



**KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION  
USE ON REVIEW REPORT**

▶ **FILE #:** 1-K-15-UR

**AGENDA ITEM #:** 33

**AGENDA DATE:** 1/8/2015

▶ **APPLICANT:** SACRED HEART CATHEDRAL

OWNER(S): Sacred Heart Church

TAX ID NUMBER: 121 J A 001 & 121HA012, 013 & 014

[View map on KGIS](#)

JURISDICTION: City Council District 2

STREET ADDRESS: 805 S Northshore Dr

▶ **LOCATION:** Southwest side of S. Northshore Dr., south of Erin Dr.

▶ **APPX. SIZE OF TRACT:** 16.5 acres

SECTOR PLAN: West City

GROWTH POLICY PLAN: Urban Growth Area (Inside City Limits)

ACCESSIBILITY: Access is via S. Northshore Dr., a major arterial street with a five lane section with a 56' pavement width, and Erin Dr., a local street within a 28' pavement width within a 50' to 55' right-of-way.

UTILITIES: Water Source: Knoxville Utilities Board

Sewer Source: Knoxville Utilities Board

WATERSHED: Fourth Creek

▶ **ZONING:** R-1 (Low Density Residential), O-1 (Office, Medical and Related Services), O-3 (Office Park) and C-6 (General Commercial Park)

▶ **EXISTING LAND USE:** Church and related facilities

▶ **PROPOSED USE:** Church and related facilities

HISTORY OF ZONING: None noted

SURROUNDING LAND USE AND ZONING: North: Mixed businesses / C-4 (Highway and Arterial Commercial) & C-6 (General Commercial Park)

South: Residences / R-1 (Low Density Residential)

East: Church, apartments and residences / R-2 (General Residential) & O-1 (Office, Medical and Related Services)

West: Residences / EN-2 (Established Neighborhood) & F-1 (Floodway)

NEIGHBORHOOD CONTEXT: The site is located in an area along S. Northshore Dr. that includes a mix of businesses, institutional uses and low and medium density residential developments.

**STAFF RECOMMENDATION:**

▶ **APPROVE** the request for the proposed cathedral and associated site improvements as shown on the development plan, subject to 9 conditions.

1. Connection to sanitary sewer and meeting any other relevant requirements of the Knox County Health Department.
2. Installation of signage for the new access drive on Erin Dr. that clearly identifies left turn restrictions at that

location, subject to approval by the Knoxville Department of Engineering.

3. Implementing the recommendations from the Traffic Impact Study prepared by Cannon & Cannon Inc., and dated December 23, 2014 (See attachment).
4. Installation of the sidewalks and pedestrian crossings as identified on the development plan.
5. Meeting all applicable requirements of the Knoxville Department of Engineering.
6. Approval of a final plat that combines the property into a single lot.
7. Installation of landscaping as shown on the development plan within six months of the issuance of an occupancy permit for this project.
8. All lighting shall be directed away from the adjoining properties and streets.
9. Meeting all applicable requirements of the Knoxville Zoning Ordinances.

With the conditions noted above, this request meets the requirements for approval in the R-1, O-1 and C-6 zoning districts and other criteria for a use-on-review.

#### **COMMENTS:**

This overall development site includes the existing Sacred Heart Church, Sacred Heart School, the Chancery Building for the Roman Catholic Diocese of Knoxville and a nursery/preschool. The applicant is proposing to replace the existing 609 seat church on this site with a new 1143 seat cathedral. The new cathedral will be located on the southeast side of the existing church in an area that is presently used for parking. The existing church building will remain and be used as a center for parish, diocesan and community events. The applicant has submitted a final plat for review that will consolidate the existing lots into a single lot. The R-1 and O-1 zoning districts allow a church through the use on review process.

New parking areas will be added to the south, east and north sides of the new cathedral. There will be a total of 446 parking spaces on site. The required parking for a church is based on the size of the sanctuary.

There are currently three access drives out to S. Northshore Dr. The southern access drive will remain unchanged. The middle access drive will be widened from 20' to 24'. The northern access will be moved approximately 110' to the north and will become the main access drive for the site. A new access drive will be provided out to Erin Dr. This driveway connection will be restricted to only right-in/right-out turning movements.

A Traffic Impact Study was prepared by Cannon & Cannon Inc. for the proposed development. The Traffic Impact Study analyzed the impact of both the cathedral and the school (which included a school drop-off and pick-up traffic flow plan) on S. Northshore Dr. and Erin Dr. It was determined that no off-site street improvements would be required. The Study does recommend continued monitoring of the traffic generated by the cathedral and school (See attached summary and recommendations).

While the development plan includes a pedestrian circulation plan with access out to S. Northshore Dr., a sidewalk is not proposed along S. Northshore Dr. The Knoxville Department of Engineering is evaluating whether they will require the applicant to provide a sidewalk along S. Northshore Dr.

#### **EFFECT OF THE PROPOSAL ON THE SUBJECT PROPERTY, SURROUNDING PROPERTIES AND THE COMMUNITY AS A WHOLE**

1. Public water and sewer utilities are available to serve the development.
2. Implementing the recommendations of the Traffic Impact Study will help to manage the traffic that is related to the new cathedral and operation of the school facility.

#### **CONFORMITY OF THE PROPOSAL TO CRITERIA ESTABLISHED BY THE KNOXVILLE AND KNOX COUNTY ZONING ORDINANCES**

1. With the recommended conditions, the proposed cathedral and associated site improvements meet the requirements of the Knoxville Zoning Ordinance.
2. The proposed development is consistent with the general standards for uses permitted on review: The proposed development is consistent with the adopted plans and policies of the General Plan and Sector Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. The use is compatible with the character of the neighborhood where it is proposed. The use will not significantly injure the value of adjacent property. The use will not draw traffic through residential areas since the primary access is out to S. Northshore Dr., a major arterial street.

