPERTY SHALL BE PICKED UP UPON DISCOVERY.

7. PERMANENTLY STABILIZE ALL BARE GROUND WITHIN AND ADJACENT TO THE SITE THAT IS DISTRIBUTED BY CONSTRUCTION OF THE PROPOSAL FACILITY PRIOR TO TERMINATING MAINTENANCE AND REMOVAL OF EROSION CONTROL MEASURES.

8. CONTRACTOR SHALL INSPECT POLLUTION CONTROL MEASURES AT LEAST ONCE EVERY 14 DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF GREATER THAN ½ INCH AND MAKE IMMEDIATE REPAIRS THAT ARE NECESSARY. CONTROL MEASURES THAT PROVE INEFFECTIVE SHALL BE REPLACED WITH MORE EFFECTIVE MEASURES OR ADDITIONAL MEASURES WITHIN SEVEN CALENDAR DAYS. REPEATED FAILURE OF A CONTROL MEASURE REQUIRES INSTALLATION OF A MORE SUITABLE DEVICE TO PREVENT DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE.

<u>NOTES:</u>

1) THE CONTRACTOR SHALL INSPECT SILT FENCE WEEKLY AND AFTER MAJOR RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY AND MAINTAIN IN ACCORDANCE WITH NCTCOG ITEM 3.12.

2) THE CONTRACTOR SHALL REMOVE SEDIMENT FROM BEHIND FENCE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-THIRD THE HEIGHT OF THE FENCE ABOVE GRADE.

3) THE CONTRACTOR SHALL INSPECT THE BASE OF THE FENCE TO ENSURE THAT NO GAPS HAVE DEVELOPED AND RE-TRENCH AS NECESSARY.

4) THE CONTRACTOR SHALL INSPECT FENCE POSTS TO ENSURE THAT THEY ARE PROPERLY SUPPORTING THE FENCE. IF NECESSARY, THE CONTRACTOR SHALL RESET AND ADD POSTS.

5) IF FILTER FABRIC IS RIPPED, DAMAGED OR DETERIORATED, THE CONTRACTOR SHALL REPLACE IT IN ACCORDANCE WITH THE ORIGINAL SPECIFICATIONS AND DETAILS. (MAINTENANCE OF THE SILT FENCE SHALL BE AT THE CONTRACTORS OWN EXPENSE)

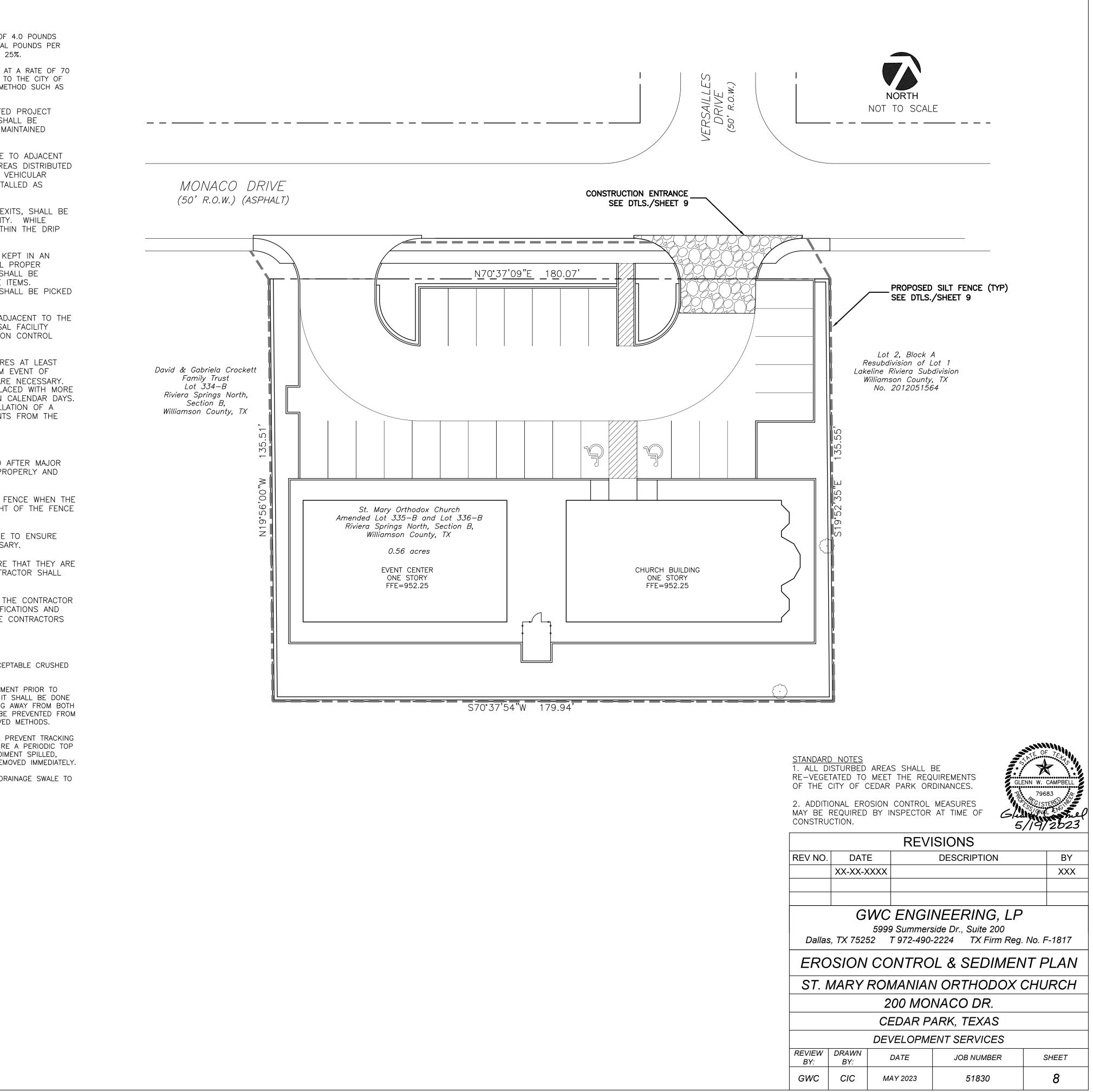
CONSTRUCTION NOTES - CONSTRUCTION ENTRANCE:

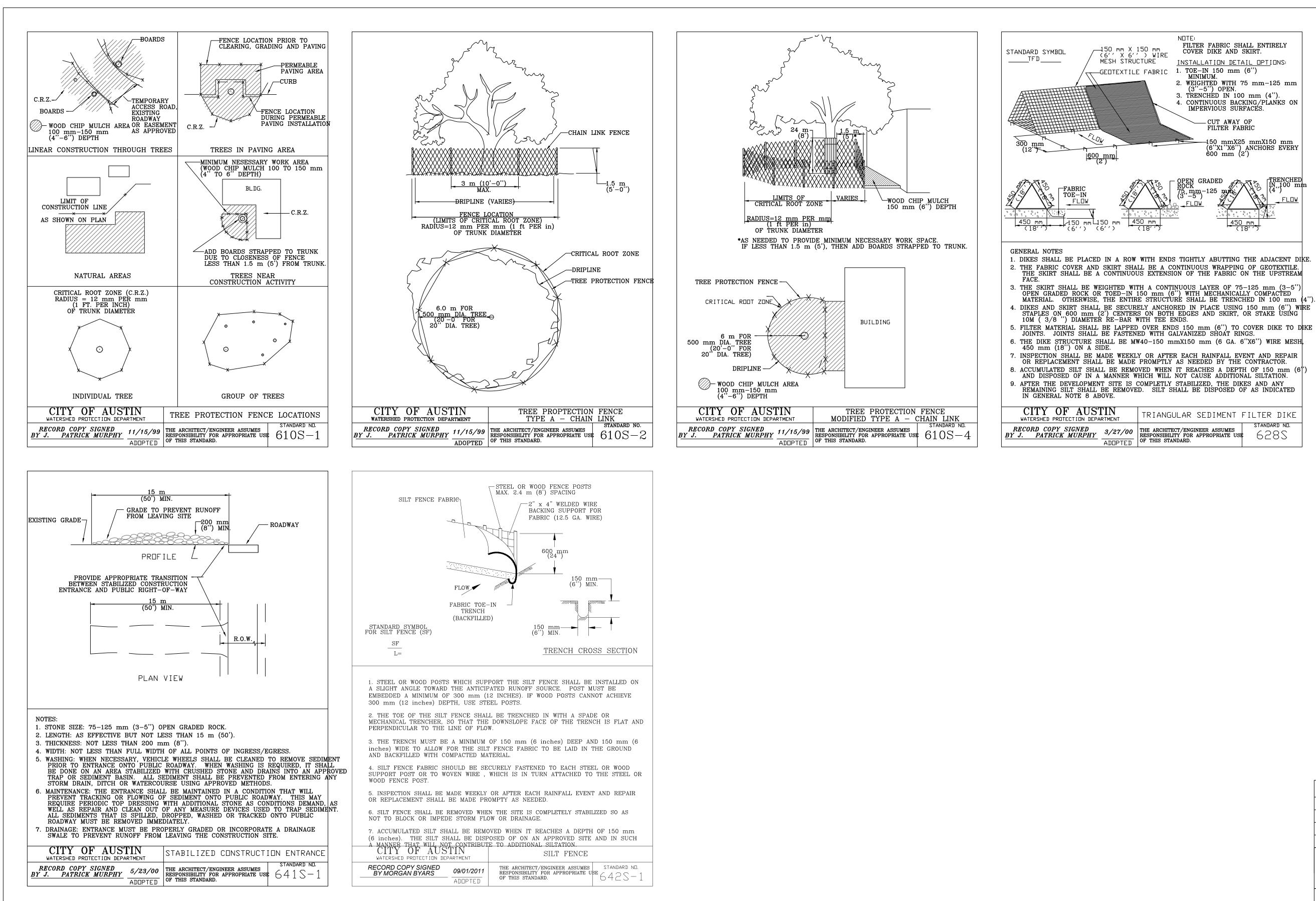
1. STONE SHALL BE 3 TO 5 INCH DIAMETER CRUSHED ROCK OR ACCEPTABLE CRUSHED PORTLAND CEMENT CONCRETE.

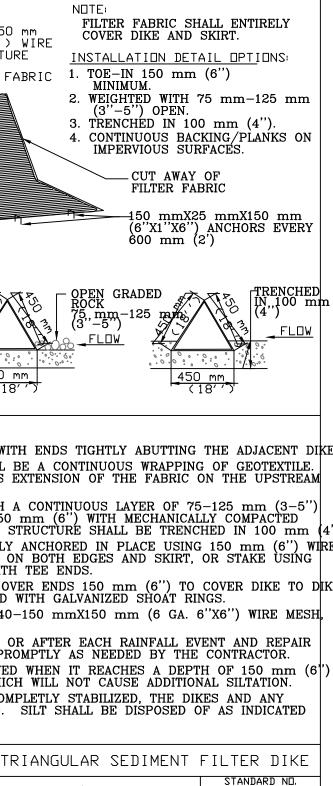
2. WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

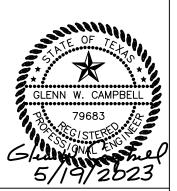
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE A PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED IMMEDIATELY.

4. THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

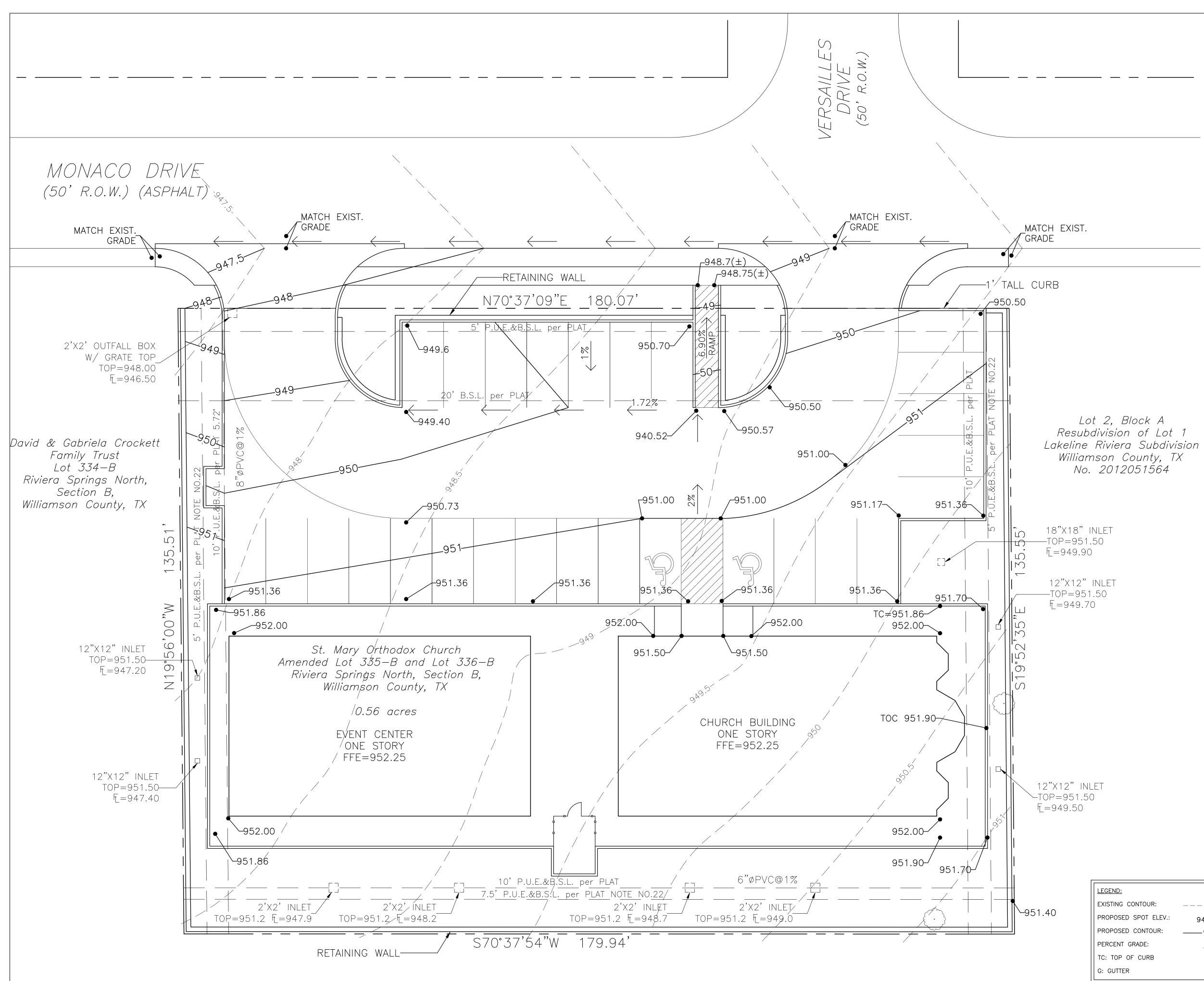


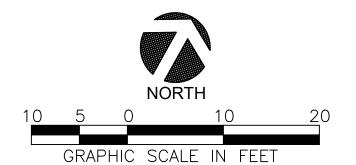






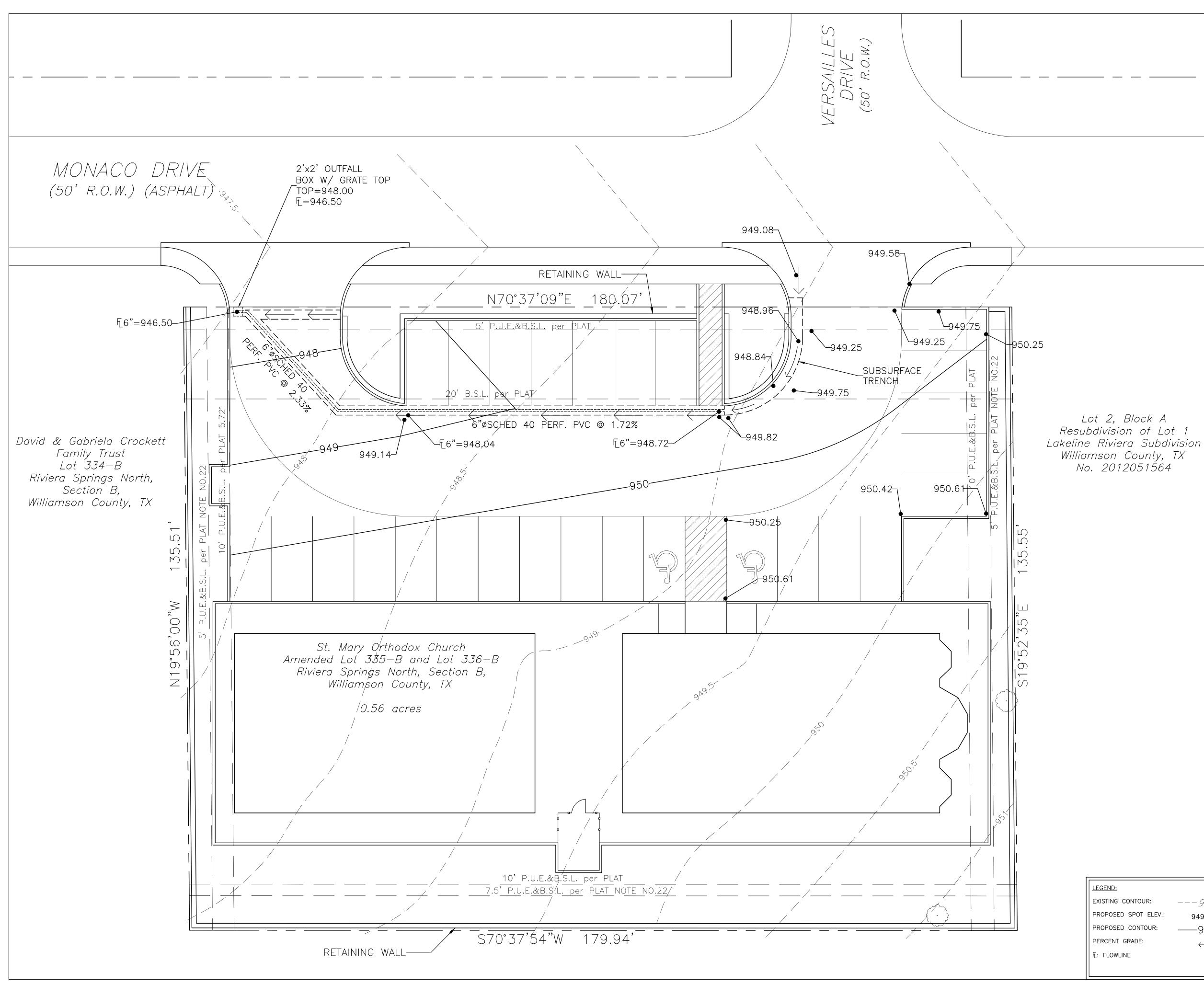
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EROSION CONTROL & SEDIMENT DETAILS								
ST. MARY ROMANIAN ORTHODOX CHURCH								
200 MONACO DR.								
CEDAR PARK, TEXAS								
DEVELOPMENT SERVICES								
REVIEW BY:	DRAWN BY:	DATE	JOB NUMBER	SHEET				
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	GRADING PLAN - SURFACE							
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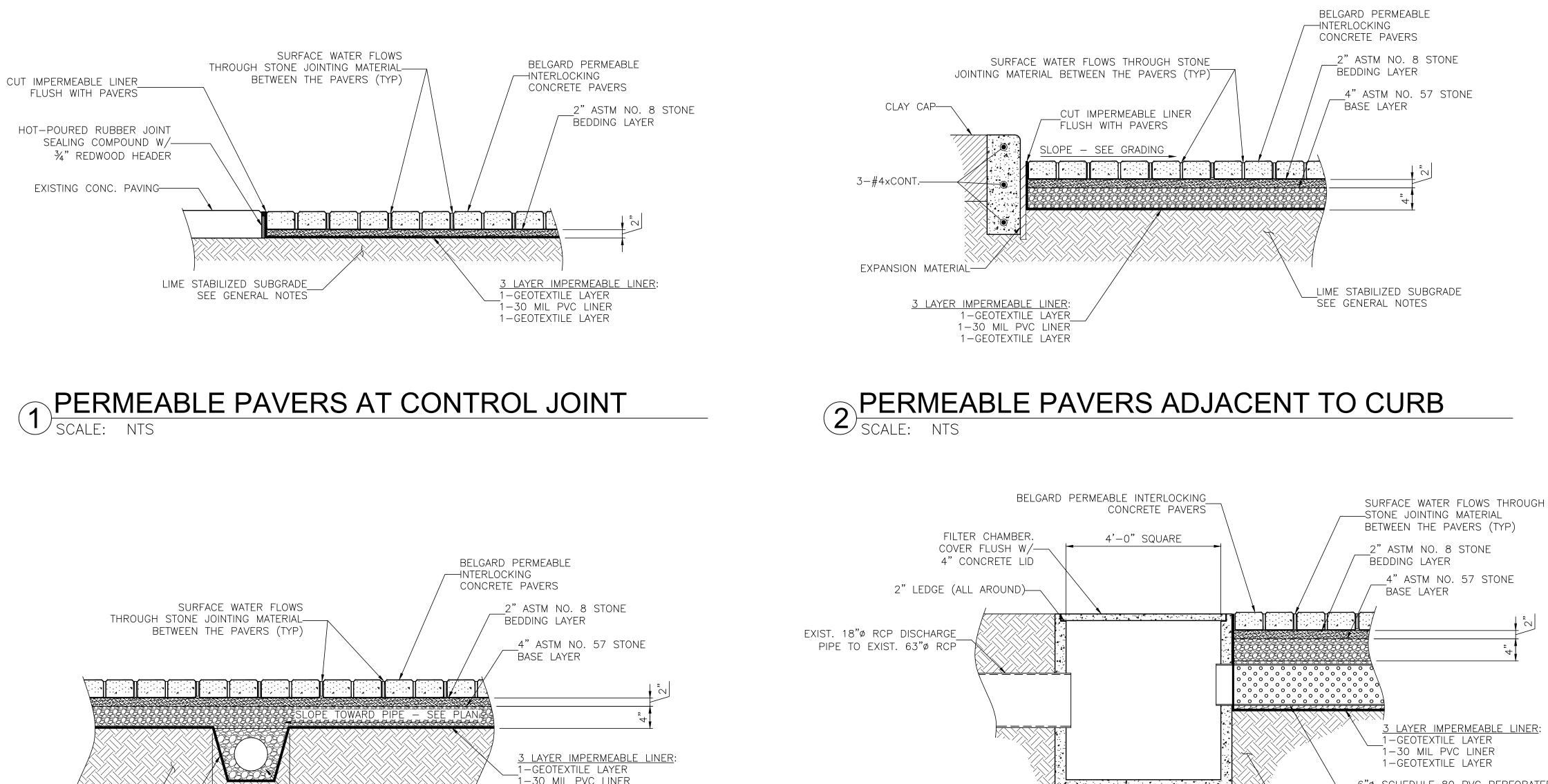


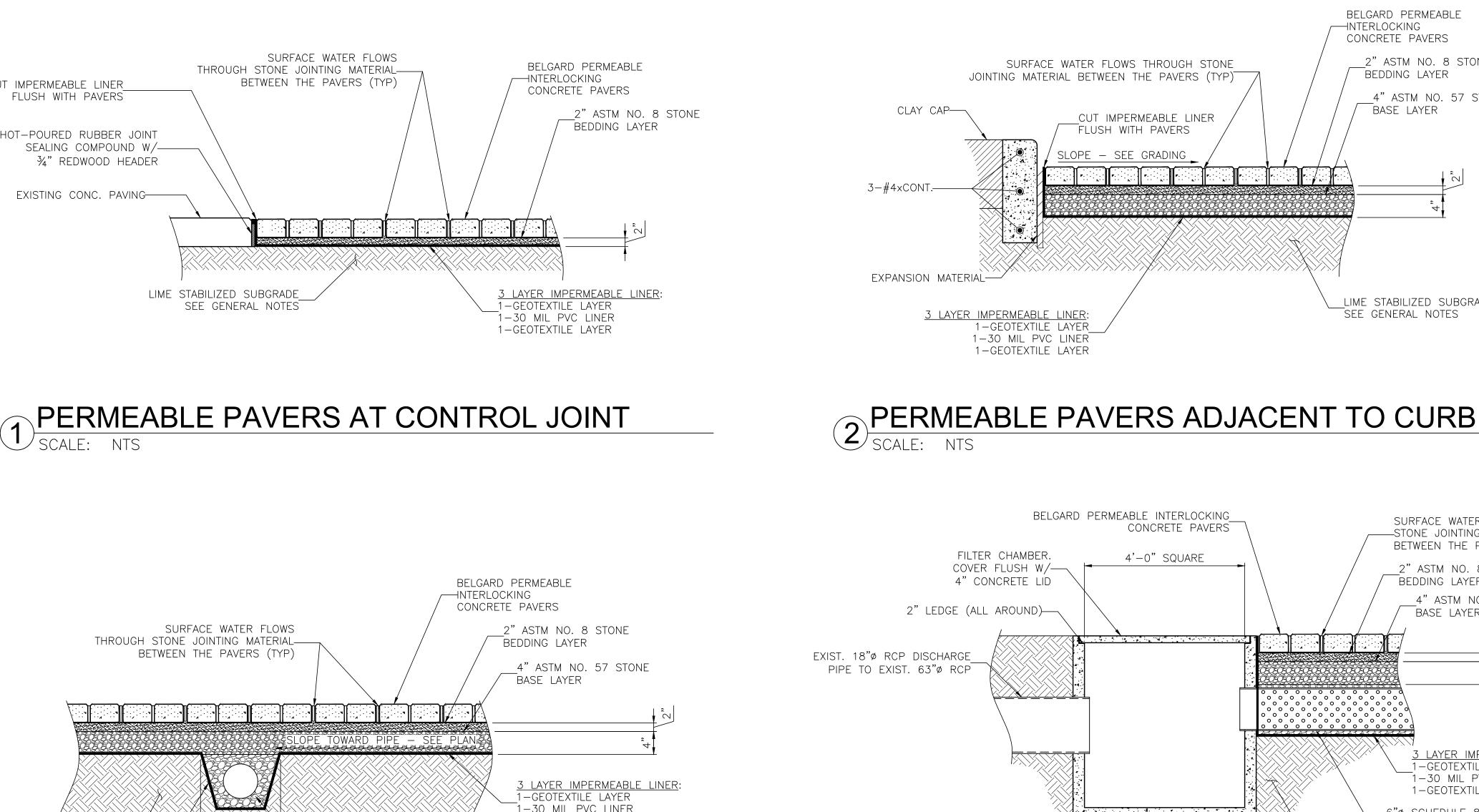


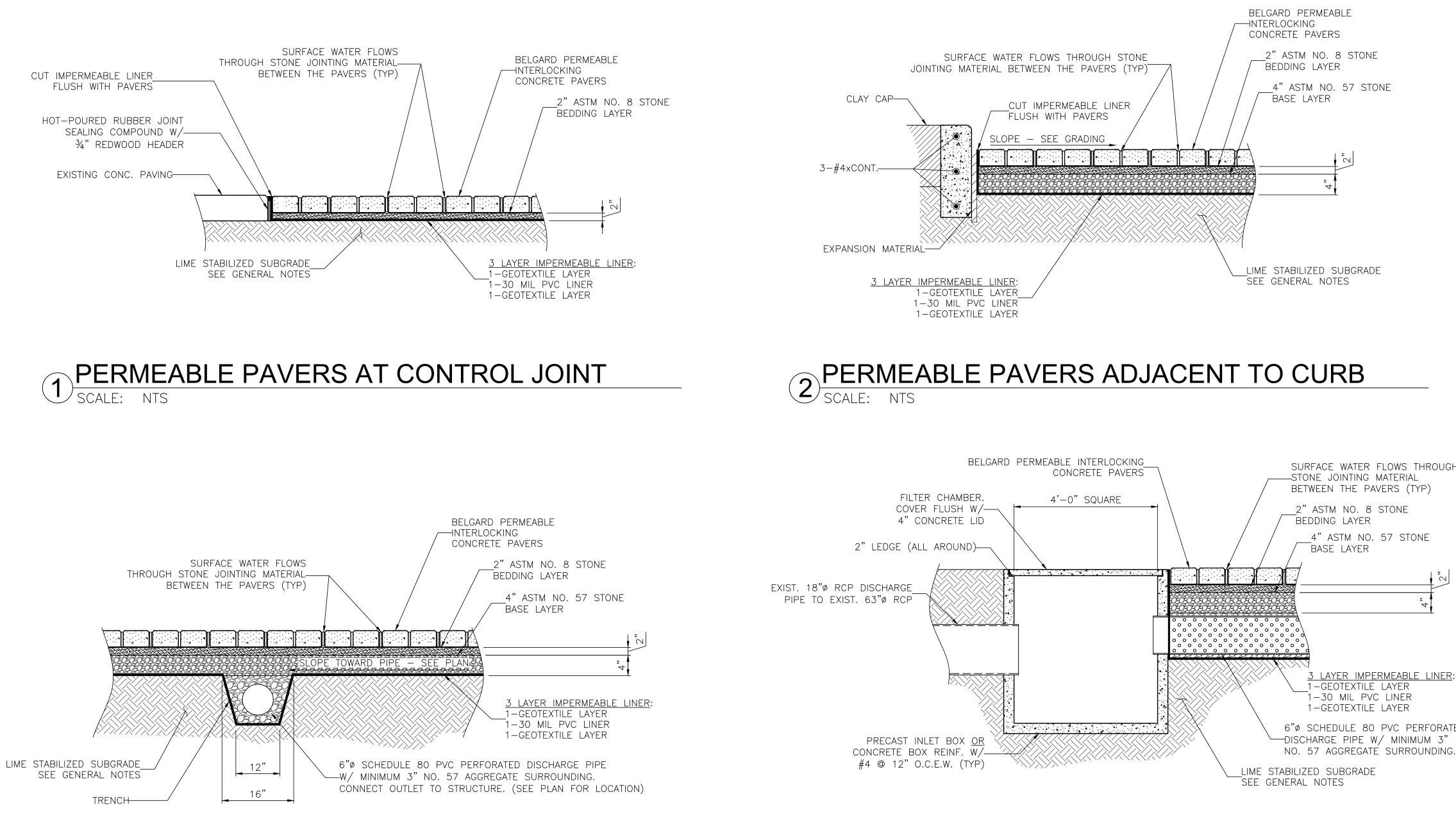
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	GRADING PLAN - SUBSURFACE							
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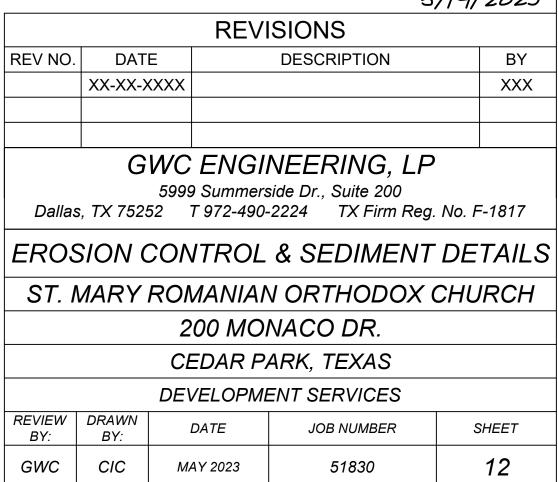




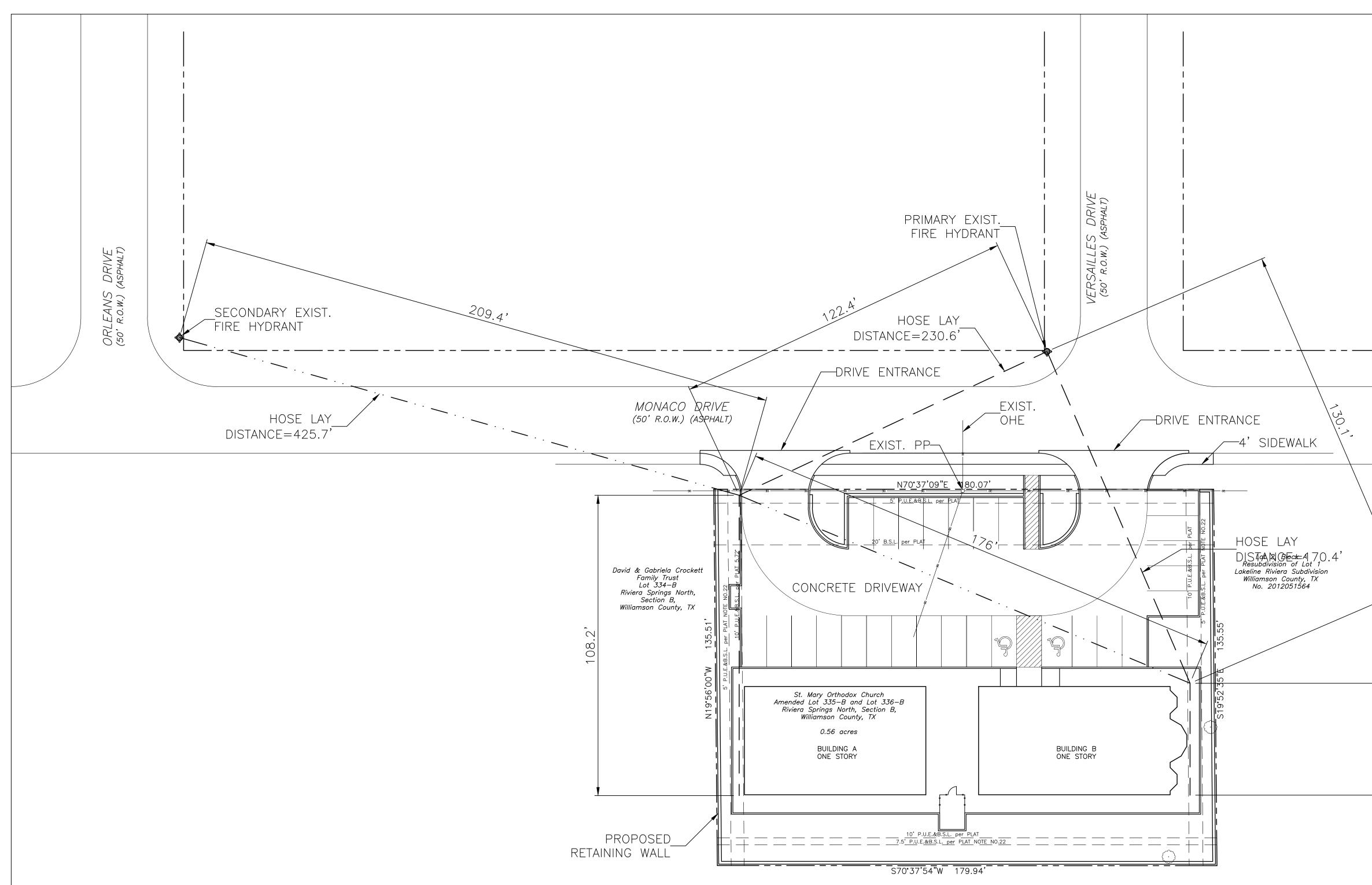
4 PERMEABLE PAVERS ADJACENT TO CURB SCALE: NTS

4" ASTM NO. 57 STONE

<u>3 LAYER IMPERMEABLE LINER:</u> 6"ø SCHEDULE 80 PVC PERFORATED





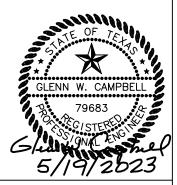


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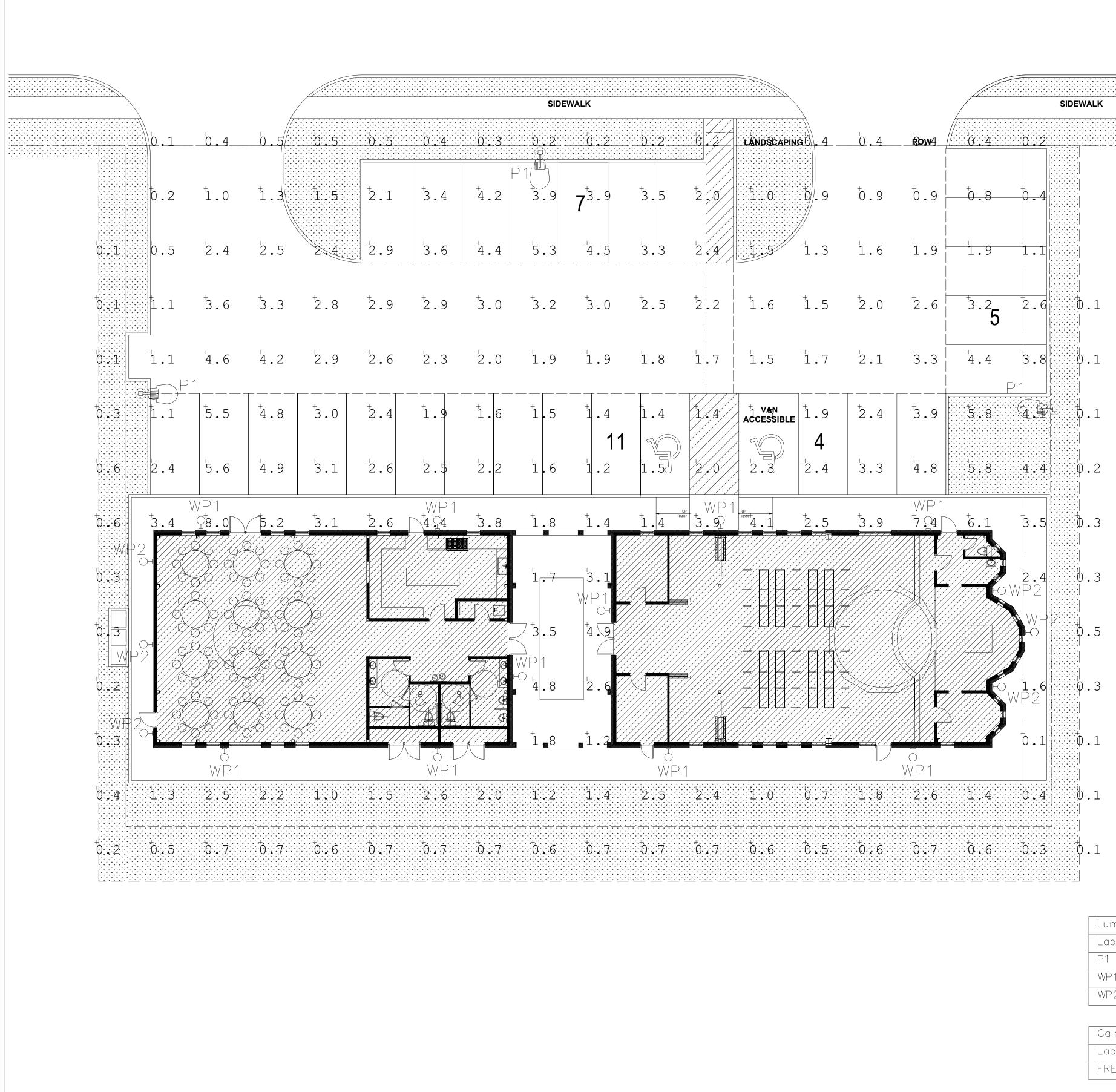
GENERAL NOTES:

- CURB RADIUS DIMENSIONS SHOWN HAVE BEEN APPROVED THROUGH VARIANCE GRANTED BY CITY OF CEDAR PARK.
 ON-SITE FIRE LANE IS NOT REQUIRED DUE TO CLOSE PROXIMITY
- OF BUILDING TO STREET.
 FIRE APPARATUS ACCESS SHALL BE THE EXISTING STREET
- ADJACENT TO THE PROPERTY, WHICH IS COMPLIANT WITH CURRENT FIRE ACCESS REQUIREMENTS. 4. ALL CONSTRUCTION VEHICLES AND CONSTRUCTION WORKERS'
- VEHICLES MUST BE PARKED ON SITE. NO VEHICLE SHALL BE ALLOWED TO PARK OR STOP IN THE FIRE APPARATUS ACCESS ROADS, WHETHER OCCUPIED OR UNOCCUPIED. 5. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER
- TEMPORARY OF PERMANENT, SHALL BE MADE AVAILABLE PRIOR TO COMBUSTIBLE MATERIALS ARRIVING ON SITE AND PRIOR TO THE ONSET OF VERTICAL CONSTRUCTION.
- 6. STRUCTURES UNDER CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORTABLE EXTINGUISHER IN ACCORDANCE WITH IFC SECTION 906 AND SIZED FOR NOT LESS THAN ORDINARY HAZARDS AS FOLLOWS: (1) AT EACH STAIRWAY ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED. (2) IN EVERY STORAGE AND CONSTRUCTION SHED. (3) ANYWHERE SPECIAL HAZARDS EXIST, INCLUDING BUT NOT LIMITED TO, THE STORAGE AND USE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.
- WHERE ANY FIRE HYDRANTS ARE SUBJECT TO IMPACT BY A MOTOR VEHICLE, GUARD POSTS SHALL BE CONSTRUCTED AS SET FORTH IN IFC SECTION 312.
- 8. A MINIMUM 36 INCHES OF CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT.
- 9. COMBUSTIBLE DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE WITHIN BUILDINGS. COMBUSTIBLE DEBRIS, RUBBISH AND WASTE MATERIAL SHALL BE REMOVED FROM BUILDINGS AT THE END OF EACH SHIFT OR WORK DAY. COMBUSTIBLE DEBRIS, RUBBISH AND WASTE MATERIAL SHALL NOT BE DISPOSED OF BY BURNING ON SITE.
- 10. MATERIALS SUSCEPTIBLE TO SPONTANEOUS IGNITION, SUCH AS OILY RAGS, SHALL BE STORED IN A UL LISTED DISPOSAL CONTAINER. CONTENTS OF SUCH CONTAINERS SHALL BE REMOVED AND DISPOSED OF DAILY. STORAGE OF COMBUSTIBLE RUBBISH SHALL NOT PRODUCE CONDITIONS THAT WILL CREATE A NUISANCE OR BE
- A HAZARD TO PUBLIC HEALTH, SAFETY OR WELFARE. 11. COMBUSTIBLE WASTE MATERIAL CREATING A FIRE HAZARD SHALL NOT BE ALLOWED TO ACCUMULATE IN BUILDINGS OR STRUCTURES,
- OR ON PREMISES. 12. OUTSIDE STORAGE OF COMBUSTIBLE MATERIALS SHALL NOT BE LOCATED WITHIN 10 FEET OF A PROPERTY LINE.



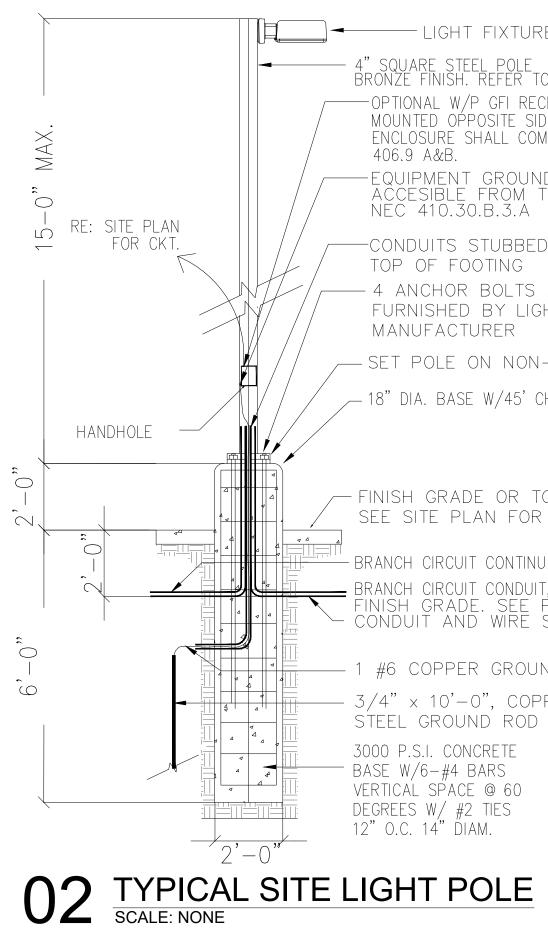
REVISIONS							
REV NO. DATE DESCRIPTION BY							
XX-XX-XXXX XXX							
<i>GWC ENGINEERING, LP</i> 5999 Summerside Dr., Suite 200 Dallas, TX 75252 T 972-490-2224 TX Firm Reg. No. F-1817							
FIRE PROTECTION PLAN							
ST. MARY ROMANIAN ORTHODOX CHURCH							
200 MONACO DR.							
CEDAR PARK, TEXAS							
DEVELOPMENT SERVICES							
REVIEW BY:	DRAWN BY:	DATE	JOB NUMBER	s	HEET		
GWC	CIC	MAY 2023	51830		13		

 \bigcirc



ELECTRICAL SITE NOTES

- CEDAR PARK, TEXAS SIGN REGULATIONS.
- 2. EXTERIOR LIGHTING SHALL BE INSTALLED PER THE CITY CEDAR PARK ELECTRICAL ORDINANCE AND IN CONJUNCTION WITH THE 2020 NEC.
- 3. ALL CONDUIT FOR ELECTRICAL SERVICE SHALL BE INSTALLED PER UTILITY STANDARDS AND SHALL HAVE MINIMUM 42" COVER. CONTRACTOR SHALL BE RESPONSIBLE FOR FILING WITH UTILITY AND INSTALLING PER UTILITY INSTRUCTIONS.
- STANDARDS, CONTACT PHONE COMPANY BEFORE ANY WORK BEGINS. 5. CONTRACTOR SHALL INSTALL ALL CABLES AND CONDUIT PER CABLE COMPANY STANDARDS,
- COORDINATE AS REQUIRED. 6. CONNECT POST INDICATOR VALVE TO FIRE ALARM SYSTEM. VERIFY EXACT LOCATION BEFORE
- ROUGH-IN. 7. MOUNT POWER METER AT PAD MOUNTED TRANSFORMER OR AS DIRECTED BY UTILITY CO.
- 8. ALL UTILITIES, INCLUDING ELECTRICAL DISTRIBUTION AND COMMUNICATION SHALL BE INSTALLED BELOW GRADE AS REQUIRED.
- HOODED



Label	Qty	Description	Lum. Watts	Lum. Lumens	[MANUFAC]
⊃1	3	DSX1 LED P3 50K 70CRI BLC4	102.17	10539	Lithonia Lighting
WP1	10	WPX1 LED P1 50K MVOLT	11.39	1602	Lithonia Lighting
WP2	6	OLLWU LED P1 50K 120 DDB	13.8	1091	Lithonia Lighting

Calculation Su	ummary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
FREE GRID	Illuminance	Fc	1.99	8.0	0.1	19.90	80.00

I. COORDINATE WITH SIGN CONTRACTOR ALL ILLUMINATED SIGNS IN ACCORDANCE TO CITY OF

4. CONTRACTOR SHALL INSTALL ALL TELEPHONE CONDUIT IN COORDINATION WITH TELEPHONE COMPANY

. AREA PARKING LIGHTS SHALL BE CONTROLLED BY A PHOTOCELL AND TIME CLOCK CONTROL. MOUNT OUTDOOR PHOTOCELL HORIZONTALLY ON ROOF OR EQUAL, FACING NORTHERN SKY. PORTION ON TOP, POINTED AWAY FROM ANY NIGHTIME LIGHT SOURCES. TIME SWITCH SHALL BE CAPABLE OF RETAINING PROGRAMMING AND THE TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS. ALL EXTERIOR LIGHTS SHALL BE LISTED DARK SKY COMPLIANT.

LIGHT FIXTURE REFER TO SPECS.	
4" SQUARE STEEL POLE BRONZE FINISH. REFER TO SPECS. OPTIONAL W/P GFI RECEPTACLE, MOUNTED OPPOSITE SIDE OF HANDHOLE,	
/ MOUNTED OPPOSITE SIDE OF HANDHOLE, ENCLOSURE SHALL COMPLY WITH NEC 406.9 A&B.	
EQUIPMENT GROUNDING TERMINAL ACCESIBLE FROM THE HANDHOLE NEC 410.30.B.3.A	
CONDUITS STUBBED UP 6" ABOVE	
4 ANCHOR BOLTS AND TEMPLATE FURNISHED BY LIGHT POLE MANUFACTURER	
SET POLE ON NON-SHRINK GROUT BASE	-
— 18" DIA. BASE W/45' CHAMFER	
FINISH GRADE OR TOP OF PAVING SEE SITE PLAN FOR LOCATION	
BRANCH CIRCUIT CONTINUATION AS REQUIRED BRANCH CIRCUIT CONDUIT, 24" BELOW FINISH GRADE. SEE PLAN FOR CONDUIT AND WIRE SIZES.	
1 #6 COPPER GROUND	

3000 P.S.I. CONCRETE BASE W/6-#4 BARS VERTICAL SPACE @ 60

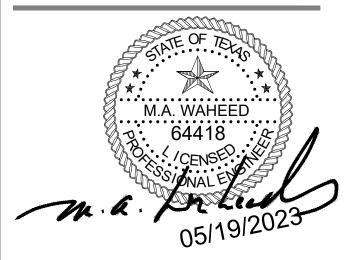
DEGREES W/ #2 TIES 12"O.C. 14"DIAM.

Terzyan Architecture stepanterzyan@gmail.com 240-535-2507 terzyanarchitecture.com