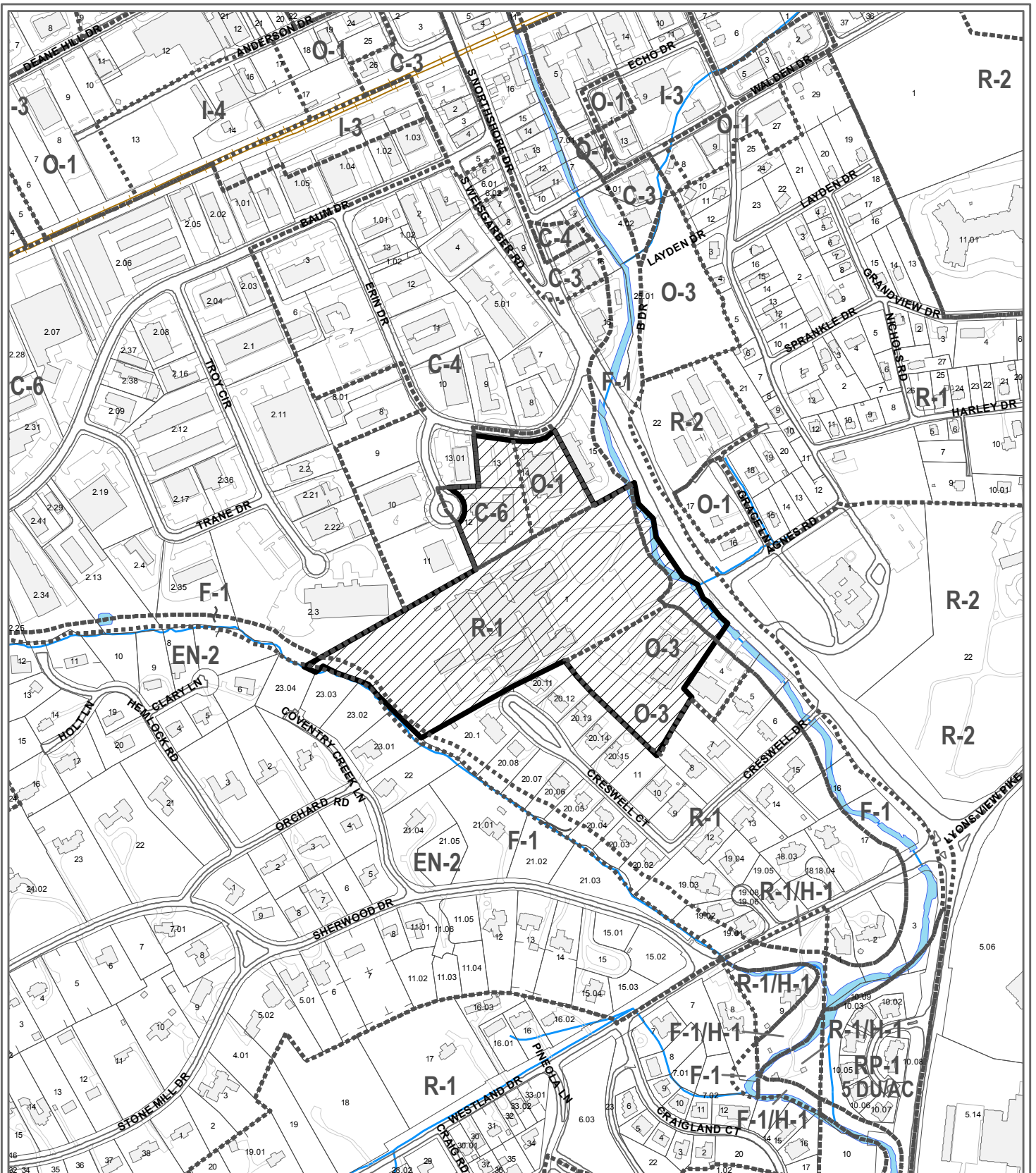
#### **CONFORMITY OF THE PROPOSAL TO ADOPTED MPC PLANS**

1. The City of Knoxville One Year Plan and the West City Sector Plan both propose office uses for the portion of the site that the cathedral will be built on. Under the Zoning Ordinances church facilities are considered to be a compatible use in both office and residential areas.
2. The site is located within the Urban Growth Area of the Knoxville-Knox County-Farragut Growth Policy Plan.

ESTIMATED TRAFFIC IMPACT: A traffic impact study was prepared by the applicant. The findings of that study were used in formulating the recommendations of this staff report.

ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this request is final, unless the action is appealed to the Knoxville City Council. The date of the Knoxville City Council hearing will depend on when the appeal application is filed. Appellants have 15 days to appeal an MPC decision in the City.



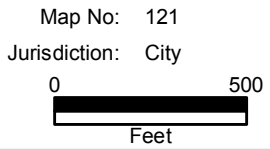
**1-K-15-UR  
USE ON REVIEW**



Church and related facilities in R-1 (Low Density Residential), O-1 (Office, Medical and Related Services), O-3 (Office Park) and C-6 (General)

Petitioner: Sacred Heart Cathedral

Original Print Date: 12/22/2014      Revised:  
Metropolitan Planning Commission \* City / County Building \* Knoxville, TN 37902



1-K-15-UR

TRAFFIC IMPACT STUDY

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**SACRED HEART CATHEDRAL AND CATHEDRAL SCHOOL**

S. NORTSHORE DRIVE  
KNOXVILLE, TN

CCI PROJECT NO 00251-0012

REV. 1

PREPARED FOR  
Barber McMurry Architects  
505 Market Street,  
Suite 300  
Knoxville, TN 37902

SUBMITTED BY  
 **CANNON &  
CANNON** INC  
CONSULTING ENGINEERS  
RUE DE LA REPUBLIQUE

REVISED  
DECEMBER 23  
**2014**

## EXECUTIVE SUMMARY

This report provides a summary of a traffic impact study that was performed for the Sacred Heart Cathedral School and the Sacred Heart Cathedral campus located along S. Northshore Drive in the City of Knoxville. The actual site location is on the west side of Northshore Drive, approximately one-half mile south of Kingston Pike and one-quarter mile north of Westland Drive / Lyons View Pike. Proposed improvements to the Sacred Heart Cathedral site include renovations to the Sacred Heart Cathedral School, construction of a new cathedral, and improvements to site parking, circulation, and access. Renovations to the Cathedral School will include modifying student drop-off and pick-up areas which will change school time traffic flow. The proposed new cathedral will increase worship seating capacity from approximately 609 seats to 1,143 seats. The first phase of the project will consist of renovations to the school and should be complete by Fall 2015. The second phase will include proposed site access changes and construction of the new cathedral. The anticipated completion date for this phase is estimated to be by Spring 2017. Modifications to site access include relocation and widening of the northern access driveway onto Northshore Drive and construction of a second access driveway onto Erin Drive just north of the existing Pre-School facility.

The purpose of this study was the evaluation of the traffic operational and safety impacts of the proposed Sacred Heart Cathedral site improvements upon roadways in the vicinity of the project site. Of particular interest were weekday traffic flow operations during school arrival and dismissal times and also during Sunday morning worship times. Appropriate evaluations were conducted at the site driveway locations for existing and future conditions. This was done in order to determine the anticipated impacts from the proposed site improvements and changes in traffic flow. These evaluations included intersection capacity analyses, corner sight distance reviews and others as appropriate.

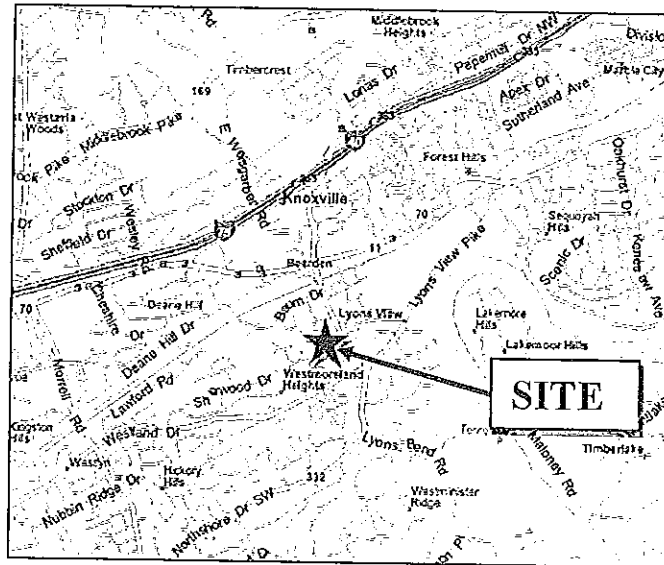
The primary conclusion of this study is that the proposed improvements to the Sacred Heart Cathedral site will not result in unacceptable traffic operations along Northshore Drive or adjacent streets. In fact, proposed site access and parking modifications will provide for sufficient on-site storage area for afternoon school traffic queues and eliminate vehicle queuing along Northshore Drive. An analysis of future Sunday morning conditions indicate that traffic flow will continue to operate well with the proposed site access modifications and the addition of the new cathedral. The access driveways located on Northshore Drive benefit from regular gaps in Northshore Drive traffic created by adjacent traffic signals located at Baum Drive to the north and Westland Drive / Lyons View Pike to the south.

The following recommendations are considered appropriate to further manage traffic related to the Sacred Heart Cathedral site:

1. Maintain the current practice of staggered school dismissal times for K-5<sup>th</sup> grade and 6<sup>th</sup>-8<sup>th</sup> grade students.
2. Periodically review school drop-off and pick-up traffic flow procedures to ensure on-site traffic queuing areas are utilized efficiently in order to eliminate the potential for traffic queues spilling onto adjacent public streets.
3. Maintain the current practice of scheduling Sunday morning Mass times such that departing traffic from the earlier service will mostly dissipate without much overlap with arriving traffic for the later service.
4. Monitor vegetation adjacent to the site driveway locations to ensure intersection sight distance requirements are maintained. In addition, any proposed site related signage or landscaping should consider intersection sight distance requirements.

**INTRODUCTION & PURPOSE OF STUDY**

This report provides a summary of a traffic impact study that was performed for the Sacred Heart Cathedral School and the Sacred Heart Cathedral campus located along S. Northshore Drive in the City of Knoxville. The actual site location is on the west side of Northshore Drive, approximately one-half mile south of Kingston Pike and one-quarter mile north of Westland Drive / Lyons View Pike. FIGURE 1 is a location map identifying the major roadways in the vicinity of the site.



**FIGURE 1  
LOCATION MAP**

The proposed improvements to the Sacred Heart Cathedral site include renovations to the Sacred Heart Cathedral School, construction of a new cathedral, and improvements to site parking, circulation, and access. Renovations to the Cathedral School will include modifying student drop-off and pick-up areas which will change school time traffic flow. The proposed construction of a new cathedral will increase worship seating capacity from approximately 609 seats to 1,143 seats. The first phase of the project will consist of renovations to the school and should be complete by Fall 2015. The second phase will include proposed site access changes and construction of the new cathedral. The anticipated completion date for this phase is estimated to be by Spring 2017. Modifications to site access include relocation and widening of the northern access driveway onto Northshore Drive and construction of a second access driveway onto Erin Drive just north of the existing Pre-School facility. FIGURE 2 is a Conceptual Site Plan which details the proposed site layout and configuration.

The purpose of this study was the evaluation of the traffic operational and safety impacts of the proposed Sacred Heart Cathedral site improvements upon roadways in the vicinity of the project site. Of particular interest were weekday traffic flow operations during school arrival and dismissal times and also during Sunday morning worship times. Appropriate evaluations were conducted at the site driveway locations for existing and future conditions. This was done in order to determine the anticipated impacts from the proposed site improvements and changes in traffic flow. These evaluations included intersection capacity analyses, corner sight distance reviews and others as appropriate.

**SIGHT DISTANCE ASSESSMENT:**

Intersection sight distances were assessed at the site driveway locations on Northshore Drive and Erin Drive. The speed limit along Northshore Drive is 40 mph, so the minimum required sight distance to oncoming traffic is 400 feet. Sight distances along Northshore Drive at the proposed north and existing south driveway locations were observed to be well in excess of the required 400 feet. Sight distances along Erin Drive at the existing pre-school driveway location was measured to be well in excess of 300 feet looking in both directions along Erin Drive. For the proposed right-in/right-out driveway location on Erin Drive, the sight distance field assessment found a sight distance of approximately 325 feet looking from the driveway to the left (west) and approximately 180 feet looking to the right (east). An original sight distance measurement taken at this proposed location documented an available sight distance looking to the right of 230 feet. However, this distance included looking across unoccupied parking spaces in the property across the street from the existing pre-school facility on Erin Drive. The sight distance was re-measured and found to be approximately 180 feet without looking across the parking area. The speed limit on Erin Drive is currently not posted. The available sight distance measured at the proposed driveway location on Erin Drive is adequate for an eastbound speed of 30 mph and a westbound speed of less than 20 mph. Due to the restricted sight distance to the east of the proposed driveway location, left-turns to and from the driveway are proposed to be prohibited and the driveway will operate under right-in / right-out only conditions. This operation will allow entry to the site from the west along Erin Drive and exit from the site to the east.