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WAHEED CONSULTING

420 PARKSIDE COURT MURPHY, TEXAS 75094 PH: 469-768-6025 FIRM #: F-6336



ST Mary Orthodox Church

200 Monaco Cedar Park, TX 78613

Revision

May 19, 2023

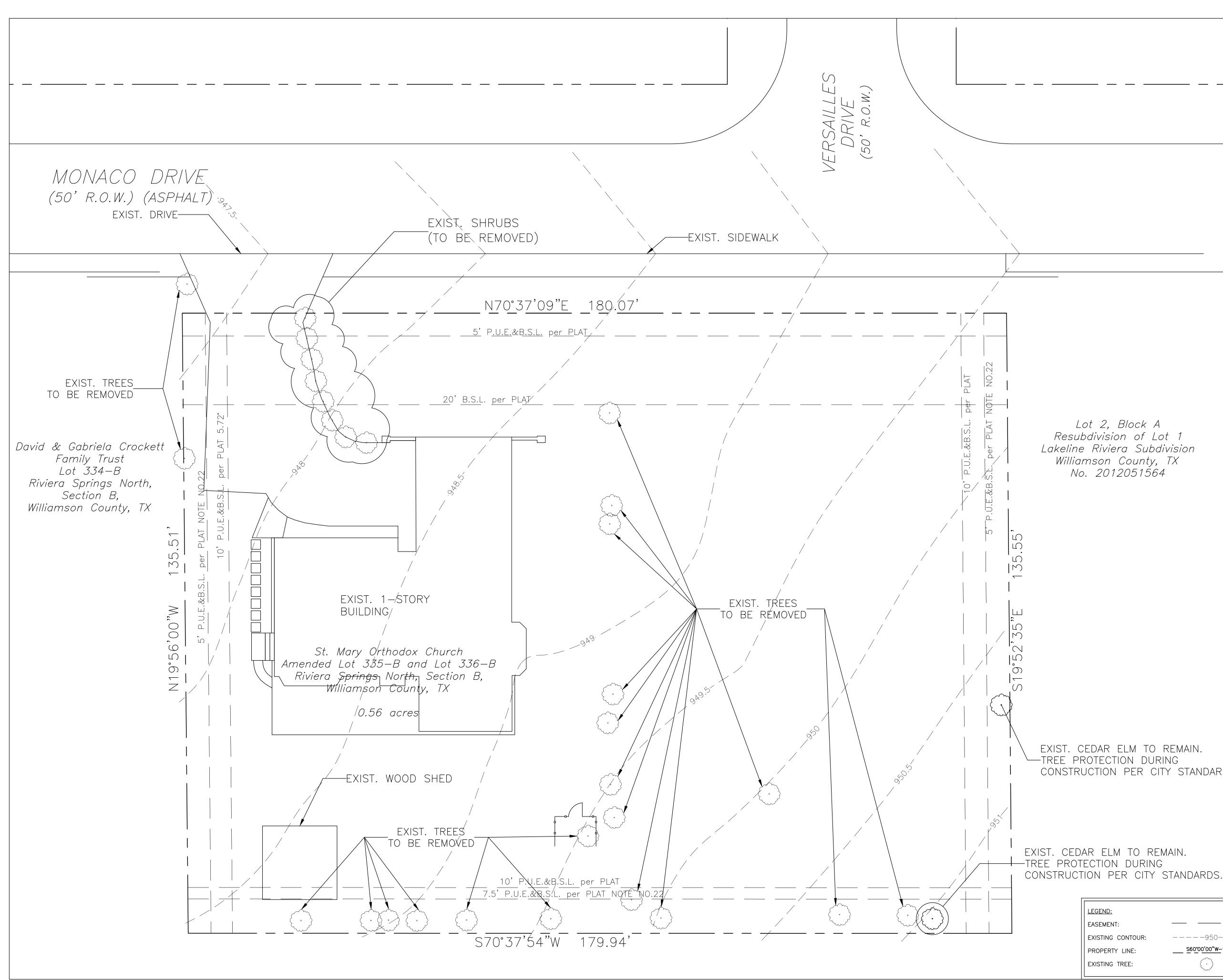
#	Revision Notes	Date

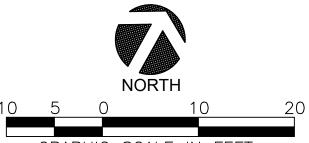
Sheet Title

Photometric Plan

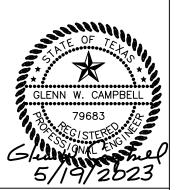
Sheet Number





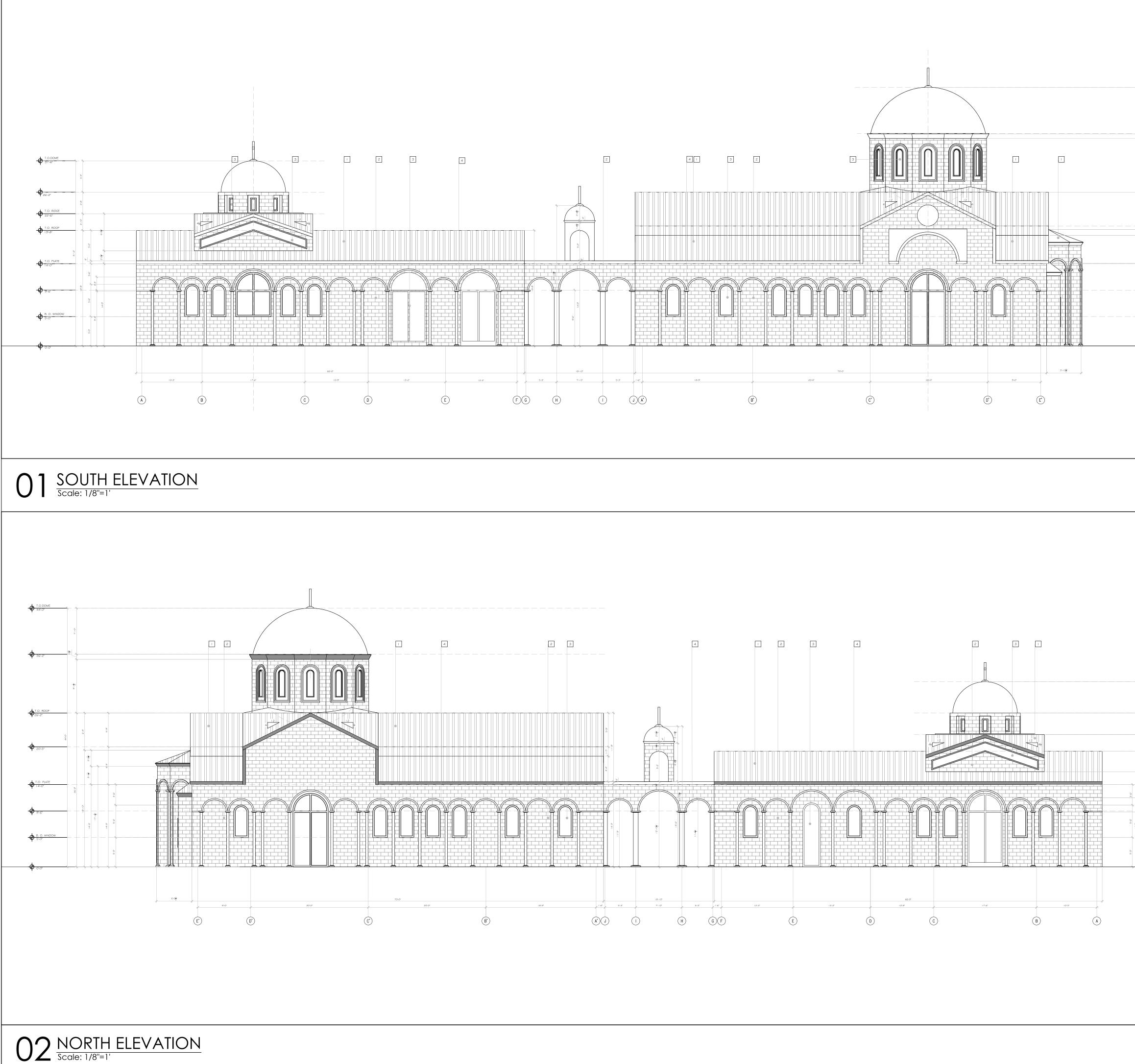


GRAPHIC SCALE IN FEET

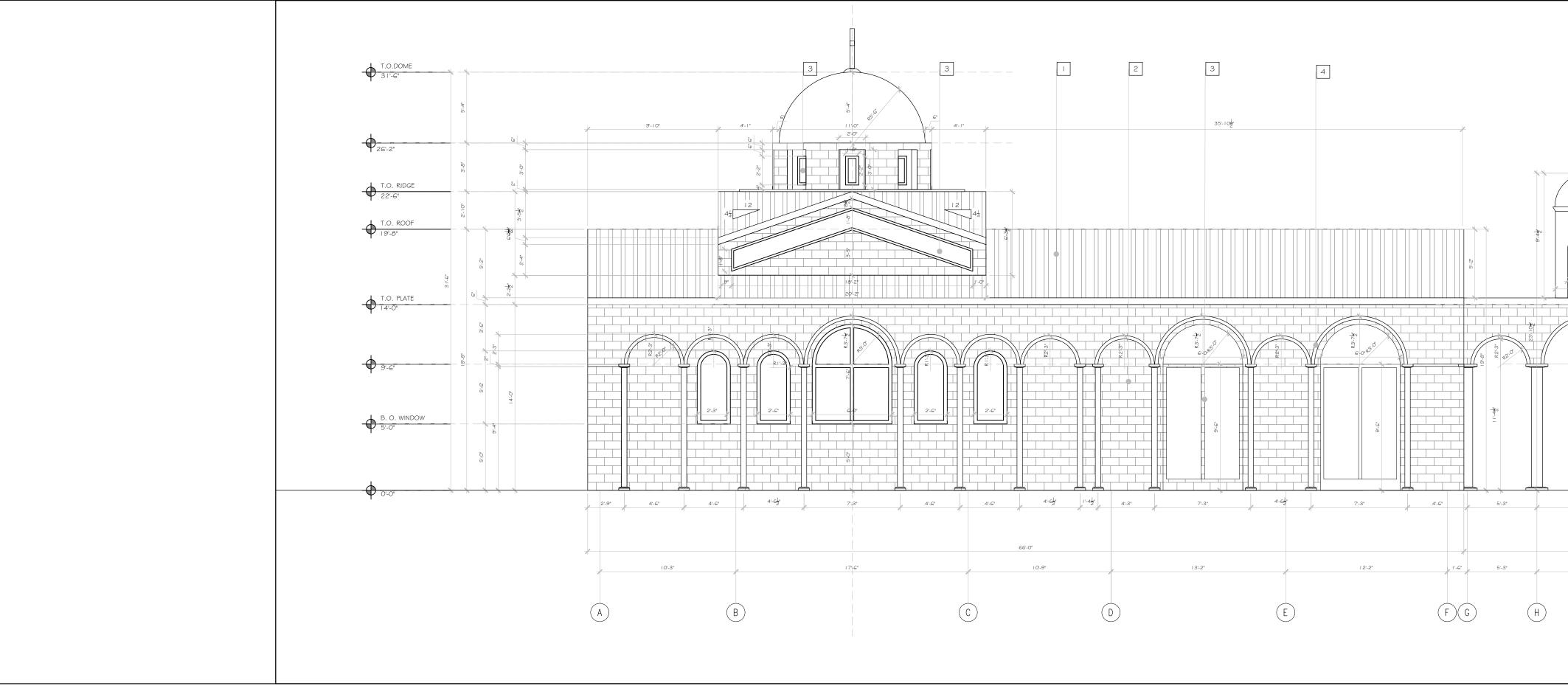


CONSTRUCTION PER CITY STANDARDS

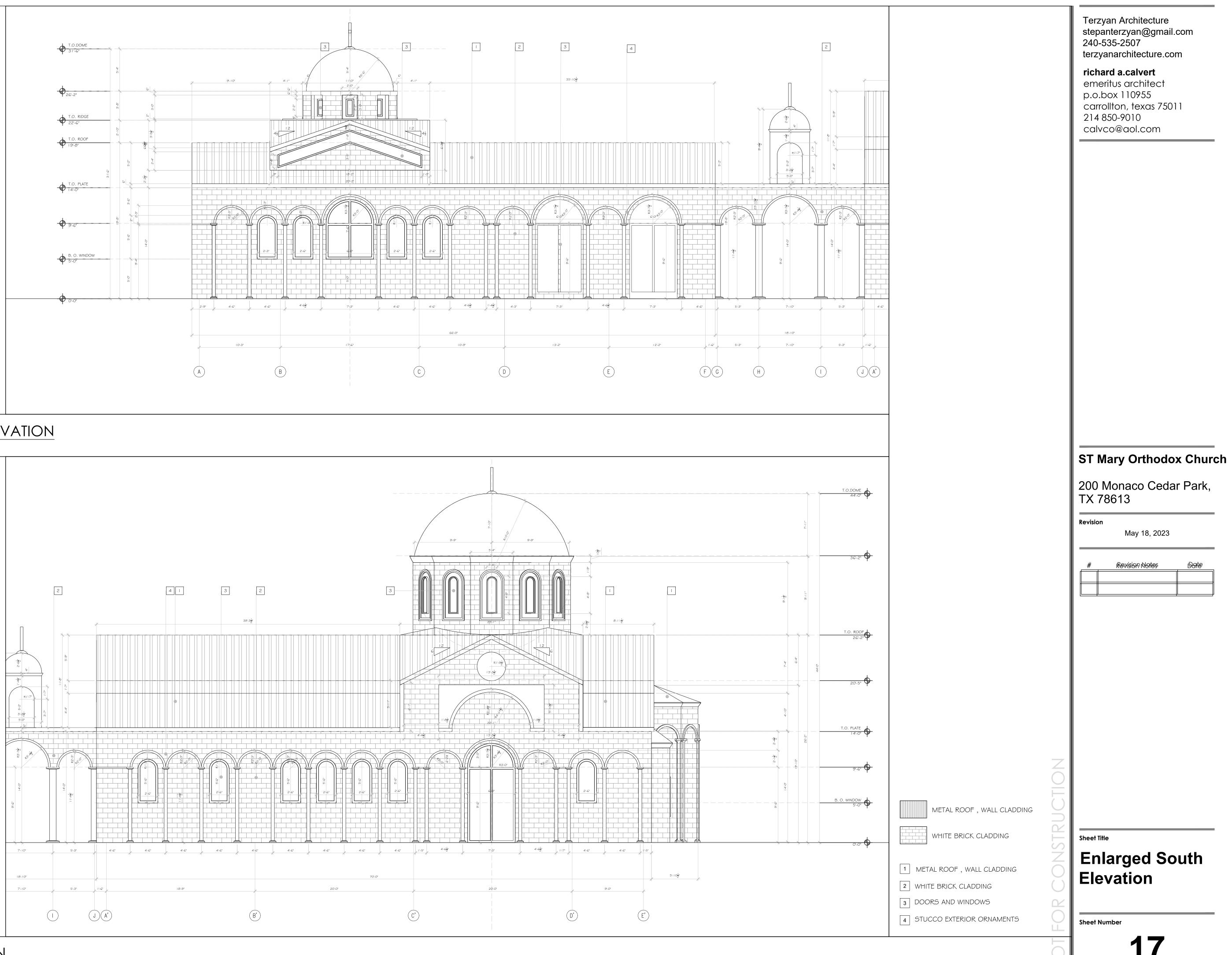
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IAIN. STANDARDS.	TREE PRESERVATION PLAN						
	ST. I	MARY	ROMANIAN	NORTHODOX (CHURCH		
	200 MONACO DR.						
	CEDAR PARK, TEXAS						
950	DEVELOPMENT SERVICES						
<u>S60.00,00,M- 30.00,</u>	JOB NUMBER	SHEET					
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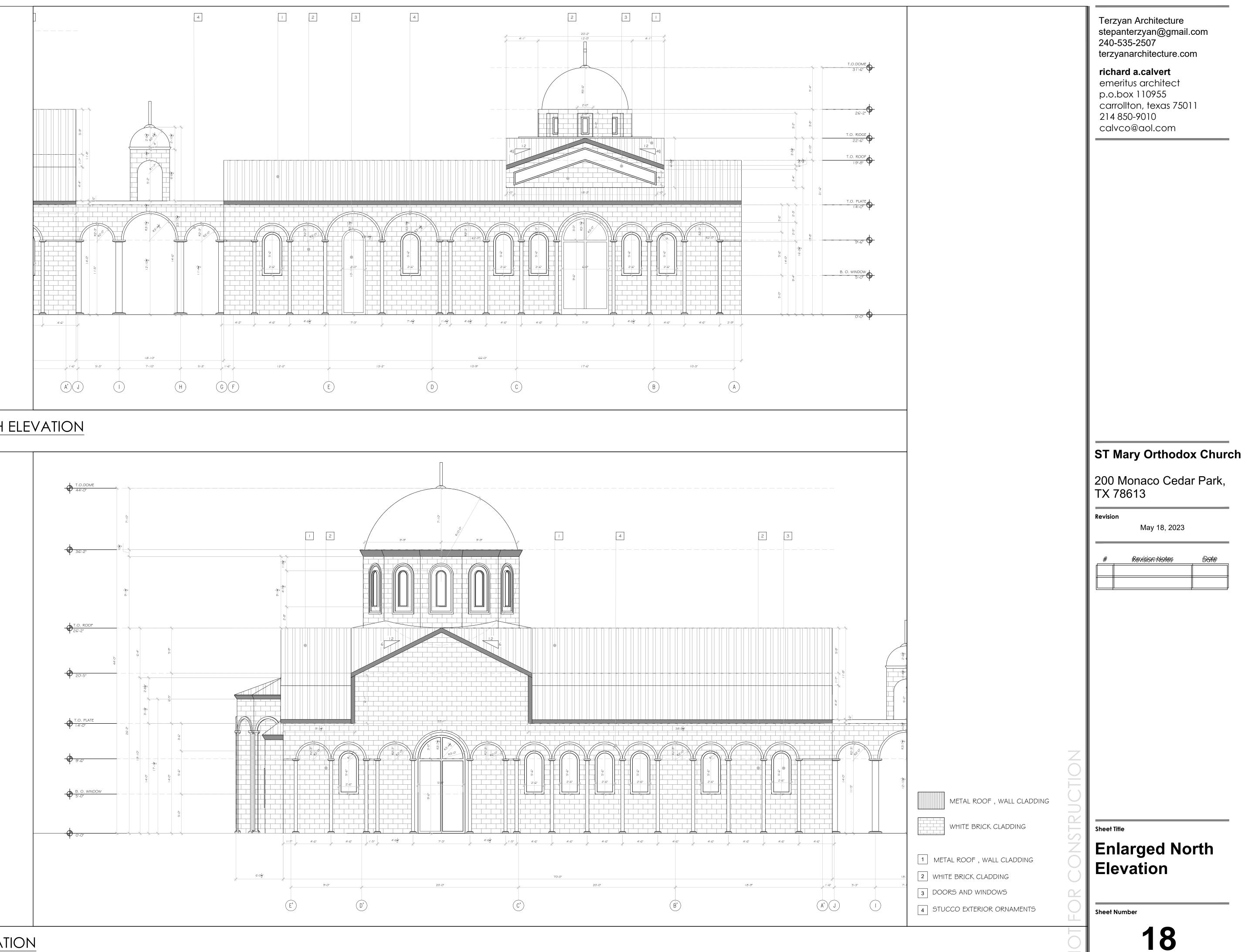
	Terzyan Architecture stepanterzyan@gmail.com 240-535-2507 terzyanarchitecture.com Tichard a.calvert emeitus architect p.o.box 110955 carrollton, texas 75011 214 850-9010 calvco@col.com calvco@col.com St Mary Orthodox Church 200 Monaco Cedar Park, X 78613 Revision Notes Dore Dore May 18, 2023 * Revision Notes Dore
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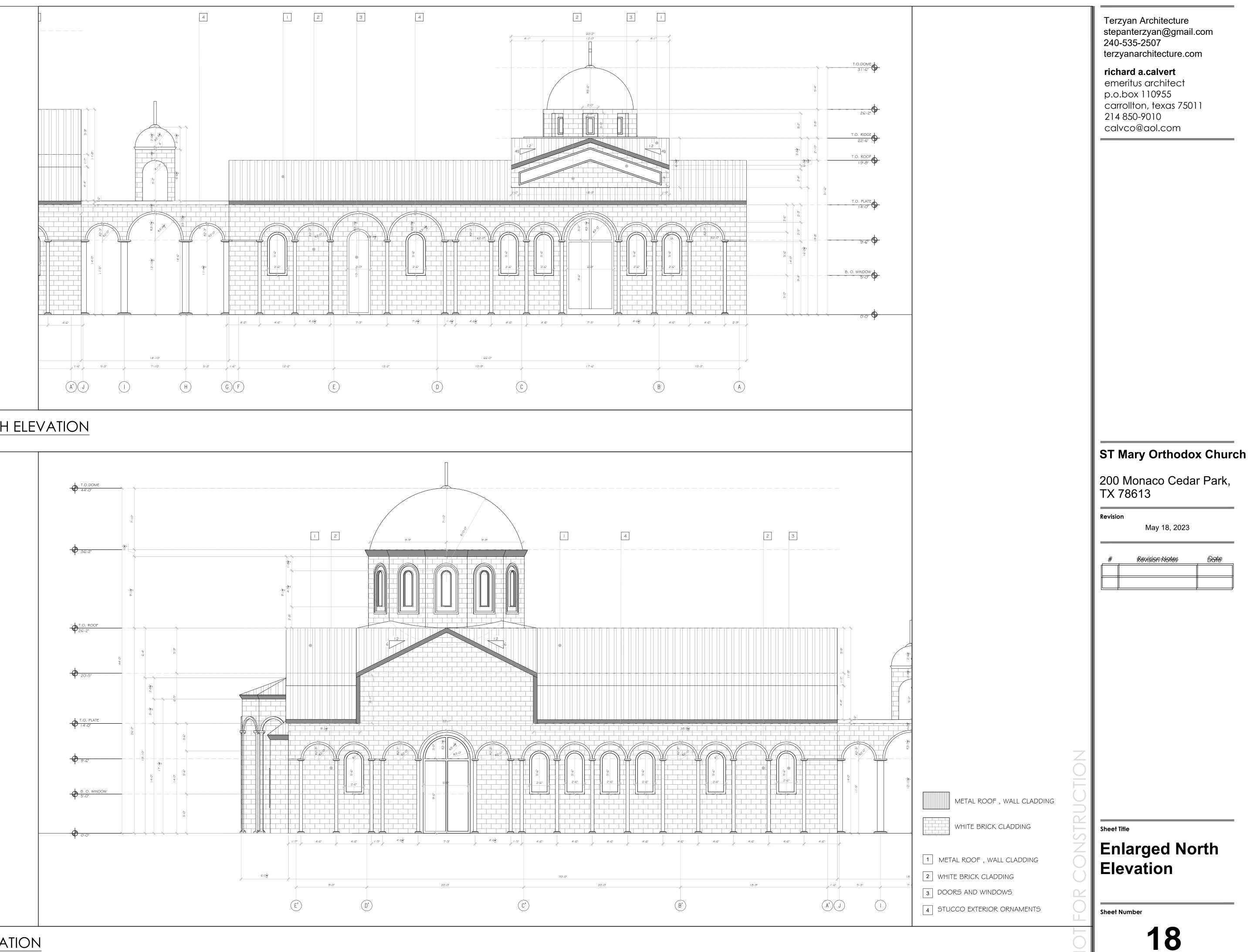
01 EVENT BUILDING SOUTH ELEVATION Scale: 1/8"=1'