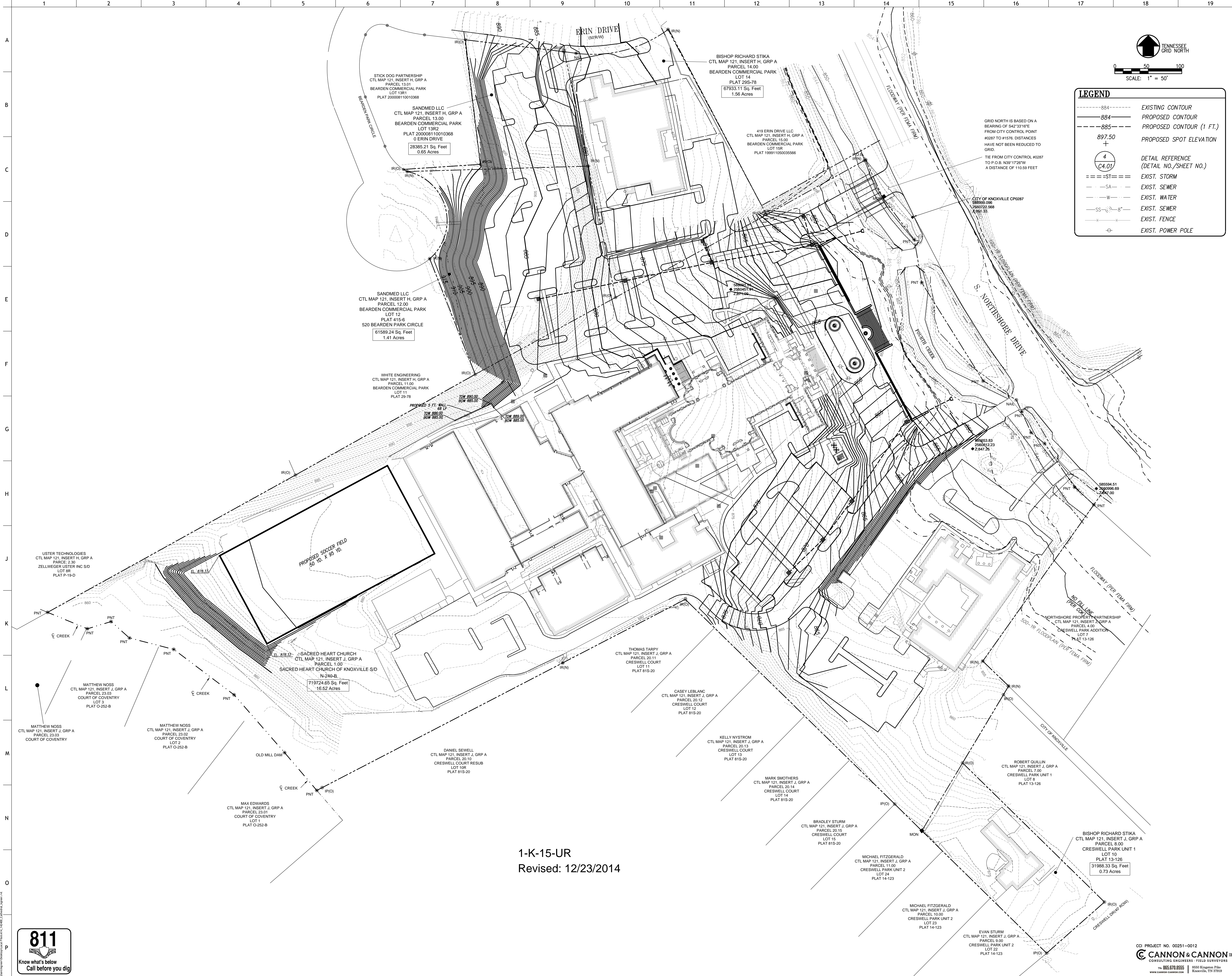
## 6.0 CONCLUSIONS & RECOMMENDATIONS

The primary conclusion of this study is that the proposed improvements to the Sacred Heart Cathedral site will not result in unacceptable traffic operations along Northshore Drive or adjacent streets. In fact, proposed site access and parking modifications will provide for sufficient on-site storage area for afternoon school traffic queues and eliminate vehicle queuing along Northshore Drive. An analysis of future Sunday morning conditions indicate that traffic flow will continue to operate well with the proposed site access modifications and the addition of the new cathedral. The access driveways located on Northshore Drive benefit from regular gaps in Northshore Drive traffic created by adjacent traffic signals located at Baum Drive to the north and Westland Drive / Lyons View Pike to the south.

The following recommendations are considered appropriate to further manage traffic related to the Sacred Heart Cathedral site:

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**LEGEND**

- 884 --- EXISTING CONTOUR
- 885 --- PROPOSED CONTOUR
- 897.50 --- PROPOSED SPOT ELEVATION
- ⊕ (C4.01) DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- ST --- EXIST. STORM
- SA --- EXIST. SEWER
- W --- EXIST. WATER
- SS --- EXIST. SEWER
- 8" --- EXIST. FENCE
- ⊕ --- EXIST. POWER POLE

1-K-15-UR  
Revised: 12/23/2014

**oma**  
BARBER McMURRY  
architects since 1915

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202.177.8544 www.mccreeryarchitects.com

USE ON REVIEW  
CONCEPT PLAN

PROJECT NUMBER  
142400

PROJECT NAME  
CATHEDRAL OF THE SACRED HEART

OWNER  
Sacred Heart Cathedral and Cathedral School

PROJECT ADDRESS  
711 S. NORTHSHORE DR.  
KNOXVILLE, TN 37919

CONSULTANTS

PARTNER-IN-CHARGE	WHC
PROJECT MANAGER	RJB
DRAWN BY	WWL
REVIEWED BY	RJB
ISSUE DATE	11/24/2014
REVISIONS	


**C2.01**  
GRADING AND DRAINAGE PLAN

CCI PROJECT NO. 00251-0012  
**CANNON & CANNON INC.**  
CONSULTING ENGINEERS - FIELD SURVEYORS  
805.678.8555 8000 Kingston Pike  
Knoxville, TN 37950



**EXISTING SCHOOL RELEASE TRAFFIC**

**NORTH BRIDGE (K-3RD ENTRANCE)**

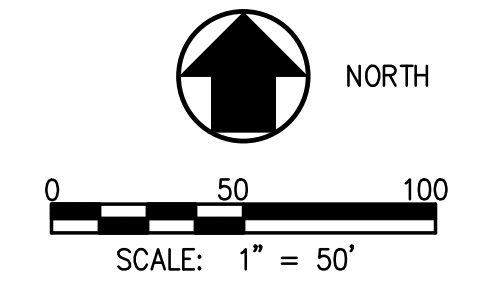
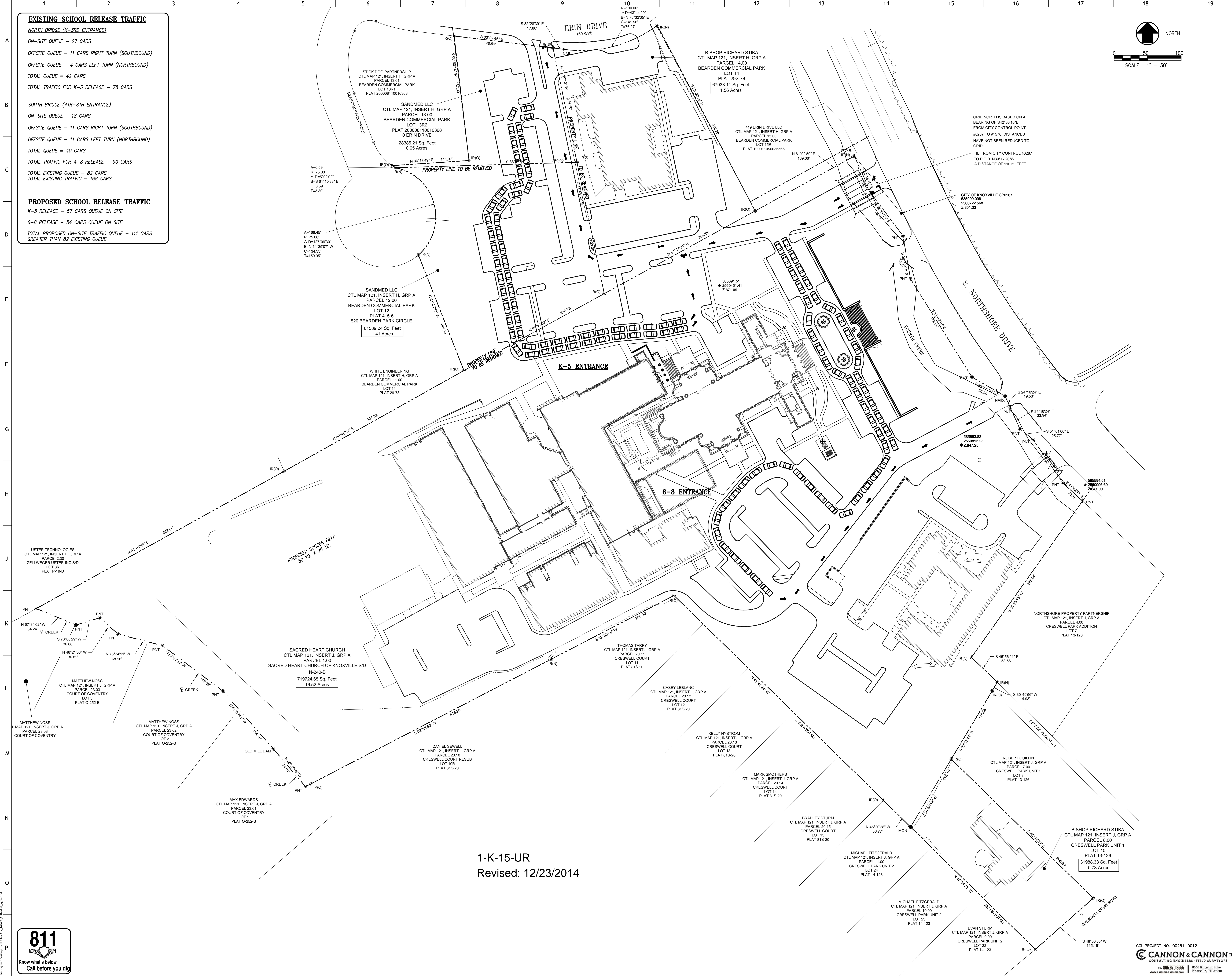
ON-SITE QUEUE - 27 CARS  
OFFSITE QUEUE - 11 CARS RIGHT TURN (SOUTHBOUND)  
OFFSITE QUEUE - 4 CARS LEFT TURN (NORTHBOUND)  
TOTAL QUEUE = 42 CARS  
TOTAL TRAFFIC FOR K-3 RELEASE - 78 CARS

**SOUTH BRIDGE (4TH-8TH ENTRANCE)**

ON-SITE QUEUE - 18 CARS  
OFFSITE QUEUE - 11 CARS RIGHT TURN (SOUTHBOUND)  
OFFSITE QUEUE - 11 CARS LEFT TURN (NORTHBOUND)  
TOTAL QUEUE = 40 CARS  
TOTAL TRAFFIC FOR 4-8 RELEASE - 90 CARS  
TOTAL EXISTING QUEUE - 82 CARS  
TOTAL EXISTING TRAFFIC - 168 CARS