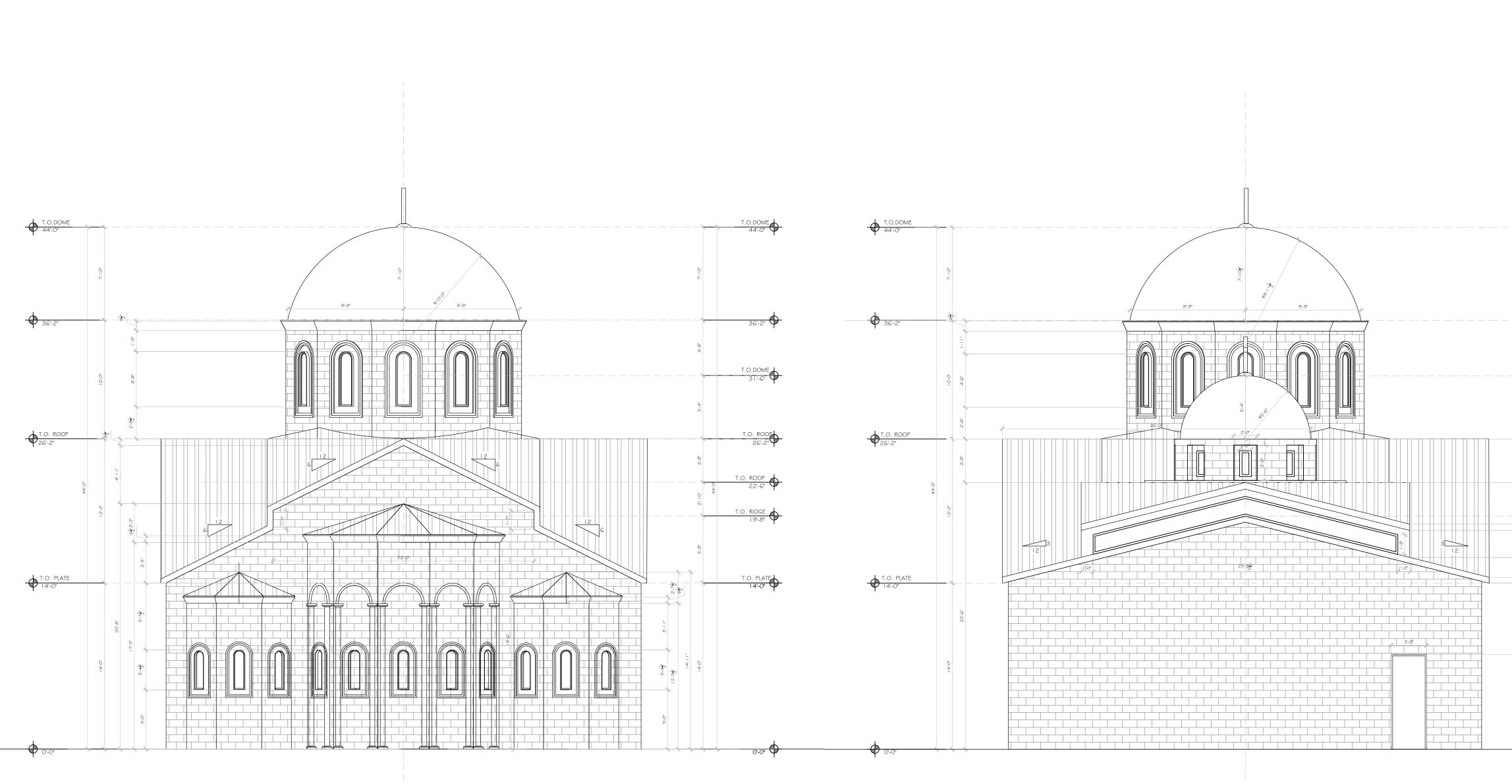
 $02 \frac{\text{CHURCH SOUTH ELEVATION}}{\text{Scale: 1/8"=1"}}$



01 EVENT BUILDING NORTH ELEVATION Scale: 1/8"=1'

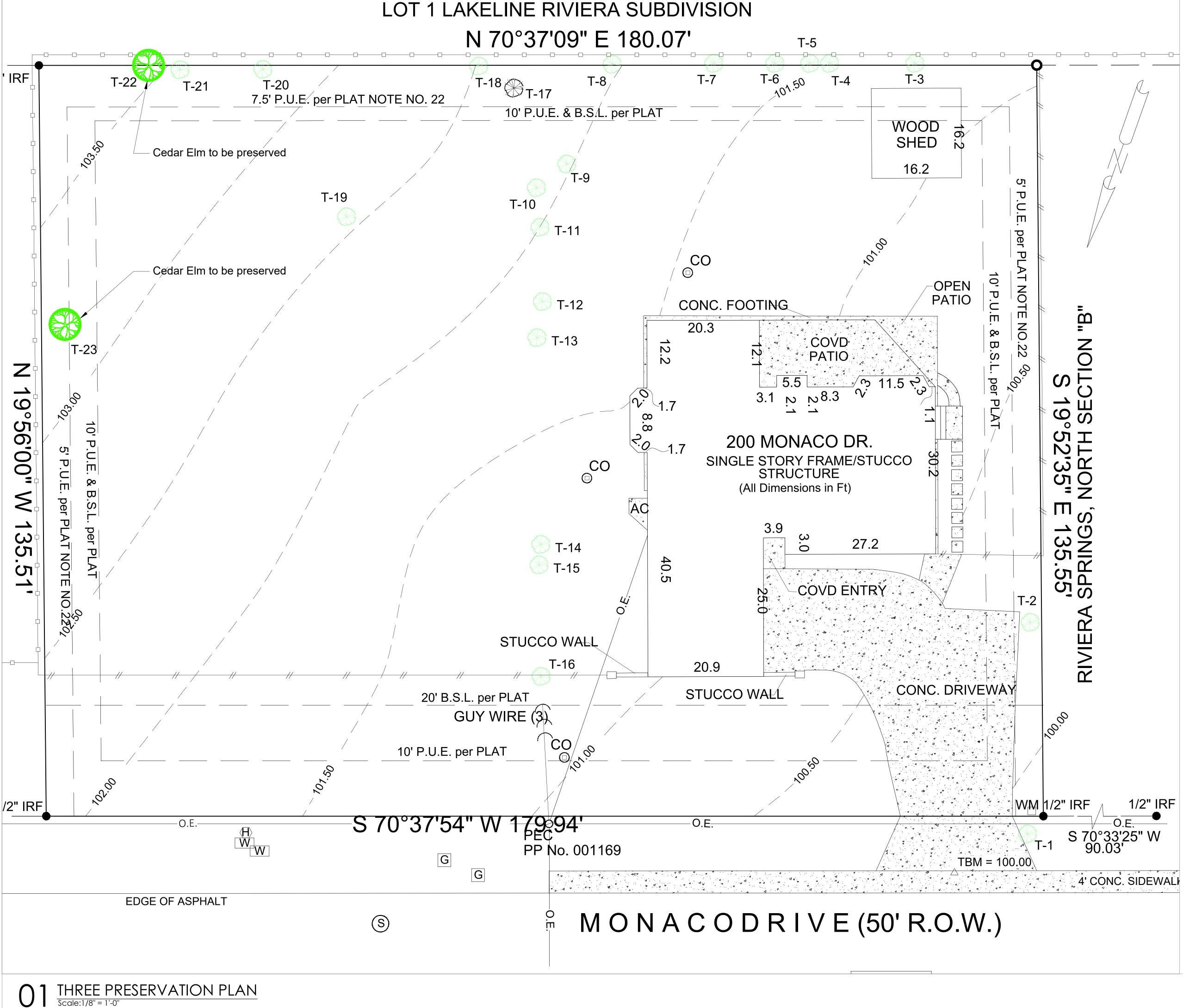


 $02 \frac{\text{CHURCH NORTH ELEVATION}}{\text{Scale: 1/8''=1'}}$





	Terzyan Architecture stepanterzyan@gmail.com 240-535-2507 terzyanarchitecture.com richard a.calvert emeritus architect p.o.box 110955 carrollton, texas 75011 214 850-9010 calvco@aol.com Sates and the step of
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CEDAR ELM TO REMAIN

TREE PROTECTION PER CITY OF CEDAR PARK STANDARDS DURING CONSTRUCTION

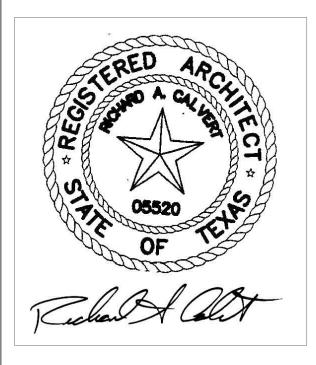
EXISTING TREE TO BE REMOVED

terzyan design llc

Architecture & Interior Design Architect: Stepan Terzyan AIA License: 13384-5 stepanterzyan@gmail.com 240-535-2507 terzyanarchitecture.com

richard a.calvert

emeritus architect p.o.box 110955 carrollton, texas 75011 214 850-9010 calvco@aol.com



WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENC OVER SCALED DIMENSION Contractors shall verify, and e rfsponsible for all dimensions and conditions on the Job and OWNER MUST BE NOTIFIED OF ANY MODIFICATIONS FROM THE dimensions and conditions Shown by these drawings

ST Mary Orthodox Church

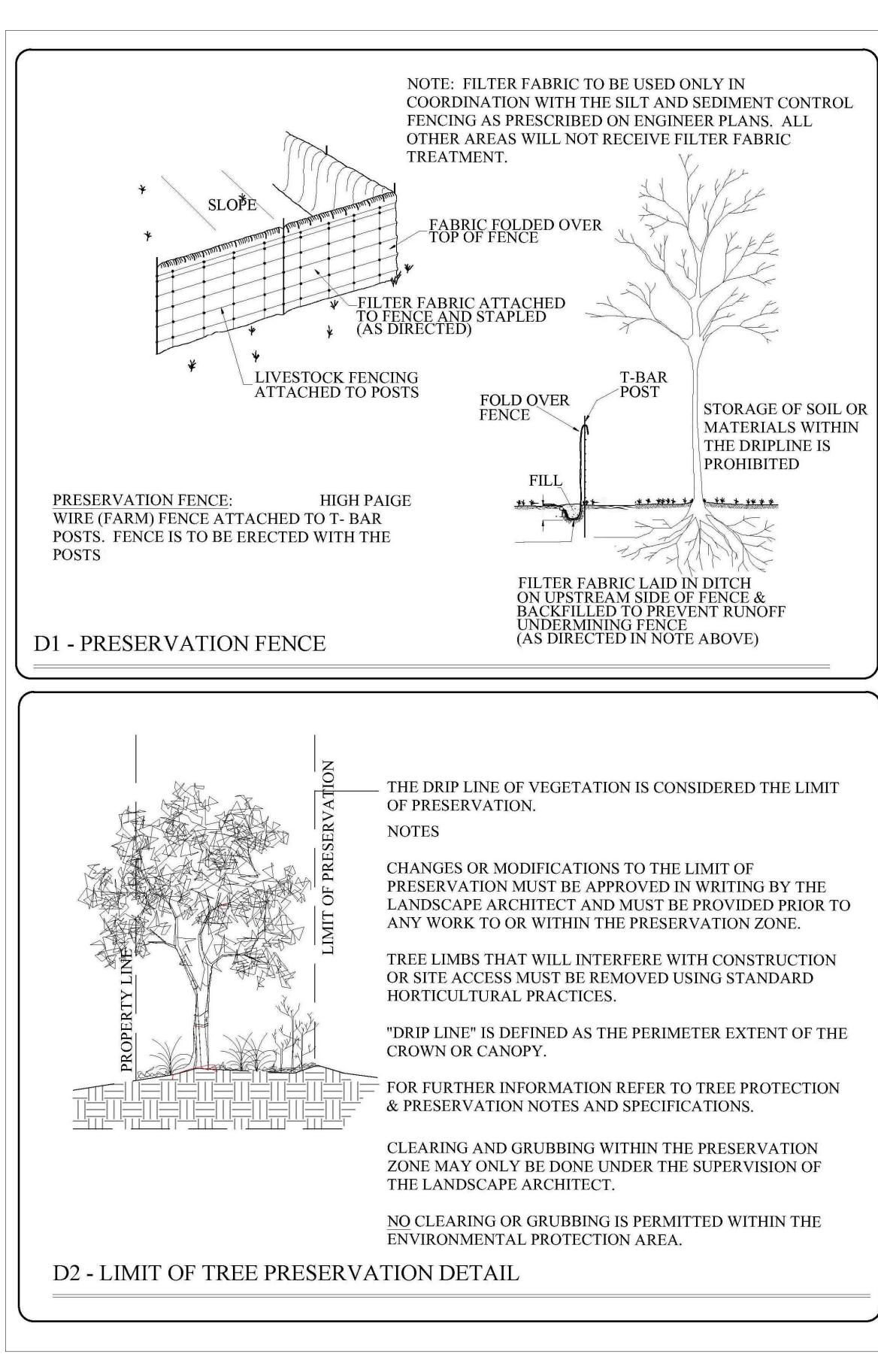
200 Monaco Cedar Park, TX 78613

	May 21, 2023	
#	Revision Notes	Date

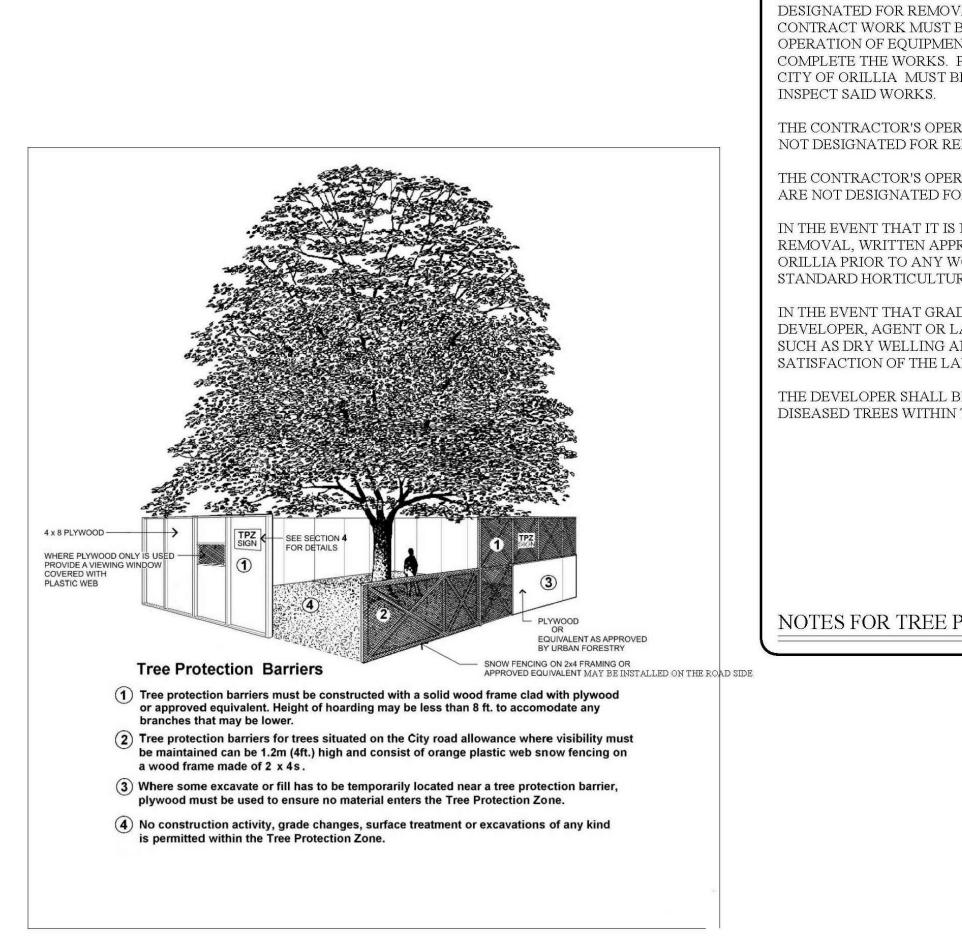
Revision

Tree Preservation Plan





THREE PRESERVATION TYP. NOTES & DETAILS Scale:NTS



D3 - PLYWOOD TREE PRESERVATION FENCE - TYP.

AS PART OF THE CLEARING AND GRUBBING CONTRACTUAL WORK, TREES LOCATED AT THE EDGES OF ALL PRESERVATION AREAS REGARDLESS OF SIZE ARE TO BE PRUNED OF DEAD AND DISEASED LIMBS AND INDIVIDUAL SPECIMENS AND ARE TO BE REMOVED IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES AND TO THE SATISFACTION OF THE CITY OF ORILLIA UNDER THE DIRECT SUPERVISION OF THE LANDSCAPE ARCHITECT.

IN THE EVENT THAT A TREE THAT HAS BEEN DESIGNATED FOR PRESERVATION IS DAMAGED OR REMOVED WITHOUT PRIOR WRITTEN PERMISSION FROM THE LANDSCAPE ARCHITECT AND CITY OF ORILLIA, THE LAND OWNER SHALL BE RESPONSIBLE FOR THE REMOVAL AND OR DAMAGE AS OUTLINED IN BYLAW 2005-120, SECTION 15.

SPECIFICATIONS FOR PRESERVATION & PROTECTION

PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, ALL TREES OR BLOCKS OF TREES THAT HAVE BEEN DESIGNATED FOR PRESERVATION, AS INDICATED ON THE ACCOMPANYING PLAN SHALL BE FULLY PROTECTED BY THE ERECTION OF HOARDING OUTSIDE OF OR AT THE DRIP LINE (SEE DETAIL D2).

EQUIPMENT OR VEHICLES SHALL NOT BE PARKED, REPAIRED OR REFUELED WITHIN TREE PROTECTION ZONE, CONSTRUCTION MATERIALS SHALL NOT BE STORED AND EARTH MATERIALS SHALL NOT BE STOCKPILED WITHIN THE DRIP LINE AREA OF ANY TREE NOT DESIGNATED FOR REMOVAL

ANY TREES NOT DESIGNATED FOR REMOVAL SHALL NOT HAVE RIGGING CABLES ATTACHED OR WRAPPED AROUND THEM. NOR SHALL ANY CONTAMINANTS BE DUMPED WITHIN THE PROTECTIVE AREAS. FURTHER, NO CONTAMINANTS SHALL BE DUMPED OR FLUSHED WHERE THEY MAY COME INTO CONTACT WITH THE FEEDER ROOTS OF THE TREES TO BE PRESERVED.

THE CONTRACTOR OR LAND OWNER SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE TO TREES OR SHRUBS THAT ARE NOT DESIGNATED FOR REMOVAL AS PER THE ACCOMPANYING PLAN.

UNLESS THE CONTRACT WORK SPECIFICALLY REQUIRES WORK WITHIN THE DRIP LINE OF TREES NOT DESIGNATED FOR REMOVAL, EQUIPMENT SHALL NOT BE OPERATED WITHIN THAT DRIP LINE AREA. WHEN CONTRACT WORK MUST BE COMPLETED WITHIN THE DRIP LINE OF TREES NOT DESIGNATED FOR REMOVAL, OPERATION OF EQUIPMENT WITHIN THAT DRIP LINE SHALL BE KEPT TO THE MINIMUM AMOUNT REQUIRED TO COMPLETE THE WORKS. PRIOR TO THE COMMENCEMENT OF SUCH WORKS THE LANDSCAPE ARCHITECT AND CITY OF ORILLIA MUST BE GIVEN WRITTEN NOTIFICATION AND WILL SUBSEQUENTLY BE REQUIRED TO

THE CONTRACTOR'S OPERATION SHALL IN NO WAY CAUSE DAMAGE TO THE TRUNK OR BRANCHES OF TREES NOT DESIGNATED FOR REMOVAL.