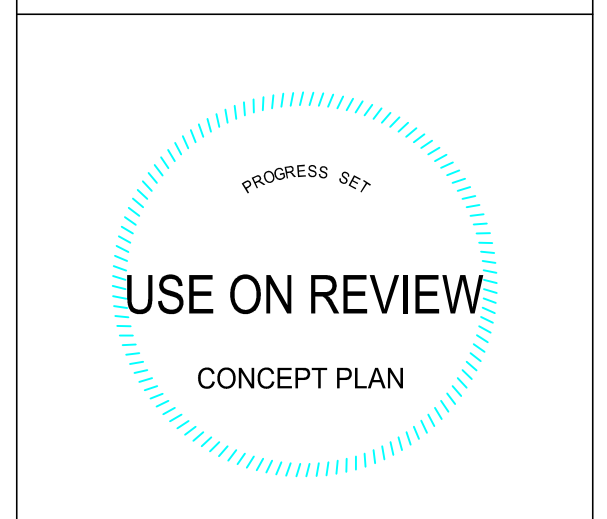
**PROPOSED SCHOOL RELEASE TRAFFIC**

K-5 RELEASE - 57 CARS QUEUE ON SITE  
6-8 RELEASE - 54 CARS QUEUE ON SITE  
TOTAL PROPOSED ON-SITE TRAFFIC QUEUE - 111 CARS  
GREATER THAN 82 EXISTING QUEUE



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800 Washington Avenue, NE  
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202.737.5344 www.mccreeryarchitects.com



PROJECT NUMBER  
142400  
PROJECT NAME  
CATHEDRAL OF THE SACRED HEART  
OWNER  
Sacred Heart Cathedral and Cathedral School  
PROJECT ADDRESS  
711 S. NORTHSHORE DR.  
KNOXVILLE, TN 37919

CONSULTANTS

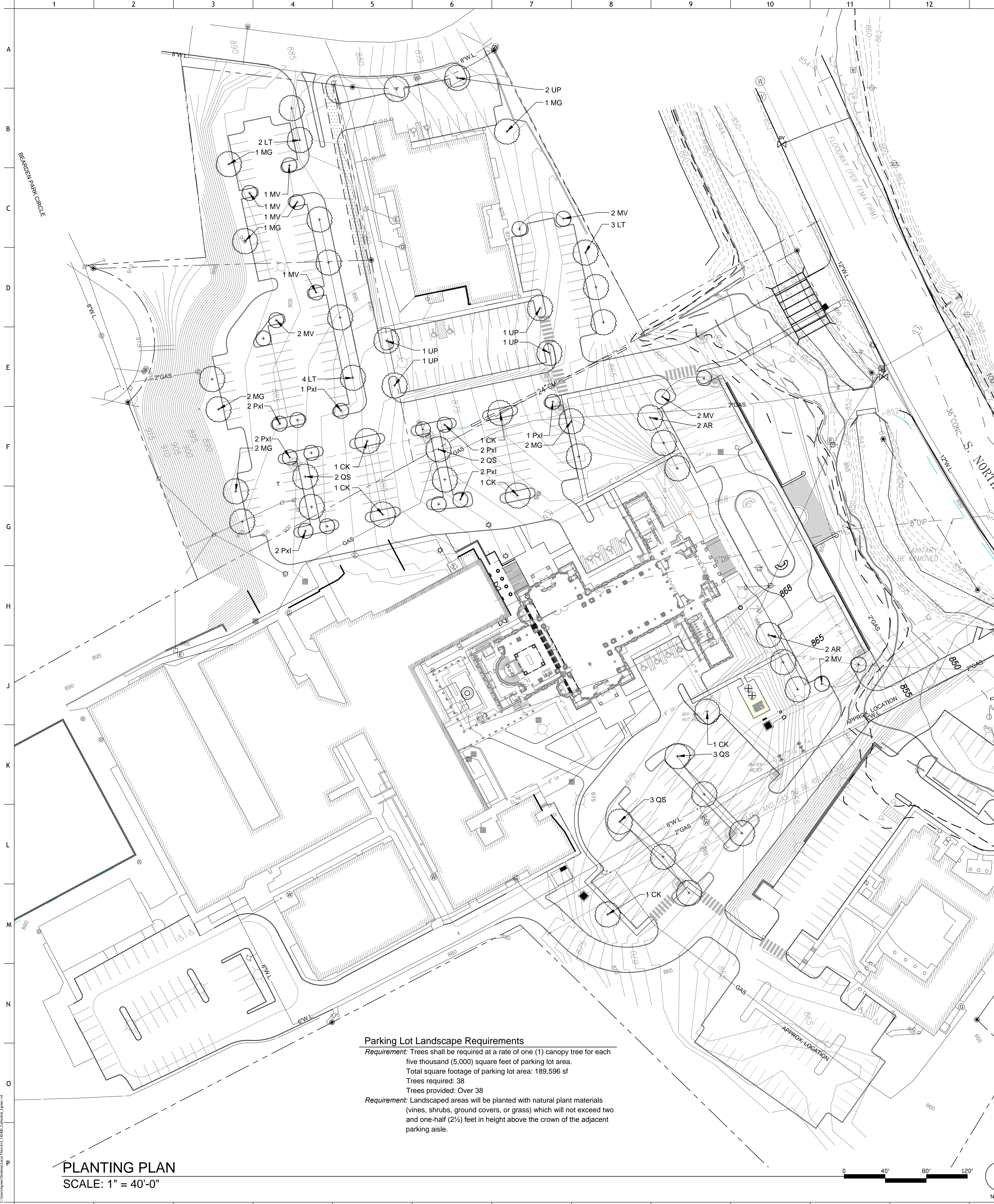
PARTNER-IN-CHARGE	WHC
PROJECT MANAGER	RJB
DRAWN BY	WWL
REVIEWED BY	RJB
ISSUE DATE	11/24/2014
REVISIONS	

**C3.01**  
SCHOOL RELEASE TRAFFIC PLAN

1-K-15-UR  
Revised: 12/23/2014



CCI PROJECT NO. 00251-0012  
CANNON & CANNON INC.  
CONSULTING ENGINEERS - FIELD SURVEYORS  
700 KINROSS BLVD  
KNOXVILLE, TN 37918



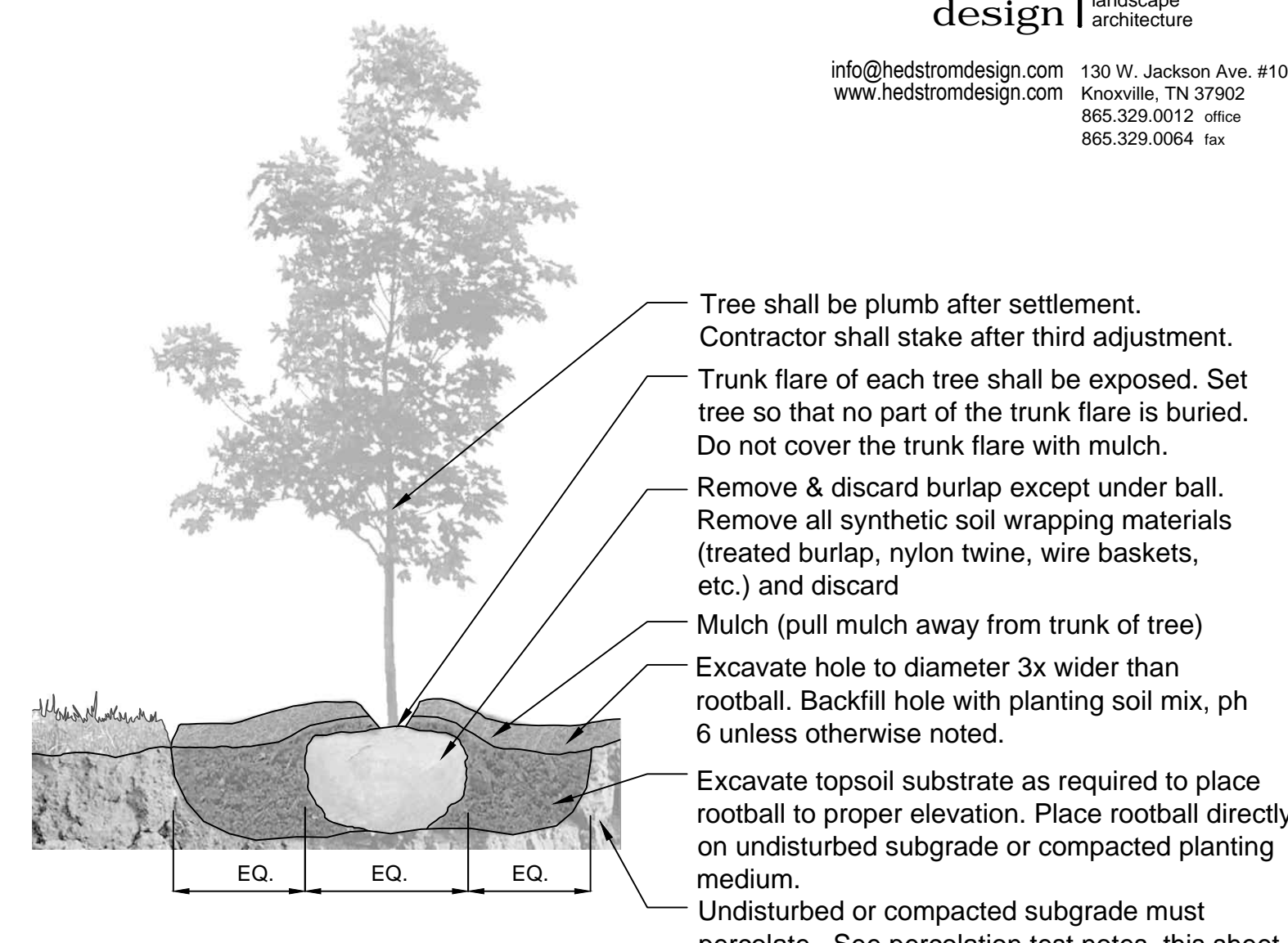
**Plant Schedule**

Key	Quantity	Botanical Name	Common Name	Size	Notes
<b>SHADE TREES</b>					
AR	6	Acer rubrum 'October Glory'	October Glory Red Maple	3" cal.	6' CT -Central leader, full & matched
CK	6	Cladrasis kentukea	Kentucky Yellowwood	3" cal.	6' CT -Central leader, full & matched
LT	9	Liriodendron tulipifera	Tulip Poplar	3" cal.	6' CT -Central leader, full & matched
MG	9	Metasequoia glyptostroboides	Dawn Redwood	14' hgt. min.	6' CT -Central leader, full & matched
QS	10	Quercus shumardii	Shumard Oak	3" cal.	6' CT -Central leader, full & matched
UP	6	Ulmus parvifolia 'Ailee'	Ailee Elm	3" cal.	6' CT -Central leader, full & matched
<b>ORNAMENTAL TREES</b>					
Pxl	12	Prunus x incamp 'Okame'	Okame Cherry	2.5" cal.	Matched, full & well branched
MV	12	Magnolia virginiana 'Australis'	Sweetbay Magnolia	12' hgt. min.	Multi-trunk, matched, full & well branched

\* Contractor to provide quantity for mulch.  
Note: Shrubs and groundcover to be determined