THE CONTRACTOR'S OPERATION SHALL NOT CAUSE FLOODING OR SEDIMENT DEPOSITS IN AREAS WHERE TREES ARE NOT DESIGNATED FOR REMOVAL.

IN THE EVENT THAT IT IS NECESSARY TO REMOVE LIMBS OR PORTIONS OF TREES NOT DESIGNATED FOR REMOVAL, WRITTEN APPROVAL AND DIRECTION MUST BE GIVEN BY THE LANDSCAPE ARCHITECT AND CITY OF ORILLIA PRIOR TO ANY WORKS. THE REMOVALS MUST BE EXECUTED CAREFULLY AND IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICES AND TECHNIQUES.

IN THE EVENT THAT GRADES AROUND A TREE DESIGNATED FOR PRESERVATION ARE TO BE CHANGED. THE DEVELOPER, AGENT OR LAND OWNER SHALL BE REQUIRED TO TAKE PRECAUTIONS TO PRESERVE THE TREE, SUCH AS DRY WELLING AND ROOT FEEDING. THE PROTECTION MEASURES MUST BE DONE TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND CITY OF ORILLIA.

THE DEVELOPER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND/OR REMOVAL OF DEAD, DYING, DISEASED TREES WITHIN THE LIMIT OF THIS PLAN UNTIL END OF GENERAL MAINTENANCE.

NOTES FOR TREE PRESERVATION AND PROTECTION

Terzyan Architecture stepanterzyan@gmail.com 240-535-2507 terzyanarchitecture.com

richard a.calvert emeritus architect p.o.box 110955 carrollton, texas 75011 214 850-9010 calvco@aol.com

THE INTENT OF TREE PRESERVATION AND PROTECTION IS TO PROVIDE AN INVENTORY OF EXISTING TREES ON SITE. IT IS NOT A SURVEY AND THEREFORE THE EXACT LOCATION OF EXISTING TREES MUST BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS.

ALL TREES TO BE PRESERVED SHALL BE INDICATED AND MARKED AS SUCH ON SITE BY THE LANDSCAPE ARCHITECT PRIOR TO THE COMMENCING OF THE CLEARING AND GRUBBING CONTRACT.

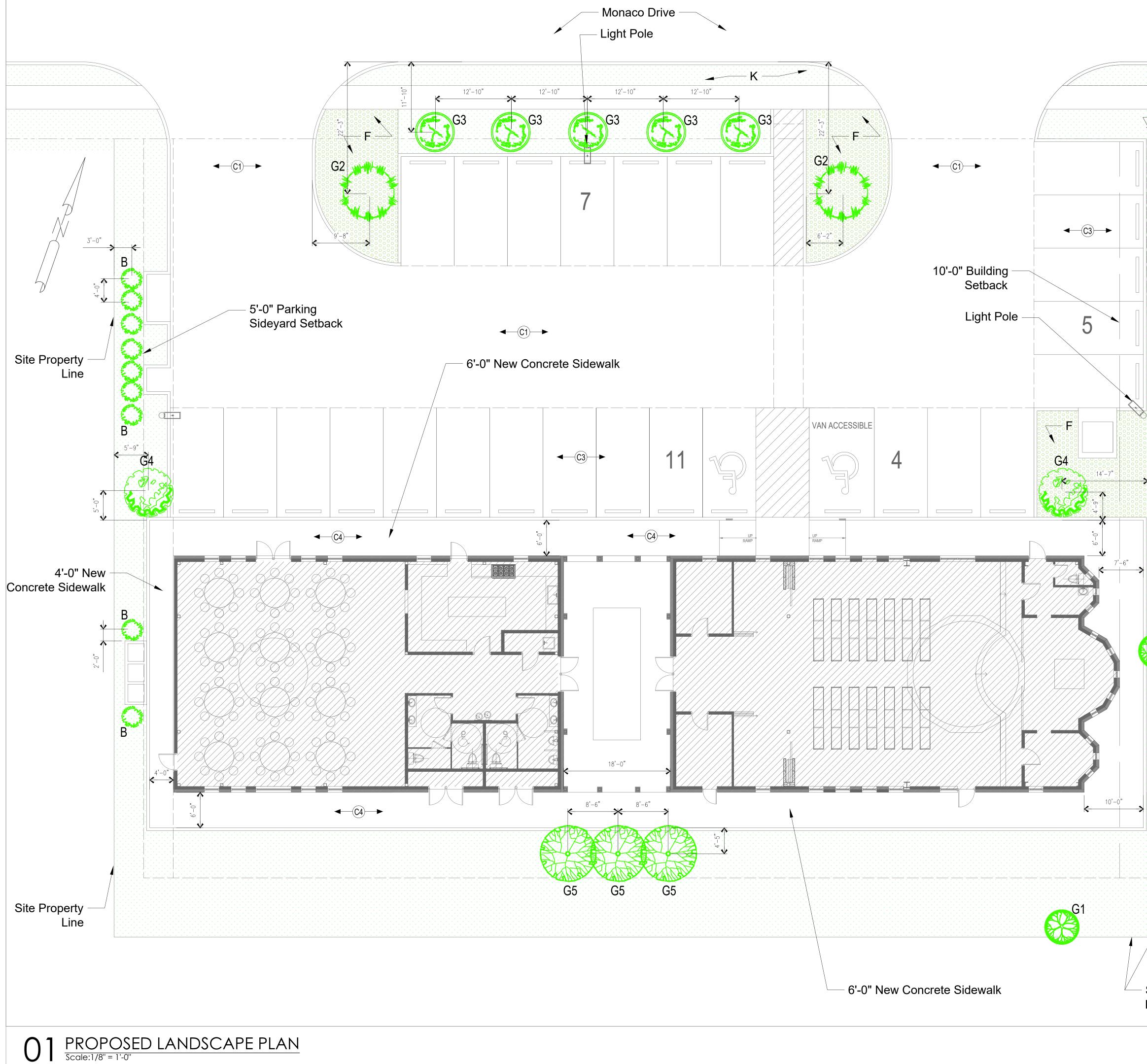
ST Mary Orthodox Church

200 Monaco Cedar Park, TX 78613

1	Revisio	n May 21, 2023	
	#	Revision Notes	Date

Sheet Title

Tree Preservation Typ. Notes & Details



- K -3'-6" G1

LANDSCAPE AREAS TABULATION CHAR	Г:
GROSS ACREAGE:	0.5578 ACRE.
SQUARE FOOT OF PRESERVATION AREA	2.790 SQ. FT.
COMBINED BUILDING FOOTPRINT :	5.338 SQ. FT.
NUMBER OF TREE TO BE PRESERVED :	2
NUMBER OF TREE TO BE PLANTED :	16
GRASS AREA :	4.986 SQ. FT.
SIDEWALK PAVING :	2.471 SQ. FT.
INTERIOR COURTYARD :	720.0 SQ. FT.
DRIVEWAYS & PARKING SPACES :	9327.0 SQ. FT.
TOTAL IMPERVIOUS SURFACE :	14.665 SQ. FT.
TOTAL PERVIOUS SURFACE :	5.644 SQ. FT.

- Site Property Line

terzyan design IIc Architecture & Interior Design KEY Architect: Stepan Terzyan AIA PLANTING License: 13384-5 (F) PLANTING BED/ GROUND COVER stepanterzyan@gmail.com G TREES 240-535-2507 terzyanarchitecture.com K GRASS M TALL PLANTING richard a.calvert emeritus architect p.o.box 110955 SITE CAST carrollton, texas 75011 PAVING 214 850-9010 calvco@aol.com PORTLAND CEMENT CONCRETE PAVING C1 DRIVEWAY 7" THICK C2 PLAZA PAVERS C3 AUTO PARKING SPACES 5" THICK (C4) PEDESTRIAN SIDEWALKS Cichard and WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSION: CONTRACTORS SHALL VERIFY, AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND OWNER MUST BE NOTIFIED OF ANY MODIFICATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. ST Mary Orthodox Church 200 Monaco Cedar Park, TX 78613 Revision May 21, 2023 **Revision** Notes Date Sheet Title Proposed Landscape Plan Sheet Number 22

Site Preparation

The planting hole should be dug no deeper than the rootball when measured from the bottom of the rootball to the trunk flare. If the hole is deeper than the rootball, it often results in the settling of the plant above the trunk flare and structure roots which can result in the rootball being planted too deep. But the width of the hole should be at least 2 to 3 times the diameter of the rootball with sloping sides. Preventive Setting the Plant and Back Filling the Hole

Plants must be set with trunk flare 1"]2" above the existing grade. Once the plant is properly placed, all visible ropes and burlaps at the top one]third should be cut away. The top 8"-16" of the wire basket should be removed once the rootball is stable in the planting hole; backfill the planting hole with the existing soil. If the

existing soil is of a poor quality, addition of soil amendment as recommended by the soil analysis should be used. The backfill soil should be tamped firm enough to remove large air pockets, but not too firm as to remove all fine air spaces needed for a well aerated soil for root development. Complete the backfill by making sure that the trunk flare is completely exposed, spread mulch at 2-4" depth but not touching the trunk, water the rootball and the planting area deeply.

Newly planted trees must receive adequate water weekly during the entire first growing season right up until dormancy in the fall, by irrigation or placement of ooze bag or hand watering. Transplanting

Desirable trees in a development area or other construction sites shall be transplanted by staff if the tree caliper is between 2"-4" where there is an acceptable location and during the planting season (October to March). Trees of larger caliper shall be contracted out using comparable tree spades.

Fertilizing

Newly planted trees should not receive fertilization during the first growing season except in a situation where a soil test recommends its use. A slow release type of fertilizer should be used around the tree basin. Trees in poor condition should receive deep root fertilization plus micro nutrients, with repeat application if necessary. Also, when necessary, we shall use evergreen trees.

Routine tree fertilization is not recommended; however, campus trees receive adequate nutrients from turf, shrubs and groundcover routine application of fertilizers.

Staking

Staking of trees at planting is not required if the rootball is stable. If staking must be done, it will be done in accordance with ANSI most recent edition.

Pruning

After planting, only broken or damaged branches should be pruned. Tree wrapping is generally not recommended.

Landscaping

Landscaping on St Mary Church campus must adhere to the five plant communities indicated in the city of Cedar park Landscape requirements. Lnadscaing contractor shall use the list of acceptable plants in the City of Cedar Park. The best plant materials should be chosen based on the site conditions, not based solely on the merit of its being native. The objectives are to increase campus green area \$ tree canopy.

NOTES:

all landscape areas whether required or not must have an automatic landscape irrigation system designed and installed in compliance with current city codes and city of cedar park landscape irrigation regulations.

2. tree symbols are shown for location and type information. sizes are approximate to their full maturity, which could take 20-30 years, during which regular maintenance, care and pruning shall be scheduled to keep fire lanes clear of any obstructions.

3. ornamental trees were used along buffer zone instead of shade trees because of overhead power lines along the street

LANDSCAPING PLANT LIST

	TREES (SEE DETAIL T-1 ON PA	GE 3 FOR TYPICAL DETAIL)				
LEGEND	COMMON NAME	BOTANICAL NAME	SIZE	CODE	QUANTITY	NOTES
	CEDAR ELM	CEDAR ELM	4 in	G1	2	EXISTING TREE TO BE PRESERVED
	CEDAR ELM	CEDAR ELM	3 in	G2	4	
	MAGNOLIA, LITTLE GEM	MAGNOLIA, LITTLE GEM	30 g	G3	5	
	CREPE MYRTLE, WHITE, SINGLE TRUNK	CREPE MYRTLE, WHITE, SINGLE TRUNK	30 g	G4	2	
	RIVER BIRCH, MULTI-TRUNK	CREPE MYRTLE, WHITE, SINGLE TRUNK	30 g	G5	3	

			,			
LEGEND	COMMON NAME	BOTANICAL NAME	SIZE	CODE	QUANTITY	NOTES
0	BOXWOOD SHRUB	WINTERGREEN BOXWOOD SHRUB	1 g	В	16	
	JUNIPER, BLUE RUG	JUNIPER, BLUE RUG	1 g	F		
	GRASS					

-	LEGEND	COMMON NAME	BOTANICAL NAME	SIZE	CODE	QUANTITY	NOTES
		BERMUDA	BERMUDA TIFF 419	PALLETS	К	10	

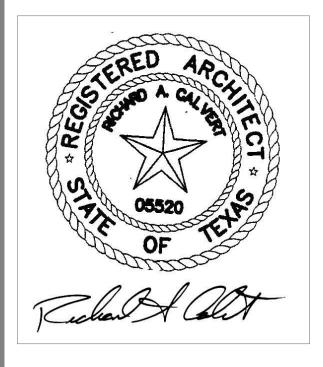
ON-SITE TREE MITIGATION TABLE								
NAME		BOTANICAL NAME		QUANTITY	S	SIZE	NO	TES
CEDAR ELM		CEDAR ELM		2		4 in	EXISTING TO BE PR	TREE RESERVED
HACKBERRY		HACKBERRY		21		4 in	PLANNED) INSTALL
LAN	LANDSCAPE BUFFER REQUIREMENT: CITY OF CEDAR PARK							
STREET FRONTAGE = 132 LINEAR FEET								
	SHADE TREES		ORNAMENTAL TREES		EVERG	REEN SHRUBS	NOTES	
PROVIDED	11		5			16		

SHRUBS & GROUNDCOVER (SEE DETAIL S-1 & G-1 ON PAGE 3 FOR TYPICAL DETAIL)

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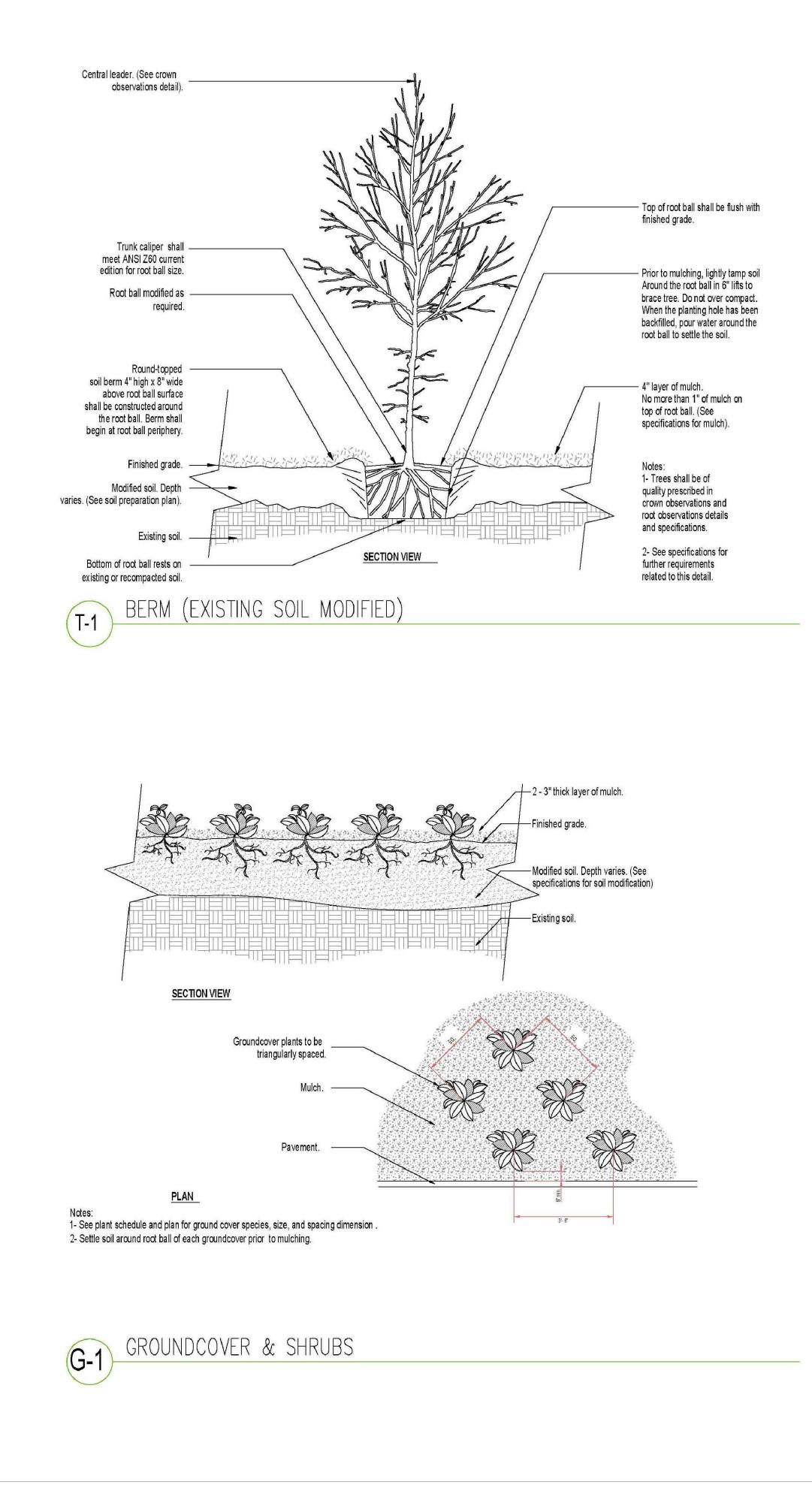


WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSION: CONTRACTORS SHALL VERIFY, AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND OWNER MUST BE NOTIFIED OF ANY MODIFICATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS.

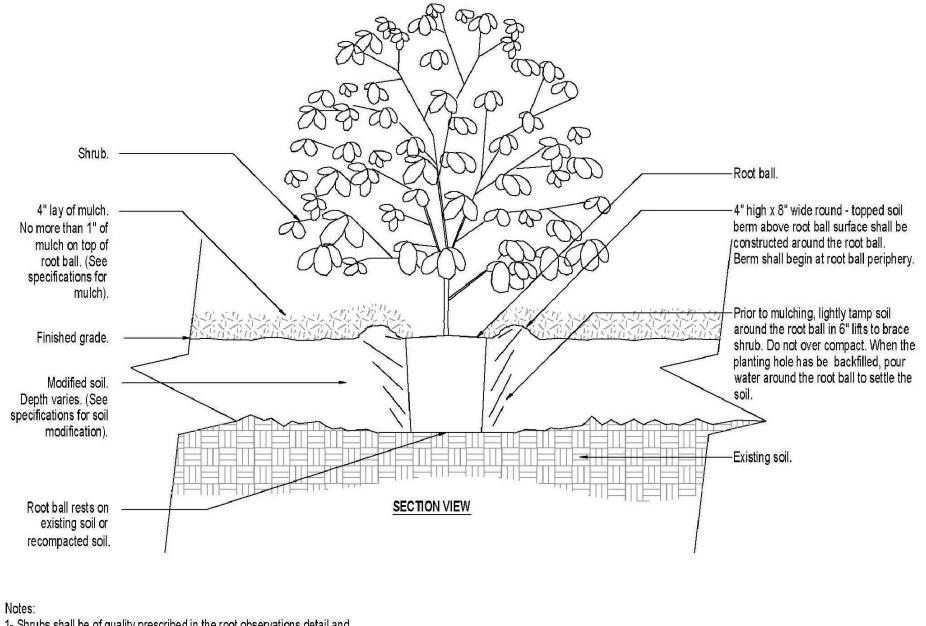
ST Mary Orthodox Church

200 Monaco Cedar Park, TX 78613

	Revision May 21, 2023	
	# Revision Notes	Date
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H	Sheet Title	
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$\overline{\bigcirc}$	Landscape	
	Planting List	
\bigcirc	Sheet Number	
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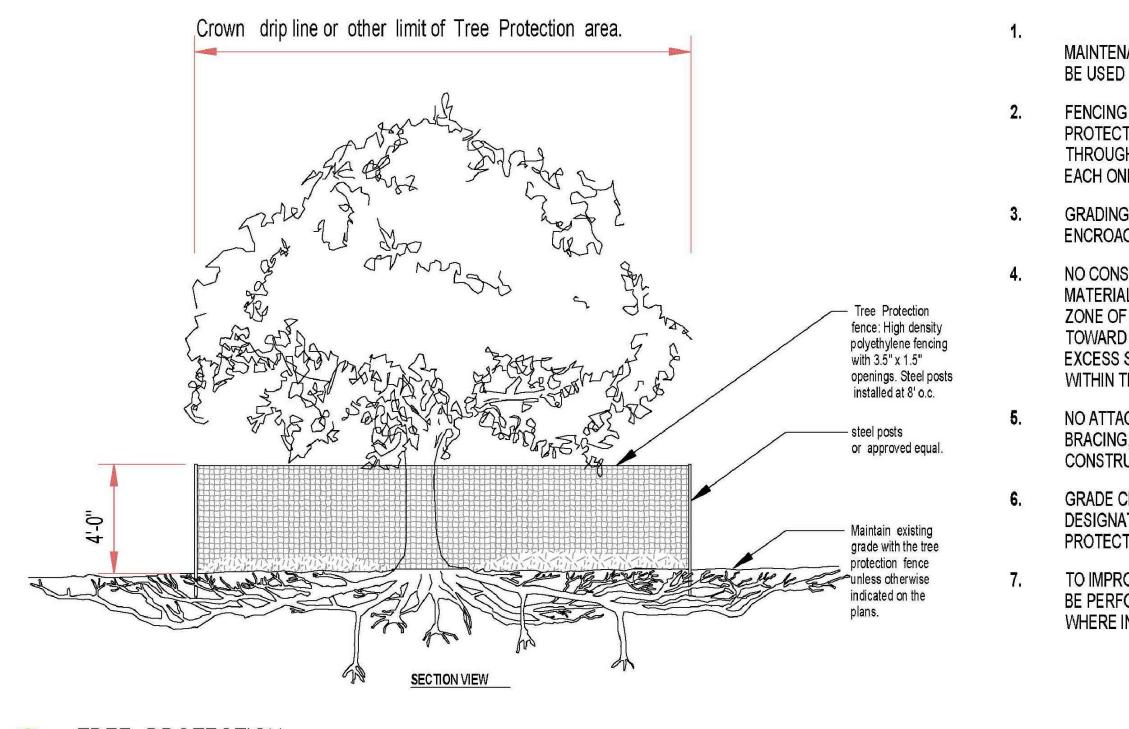
LANDSCAPE DETAILS Scale:NTS



1- Shrubs shall be of quality prescribed in the root observations detail and specifications.

2- See specifications for further requirements related to this detail.

SHRUB – MODIFIED SOIL S-1



TREE PROTECTION

TP

SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF TEMPORARY FENCING OR OTHER TREE PROTECTION MEASURES TO BE USED DURING CONSTRUCTION.

FENCING SHALL BE TEMPORARILY INSTALLED AT THE CRITICAL ROOT ZONE FOR PROTECTION OF TREES PRIOR TO ANY CONSTRUCTION ACTIVITIES AND MAINTAINED THROUGHOUT ENTIRE PROJECT. THE CRITICAL ROOT ZONE EQUALS ONE FOOT OF EACH ONE INCH OF TRUNK DIAMETER MEASURED 4.5 FEET ABOVE GROUND.

GRADING AND CONSTRUCTION EQUIPMENT SHALL BE FORBIDDEN FROM ENCROACHING WITHIN THE DRIP LINE OF A TREE.

NO CONSTRUCTION ACTIVITY, MOVEMENT, AND/OR PLACEMENT OF EQUIPMENT OR MATERIALS OR SPOILS STORAGE SHALL BE PERMITTED WITHIN THE CRITICAL ROOT ZONE OF A PROTECTED TREE OR AT ANY HIGHER LOCATION WHERE DRAINAGE TOWARD THE TREE COULD CONCEIVABLY AFFECT THE HEALTH OF THE TREE. NO EXCESS SOIL, ADDITIONAL FILL, LIQUIDS OR CONSTRUCTION DEBRIS SHALL BE PLACED WITHIN THE CRITICAL ROOT ZONE OF A PROTECTED TREE.

NO ATTACHMENTS, FENCES, OR WIRES, OTHER THAN THOSE APPROVED FOR BRACING, GUYING, OR WRAPPING, SHALL BE ATTACHED TO TREES DURING THE CONSTRUCTION PERIOD.

GRADE CHANGES SHALL BE ALLOWED UNDER THE DRIP LINE OF ANY TREES DESIGNATED FOR PRESERVATION ONLY IF TREE TRUNKS AND BRANCHES ARE PROTECTED WHEN CONSTRUCTION MUST OCCUR WITHIN THE TREE DRIP LINE AREAS.

TO IMPROVE THE SURVIVAL RATE OF TREES, ROOT PRUNING AND/OR THINNING SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND PRACTICES AND WHERE INDICATED ON THE PLAN.

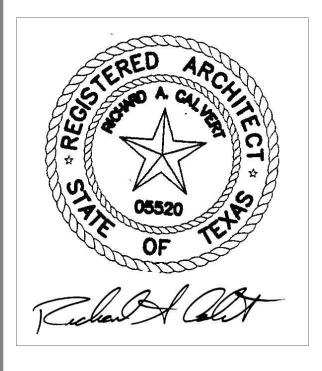
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WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSION: CONTRACTORS SHALL VERIFY, AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND OWNER MUST BE NOTIFIED OF ANY MODIFICATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS.

ST Mary Orthodox Church

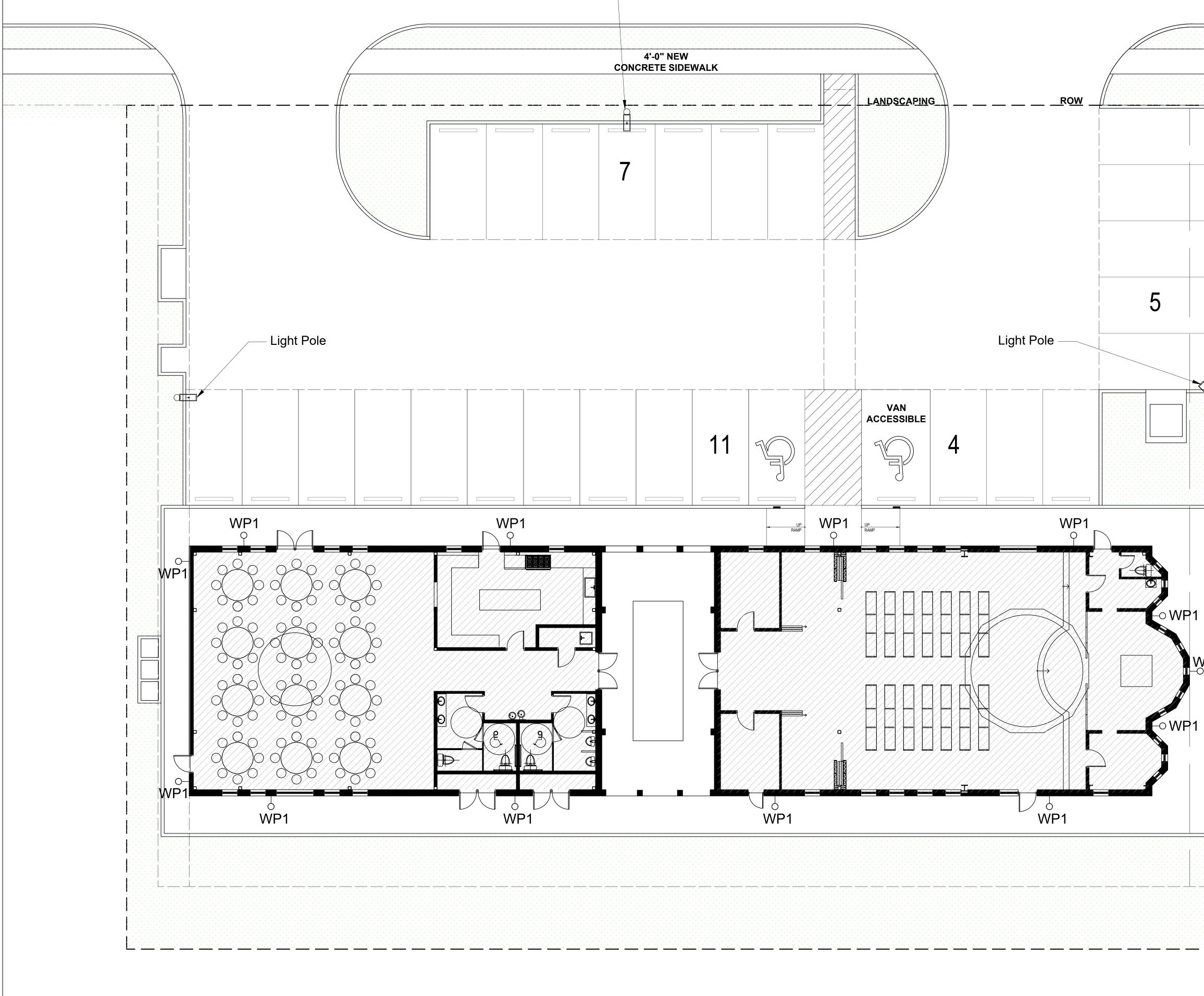
200 Monaco Cedar Park, TX 78613

Revision	May 21, 2023	
#	Revision Notes	Date

Sheet Title

Landscape Details





SITE LIGHTING PLAN Scale:1/8" = 1'-0"

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ST Mary Orthodox Church

200 Monaco Cedar Park, TX 78613

1	Revisio	May 21, 2023	
	#	Revision Notes	Date

Sheet Title

Proposed Site Lighting Plan



GENERAL NOTES:

- THE SUBMISSION OF A BID BY THE CONTRACTOR IS NOTIFICATION THAT THE CONTRACTOR HAS TOTALLY FAMILIARIZED HIMSELF WITH THE CONTRACT DOCUMENTS AND EXISTING SITE CONDITIONS AND HAS AGREED TO PROVIDE THE NECESSARY LABOR AND MATERIAL FOR THE COMPLETE INSTALLATION OF EACH SYSTEM IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE BEST PRACTICES OF THE INDUSTRY AND IN COMPLIANCE WITH ALL AUTHORITIES HAVING JURISDICTION.
- THESE DRAWINGS ARE PRESENTED TO THE CONTRACTOR WITH THE UNDERSTANDING THAT THE CONTRACTOR IS AN EXPERT AND COMPETENT IN THE PREPARATION OF CONTRACT BID PRICES ON THE BASIS OF INFORMATION SUCH AS IS CONTAINED IN THESE DOCUMENTS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION AND IN COMPLETE CONFORMANCE WITH ALL APPLICABLE CODES, RULES, AND REGULATIONS, MINOR ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT MANIFESTLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED IN THE WORK AND IN THE PROPOSAL THE SAME AS IF SPECIFIED OR SHOWN ON THE DRAWINGS. IF ANY DEPARTURES FROM THE DRAWINGS ARE DEEMED NECESSARY, DETAILS OF SUCH DEPARTURES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL.
- THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
- 4. THE DRAWINGS INDICATE ARRANGEMENTS AND APPROXIMATE SIZES AND RELATIVE LOCATIONS OF PRINCIPAL APPARATUS, EQUIPMENT, DEVICES, AND SERVICES TO BE PROVIDED. DRAWINGS ARE DIAGRAMMATIC AND ARE A GRAPHIC REPRESENTATION OF CONTRACT REQUIREMENTS BASED ON THE INFORMATION PROVIDED BY THE MANUFACTURER IDENTIFIED IN THE EQUIPMENT SCHEDULE AT THE SCALE INDICATED.
- LAYOUT OF EQUIPMENT INDICATED ON THE DRAWINGS SHALL BE CHECKED AND COMPARED AGAINST ALL DRAWINGS AND SPECIFICATIONS OF ALL TRADES AND EXACT LOCATIONS DETERMINED USING APPROVED SHOP DRAWINGS OF SUCH EQUIPMENT. WHERE PHYSICAL INTERFERENCES OCCUR, CONSULT WITH THE OWNER AND PREPARE DATED, DIMENSIONED DRAWINGS COORDINATED WITH ALL OTHER TRADES WORKING IN THIS AREA AND CORRECTING SUCH INTERFERENCE.
- 6. THE CONTRACTOR SHALL SCHEDULE THEIR WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL OF THEIR WORK CAN BE INSTALLED WITHOUT DELAYING THE PROJECT. ALL WORK RELATED TO SHUTDOWN OF EXISTING SERVICES SHALL BE PERFORMED AT THE HOURS DESIGNATED BY THE OWNER WITH ALL ASSOCIATED COSTS BORNE BY THE CONTRACTOR AT NO COST TO THE OWNER. PROVIDE ANY TEMPORARY FACILITIES REQUIRED TO PERMIT OWNER'S USE OF EXISTING FACILITIES AND SYSTEMS TO REMAIN UNDISTURBED. COORDINATE ALL WORK, INCLUDING ALL SHUTDOWNS THAT AFFECT SYSTEMS AND/OR PORTIONS OF THE BUILDING THAT MUST REMAIN IN OPERATION, WITH OWNER.
- THE CONTRACTOR SHALL SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.
- 8. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING. HANDLING, AND PROTECTION OF MATERIALS. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
- 11. THE CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED ITEMS.
- 12. WHERE CONDUIT, CABLES, DUCTWORK, OR PIPING PASSES THROUGH FIRE RATED FLOORS OR WALLS, THE PENETRATION SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS ULLISTED AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THIS SERVICE. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO THEIR WORK. THE CONTRACTOR SHALL SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.
- 14. ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED, AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.
- 15. THE CONTRACTOR SHALL SUBMIT SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. TO BE SUBMITTED FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT AN ELECTRONIC COPY OF THE COMPLETE SHOP DRAWINGS AND CATALOG CUTS, WIRING DIAGRAMS AND ASSOCIATED DATA TO THE OWNER FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR STARTING ANY WORK. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF OWNER APPROVED SUBMITTALS SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
- 16. SUBMIT CATALOG INFORMATION, FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED. THE CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. THE CONTRACTOR SHALL CHECK AND VERIFY ALL FIELD MEASUREMENTS.
- 17. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE OWNER WITH (3) COMPLETE BOUND COPIES OF ALL OWNER APPROVED SUBMITTALS AND ALL OPERATION AND MAINTENANCE MANUALS
- 18. ALL WORK FURNISHED UNDER THE CONTRACT SHALL BE GUARANTEED AGAINST ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS FOR A PERIOD OF NOT LESS THAN (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION, UNLESS NOTED OTHERWISE IN THE PROJECT SPECIFICATIONS, AND ANY DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED AND ANY DEFECTIVE MATERIAL REPLACED WITHOUT ADDITIONAL COST TO THE OWNER.
- 19. INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- 20. THE CONTRACTOR SHALL SIMILARLY NOTIFY OWNER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE OWNER TO PERFORM THE FINAL PUNCHLIST INSPECTION.

- 24. DEFINITION: UNLESS OTHERWISE NOTED, ALL WORK SPECIFIED HEREIN OR NOTED ON DRAWINGS, SHALL BE BY THE CONTRACTOR. THE TERM "PROVIDE" WHENEVER ENCOUNTERED ON DRAWINGS OR IN THESE SPECIFICATIONS, SHALL MEAN "FURNISH AND INSTALL."
- 25. CODES AND STANDARDS: ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND FIRE INSURANCE CARRIER'S REQUIREMENTS.
- 26. MATERIALS: ALL MATERIALS FURNISHED BY THIS CONTRACTOR, SHALL BE NEW AND BEAR THE LABEL OR LISTING OF A NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY.
- 27. OUTLET AND SWITCH BOXES: PROVIDE AND INSTALL OUTLET BOXES OF PROPER TYPE AND SIZE AS REQUIRED AT ALL OUTLETS WHERE SHOWN SECURED FIRMLY IN PLACE AND SET TRUE AND SQUARE AND FLUSH WITH THE FINISHED SURFACE.
- 28. WIRING: WIRES SHALL BE COPPER AND RATED FOR THE LOCATIONS IN WHICH THEY ARE INSTALLED, ALL RACEWAYS ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION TO BE DETERMINED ON THE JOB. CONTRACTOR SHALL ARRANGE ALL NEW CIRCUITS IN PANELS SO AS TO BALANCE THE LOAD ON ALL PHASES.
- 29. A TYPED DIRECTORY CARD SHALL BE PROVIDED IN EACH PANEL WITH ADDED CIRCUITS TO INDICATE THE LOADS ACTUALLY SERVED.
- 30. GROUNDING: SHALL BE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 250. PROVIDE GROUND WIRES AS REQUIRED AND RESIZE CONDUIT IF NECESSARY.
- 31. DEMONSTRATION OF COMPLETE ELECTRICAL SYSTEMS: UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL OBTAIN A CERTIFICATE OF APPROVAL FROM THE RESPECTIVE INSPECTION AGENCIES, CONTRACTOR SHALL NOTIFY AND MAKE ALL THE NECESSARY ARRANGEMENTS WITH THE INSPECTING AGENCY AND LOCAL AUTHORITIES SO THAT INSPECTION MAY BE CARRIED OUT AT THE PROPER TIME.



THE DRAWINGS.

- EXPENSE.
- CONTRACTOR.
- FINISHED GRADE.

- ENGINEER.



ELECTRICAL LIGHTING NOTES:

1. PRIOR TO ORDERING ANY MATERIALS OR DOING ANY WORK, THE CONTRACTOR SHALL VERIFY DIMENSIONS AT THE SITE AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ENGINEER. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL THE ENGINEER RENDERS A DECISION. NO EXTRA CHARGES OR COMPENSATION WILL BE ALLOWED FOR THE DIFFERENCES IN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON

2. THE CONTRACTOR SHALL PROVIDE A UTILITY LOCATOR AND VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES IN PLACE UNLESS NOTED OR SPECIFIED OTHERWISE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RESTORE ALL PROPERTY, LANDSCAPING, PAVING AND DRIVEWAYS THAT ARE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION.

4. HOLES, CAVITIES, TRENCHES, AND DEPRESSIONS RESULTING FROM THE REMOVAL OF STRUCTURES OR OBSTRUCTIONS, EXCEPT IN AREAS TO BE EXCAVATED, SHALL BE BACKFILLED WITH SUITABLE MATERIAL WHICH SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698, D-2922 AND D-3017. SURPLUS EXCAVATION MATERIALS SHALL BE LEGALLY DISPOSED OF BY THE

5. ALL CONDUCTORS SHALL BE IDENTIFIED AT ALL PULL BOXES, LOAD CENTERS AND FIXTURES. ALL WIRING DEVICES SHALL HAVE A TAG ON BACK OF THE COVERPLATE IDENTIFYING THE PANEL AND CIRCUIT NUMBER FROM WHICH THEY ARE FED.

6. EACH LIGHT POLE SHALL HAVE 3/4" X 10' COPPER GROUND ROD WITH #6 CU TO GROUND LUG IN LIGHT POLE HANDHOLE. CABLE CONNECTION TO GROUND ROD SHALL BE AN EXOTHERMIC CONNECTION, MINIMUM 12" BELOW

7. FOR MATERIAL INSTALLED AND/OR WORK PERFORMED PRIOR TO APPROVAL. THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST, IF IN THE OPINION OF THE ENGINEER, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE PLANS AND/OR SPECIFICATIONS.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY, STORAGE, AND HANDLING OF ALL MATERIALS AND EQUIPMENT PRIOR TO FINAL ACCEPTANCE. ANY DAMAGED MATERIAL OR EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

9. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL ENERGIZE AND OPERATE THE ENTIRE LIGHTING SYSTEM, FROM SUNSET TO SUNRISE FOR TWO (2) CONSECUTIVE DAYS WITHOUT INTERRUPTION OR FAILURE. IF ANY EQUIPMENT OR MATERIAL SHOULD FAIL, IT SHALL BE REPLACED IMMEDIATELY AND RETESTED.

10. "AS-BUILT" DRAWING REQUIREMENTS SHALL CONSIST OF RECORDING, BY THE CONTRACTOR, ANY CHANGE OR DEVIATION ON A SET OF APPROVED PLANS. PLANS SHALL BE FURNISHED TO THE INSPECTOR AT THE COMPLETION OF THE PROJECT. CONTRACTOR SHALL COORDINATE INSPECTION WITH RESIDENT ENGINEER. FINAL PAYMENT SHALL NOT BE MADE UNTIL THE AS-BUILT PRINTS ARE ACCEPTED BY THE RESIDENT

11. TRENCH, CONDUIT, AND PULL BOXES SHALL BE FURNISHED AND INSTALLED PER TARGET STANDARD SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC IMPROVEMENTS, LATEST EDITION AND ANY APPROVED/ACCEPTED AMENDMENT OR REVISION.

12. CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW-2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #10 AWG WITH #10 GND, UNLESS OTHERWISE NOTED.

 UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC, MINIMUM DEPTH 30' MINIMUM SIZE 1", UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE FOR INFORMATION ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

14. OUTDOOR CONDUITS TO BE GALVANIZED RIGID STEEL (GRS), MINIMUM SIZE 1", UNLESS OTHERWISE NOTED ON THE PLANS. GRS CONDUIT SHALL EXTEND BELOW GRADE TO THE FIRST ELBOW. ALL GRS CONDUIT EXPOSED TO FARTH SHALL BE HALF LAPPED WRAPPED IN SCOTCHRAP 50 10 MIL TAPE OR EQUAL. EXTEND WRAP TO A HEIGHT OF 12" ABOVE GRADE. INDOOR CONDUITS SHALL BE IMC OR EMT UNLESS OTHERWISE SHOWN ON PLAN.

ABBREVIATIONS:

AFG ABOVE FINISHED GRADE AIC AMPS INTERRUPTING CURRENT AMERICAN NATIONAL STANDARDS INSTITUTE ANSI AWG DIA EMT ENT **FVNR** GFCI GND GRS HDD

*GENERAL LIST OF ABBREVIATIONS: SOME MAY OR MAY NOT APPLY

LEGEND:

AWG	AMERICAN NATIONAL STANDARDS INSTITUTE AMERICAN WIRE GAUGE	
DIA	DIAMETER	
EMT	ELECTRICAL METALLIC TUBING	
ENT	ELECTRICAL NON-METALLIC TUBING	
FVNR	FULL VOLTAGE NON-REVERSING STARTER	
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	
GND	GROUND	
GRS	GALVANIZED RIGID STEEL	
HDD	HORIZONTAL DIRECTIONAL DRILLING	
HDPE	HIGH DENSITY POLYETHYLENE	
IEEE	INSTITUTE FOR ELECTRICAL AND ELECTRONIC ENGINEERS	
IMC	INTERMEDIATE METAL CONDUIT	
KW	KILOWATT	
KVA	KILOVOLT AMPERES	
MEP	MECHANICAL, ELECTRICAL, PLUMBING	(x)
МН	MOUNTING HEIGHT	\bigcirc
MCC	MOTOR CONTROL CENTER	
NEC	NATIONAL ELECTRICAL CODE	
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	0
NEPA	NATIONAL FIRE PROTECTION ASSOCIATION	
PLC	PROGRAMMABLE LOGIC CONTROLLER	
PVC	POLYVINYL CHLORIDE	
SCCR	SHORT CIRCUIT CURRENT RATING	
SES	SERVICE ENTRANCE SECTION	
SS	STAINLESS STEEL	
TSP	TWISTED SHIELDED PAIR	
UBC	UNIFORM BUILDING CODE	
UL	UNDERWRITERS LABORATORY	
VFD	VARIABLE FREQUENCY DRIVE	
W	WATTS, WIRE	
WP	WEATHERPROOF	
WWTP	WASTE WATER TREATMENT PLANT	
XFMR	TRANSFORMER	
3P	THREE PHASE	
	La adale accessioned data (Constraint)	

PROPOSED UNDERGROUND ELECTRICAL CONDUIT VIA HORIZONTAL DIRECTIONAL DRILLING (HDD)

EXISTING UNDERGROUND ELECTRICAL CONDUIT

PROPOSED SITE LIGHTING LED POLE FIXTURE SEE PLANS FOR ARRANGEMENT AND QUANTITY

EXISTING SITE LIGHTING LED POLE FIXTURE SEE PLANS FOR ARRANGEMENT AND QUANTITY

CONSTRUCTION NOTE

SOLAR DRIVE UP BEACON

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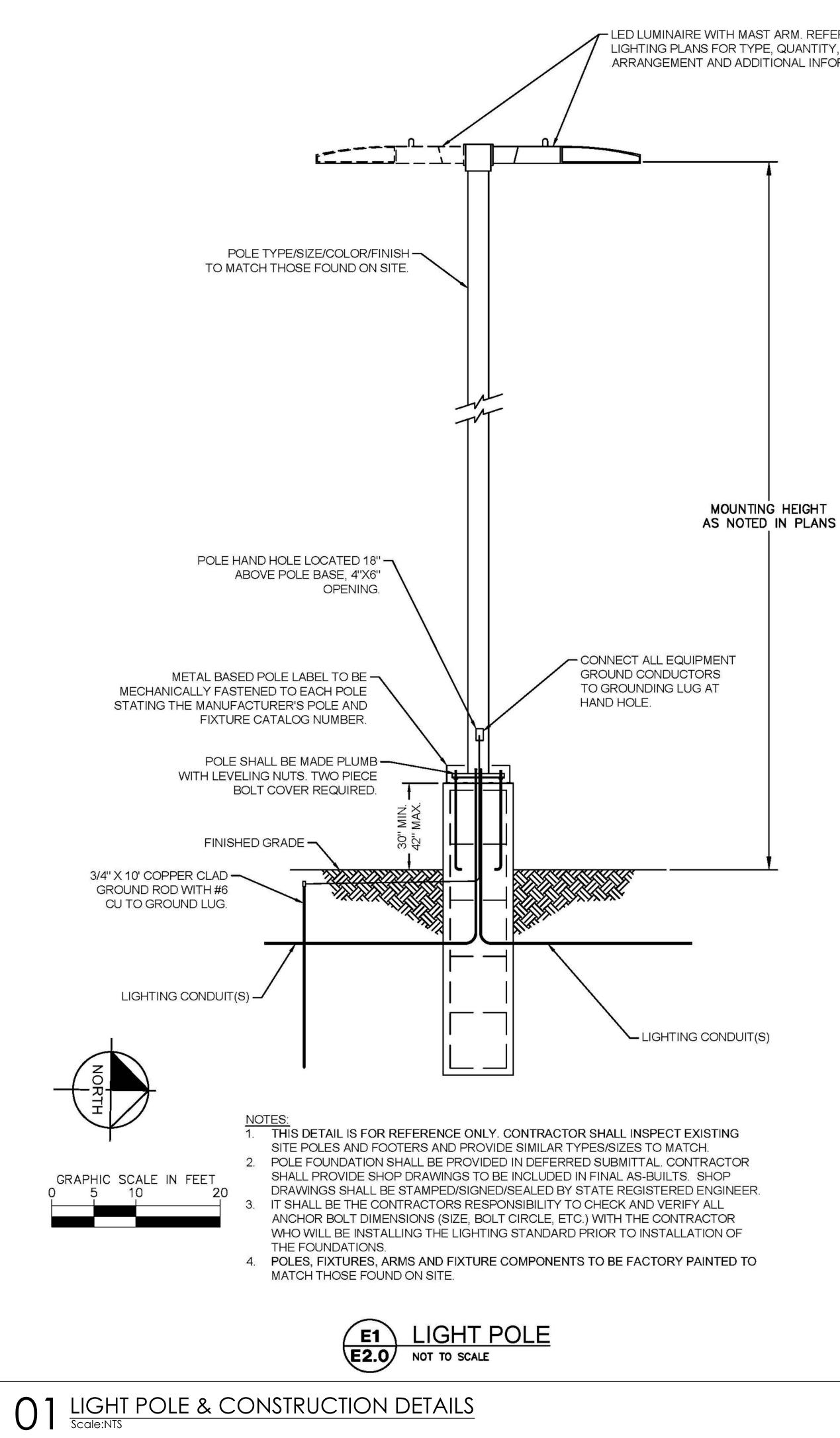
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Revisio	m May 21, 2023	
#	Revision Notes	Date

Sheet Title

Lighting General Notes





- LED LUMINAIRE WITH MAST ARM. REFER TO

AST ARM. REFER TO TYPE, QUANTITY, DDITIONAL INFORMATION.	1	COORDINATE SITE ELECTRICAL WORK WITH OWNER, SITE MANAGER AND ALL APPROPRIATE TRADES. EXISTING CONDUITS TO BE MANDRELLED AND REUSED; REPLACE IF COLLAPSED OR BLOCKED. INTERCEPT AND EXTEND CONDUITS AND CONDUCTORS AS REQUIRED. RE-USE EXISTING SAME SIZE OR LARGER WIRE AFTER TESTING EXISTING WIRE AND INSULATION PER NEC STANDARDS.	1.	ALL EXIS TYPES, F CONDUIT UNKNOW REFLECT VERIFY II UPDATEE
•	2	EXISTING SITE LIGHTING POLE, FIXTURES, AND FOUNDATION TO REMAIN. PROTECT IN PLACE.	2.	ALL CON SCHEMA
	3	EXISTING ELECTRICAL SITE LIGHTING CONDUIT. FIELD VERIFY LOCATIONS AND PROTECT IN PLACE.		BEST RO
	4	FURNISH AND INSTALL 1/2" GRS CONDUIT FOR NEW CONDUCTOR PATHS TO PROPOSED POLE LOCATION(S). PENETRATE EXISTING POLE SIDEWALL AND SEAL ALL PENETRATIONS UPON COMPLETION. SEE DETAIL E2 FOR ADDITIONAL INFORMATION.	3.	CONTRA MANUFA REQUIRE FOR A CO
	5	DIRECTIONAL DRILLING (HDD) METHOD. PROVIDE (2) #10 AWG CU XHHW CONDUCTORS AND (1) #10 AWG CU GROUND FOR SITE LIGHTING AND CONNECT FOR A COMPLETE SYSTEM. ENSURE	4.	THE CON BE MAINT
		THAT ALL EXISTING CIRCUITS AND CONNECTIONS ARE MAINTAINED.	5.	ALL NEW APPROPI
	(6)	FURNISH AND INSTALL NEW FOUNDATION FOR PROPOSED SITE LIGHTING POLE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR NEW SITE LIGHTING POLE FOUNDATIONS.	6.	CIRCUITI
TING HEIGHT		FOUNDATIONS SHALL PROVIDE MOUNTING HEIGHT(S) FOR FIXTURES AS DESIGNATED IN THE PLANS. FOUNDATIONS SHALL PROVIDE BOLT PATTERNS TO MATCH OTHER EXISTING SITE LIGHTING POLE FLANGE BOLT PATTERNS. SEE DETAIL E1.	0.	CONTRAG ADEQUA REPLACE
TED IN PLANS	7	FURNISH AND INSTALL (1) NEW LED SITE LIGHTING FIXTURE COOPER GLEON LUMINAIRE LIGHT MODEL # TAR-GLEON-SA8B-740-8-5MQ-DP-DIM10-PER7N-MS/DC-L40W AT 20' MOUNTING HEIGHT WITH NEW MAST ARM ON NEW POLE AND	7.	ALL CIRC PRIOR TO ALL EQU BREAKEF
		FOUNDATION. PROVIDE (2) #12 AWG CU CONDUCTORS AND (1) #12 AWG CU GROUND FROM POLE HAND HOLE TO EACH FIXTURE AND CONNECT FOR COMPLETE SYSTEM. COORDINATE WITH OWNER TO VERIFY ALL PREVIOUS CIRCUITS AND CONNECTIONS HAVE BEEN REESTABLISHED.	8.	CONTRA CONTRO ELECTRI EQUIPME
	8	SOLAR BEACON. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.	9.	CONTRA LANDSCA ORIGINA
	9	CONTRACTOR SHALL IDENTIFY EXISTING LIGHTING CIRCUIT TO UTILIZE FOR CONNECTING NEW SITE LIGHTING FIXTURES. IDENTIFY THE EXISTING LIGHTING CIRCUIT'S SOURCE PANEL, CIRCUIT NUMBER AND CIRCUIT BREAKER SIZE. VERIFY EXISTING CAPACITY BY PERFORMING 72-HOUR LOAD STUDY OR NEC CODE 220.87 APPROVED METHOD. IF THE TOTAL NEW LOAD (EXISTING PLUS PROPOSED) EXCEEDS THE ALLOWABLE LOADS OF THE CIRCUIT BREAKER OR PANEL, DO NOT CONNECT THE NEW LOADS WITHOUT UP-SIZING THE CIRCUIT BREAKER OR PANEL CAPACITY. PROVIDE UPDATED PANEL SCHEDULES AS	10.	EXISTING SHALL BE WITH OW PRIOR TO IRRIGATIO REPAIRE

NEEDED.

SITE LIGHTING CONSTRUCTION NOTES

GENERAL NOTES

1. ALL EXISTING ELECTRICAL INFORMATION INCLUDING LUMINAIRE PANEL NAMES, CIRCUIT NUMBERS, JIT/CONDUCTOR SIZES AND ROUTING, ETC. ARE WN AND BASED ON EXISTING DOCUMENTS AND MAY NOT CT ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL INFORMATION DURING CONSTRUCTION AND PROVIDE ED AS-BUILTS UPON COMPLETION.

> NDUIT ROUTING AND EQUIPMENT LOCATIONS ARE IATIC. ELECTRICAL CONTRACTOR SHALL DETERMINE ROUTING PATH BASED ON FIELD CONDITIONS WITH APPROVAL.

ACTOR SHALL COORDINATE WITH EQUIPMENT ACTURER(S) FOR DETAILED CONNECTIONS REMENTS AND PROVIDE MATERIALS AND INSTALLATION COMPLETE AND OPERATIONAL SYSTEM.

DNTINUITY OF ALL EXISTING CIRCUITS TO REMAIN SHALL NTAINED.

WEQUIPMENT SHALL BE CONNECTED TO AN PRIATELY SIZED CIRCUIT IN AN EXISTING PANEL AND/OR NG CONTROLLER, CONTRACTOR SHALL VERIFY TING PRIOR TO ROUGH-IN.

ACTOR SHALL VERIFY EXISTING CIRCUITS ARE JATELY SIZED FOR ANY EQUIPMENT THAT IS TO BE CED PRIOR TO CONNECTING NEW EQUIPMENT.

RCUITING THAT IS INDICATED SHALL BE FIELD VERIFIED TO ROUGH-IN. THE CONTRACTOR SHALL ENSURE THAT QUIPMENT IS CONNECTED TO ADEQUATELY SIZED CIRCUIT ERS AND CONDUCTORS.

ACTOR SHALL ENSURE EXISTING PANELS/LIGHTING OLLERS HAVE ADEQUATE CAPACITY FOR NEW RICAL LOADS PRIOR TO ANY NEW OR REPLACED **MENT BEING CONNECTED**

ACTOR SHALL RESTORE AND REPAIR ALL DISTURBED CAPE, HARDSCAPE, ASPHALT, CURB AREAS ETC. TO AL STATE OR BETTER.

NG UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. IT BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WNER AND FIELD VERIFY ALL EXISTING SITE CONDITIONS TO BEGINNING WORK. ANY EXISTING SYSTEMS (I.E. TION, WATER, GAS, SEWER, ETC.) IMPACTED, SHALL BE RED/RESTORED TO ORIGINAL STATE OR BETTER.

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