1-K-15-UR  
Revised: 12/23/2014



1 Deciduous Tree Planting Detail  
Scale: NTS

**Landscape Notes**

- Contractor shall verify all existing conditions in the field and report any discrepancies to the Landscape Architect or Owner's Representative prior to starting work.
- No planting shall occur until soil sample results have been received from all planting areas and soils are properly amended based on the results of the soil tests. See this sheet for soil sampling instructions.
- No planting shall occur until percolation testing has been completed and soils have been properly amended to drain. See this sheet for percolation testing procedures.
- All new plant material shall conform to the guidelines established for nursery stock published by the American Association of Nurserymen, Inc. In addition, all new plant material for the project shall be of the highest specimen quality.
- Do not assume trunk flare will be exposed at the nursery. Contractor to expose trunk flares to check for root girdling. Pull mulch away from the trunk flare of trees and from the base of all shrubs.
- All new plants shall be balled and burlapped or container grown unless otherwise noted on the plant list.
- The Contractor shall locate and verify all existing utility lines prior to planting and report any conflicts to the Landscape Architect.
- No plant material shall be planted before acceptance of rough grading. The finished grade shall not cover any part of the tree trunk flare. See tree planting detail.
- Stake location of all proposed trees and planting areas for approval by the Landscape Architect or Owner's Representative prior to the commencement of planting.
- All lawn areas disturbed by construction operations inside and outside the limit of work shall be prepared and seeded as specified.
- Prepare all shrub beds with planting soil to a minimum depth matching the depth of shrub root balls; prepare perennial beds with a minimum of 12" planting loam; prepare groundcover beds with a minimum of 6" planting loam.
- All plant beds are to receive one and a half inches (1.5") of double shredded hardwood mulch as specified.
- Thoroughly water trees and shrubs during the first 24 hours after planting. Wet the soil to a depth of 18-24". When runoff starts, stop watering, let the water soak in and repeat until the proper depth is wet.
- Any proposed substitutions of plant species shall be made with plants of equivalent overall form, height, branching habit, flower, leaf, color, fruit, and culture only as approved by the Landscape Architect.
- All areas to be sodded shall receive soil preparation as specified prior to sodding, unless otherwise noted on plan.
- Contractor's base bid to include all materials, labor, permits, equipment, tools, insurance, etc. to perform the work as described in the contract documents.
- Contractor to complete work within schedule established by Owner.
- Contractor to provide one year warranty for all material from date of substantial completion. Plant material delivered to the site that does not meet the requirements stated herein may be rejected by the Owner's Representative.
- Contractor to provide interim maintenance (watering, pruning, fertilizing, guying, mowing, trimming, adequate drainage of ponding areas, edging, weeding, mulching, and general landscape clean-up) until substantial completion notice is provided by the Owner's Representative.
- See civil drawings for further information regarding:
  - Erosion and sediment control.
  - Locations of existing and proposed structures, paving, driveways, cut and fill areas, and retention areas.
  - Limits of construction.
  - Locations of existing and proposed utilities or easements.
- Plant beds to join walks or walls at an angle between 90° & 60°.
- Shade trees to be planted a minimum of 5' from sidewalks, water line, sewer line or manholes. Evergreen and ornamental trees to be planted a minimum of 3' from sidewalks, water line, sewer line or manholes.
- Mulch rings around shade trees to be a minimum diameter of 4' and a minimum of 3" around ornamental and evergreen trees. If evergreen trees are specified as full to ground, mulch ring to extend a minimum of 12' beyond the edge of plant.
- Planting plans are not layout plans. Plants may need to be shifted in the field, based on the existing conditions.
- Square footage of sod quantities is approximate and is an estimate of the disturbed areas. Contractor to verify quantities prior to purchase and installation.

**Instructions For Existing Soil Sampling:**

- Using a spade, dig a v-shape hole to a 6" depth; then cut a thin slice of soil from one side of the hole. Place the slice in a plastic bucket, do not use a metal bucket. Mix slices together and fill a plastic sample bag with three (3) cups of dirt. The sample bags can be ziploc bags that are labeled with the project name and sample number.
- A well mixed composite from 10 to 20 random locations should be subsampled to make the three (3) cup sample.
- Mark the plan to show soil sample locations.
- Send samples to A & L Analytical Labs, Inc., 2790 Whitten Road, Memphis, Tennessee 38133, 800-264-4522, www.a-l-labs.com.
- Results to be copied to the Owner.

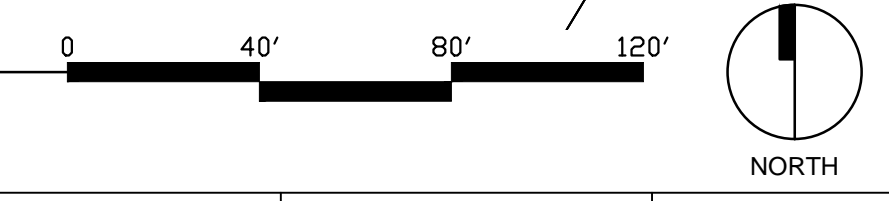
**Percolation Test Notes**

- Excavate the new medians to a depth required by the plant bed excavation notes.
- Dig a hole 18-24" deep & a minimum of 6" wide.
- Fill hole with water to the top and let drain for several hours. Ideally let the hole pre-wet over night and test the following day. Refill hole to within a couple inches of the top.
- To aid in measurement, place a stick across the top of the hole and use a second stick to mark periodic drops in water level.
- Mark side of hole; or mark soil on side of hole with nail or stick.
- Measure drop in water level after 30 minutes and one hour. If possible measure drop in water level the next day.
- Determine drop in water level per hour. If water level in hole drops more than one inch per hour, it is well drained and suitable for all plant species.

**Parking Lot Landscape Requirements**

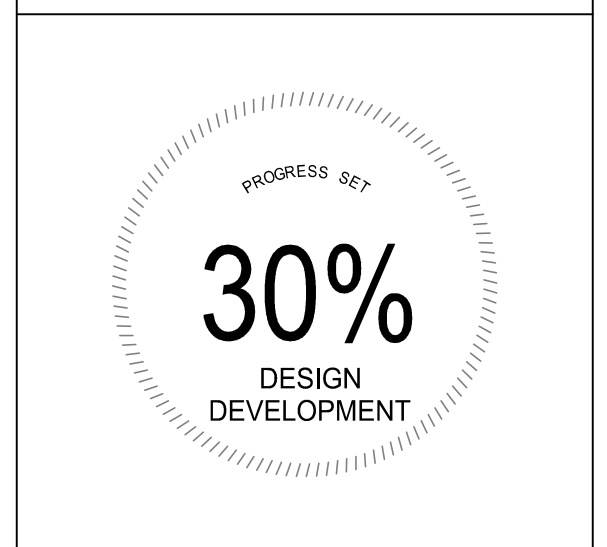
**Requirement:** Trees shall be required at a rate of one (1) canopy tree for each five thousand (5,000) square feet of parking lot area.  
Total square footage of parking lot area: 189,596 sq ft  
Trees required: 38  
Trees provided: Over 38  
**Requirement:** Landscaped areas will be planted with natural plant materials (vines, shrubs, ground covers, or grass) which will not exceed two and one-half (2½) feet in height above the crown of the adjacent parking aisle.

**PLANTING PLAN**  
SCALE: 1" = 40'-0"



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Washington, District of Columbia 20002  
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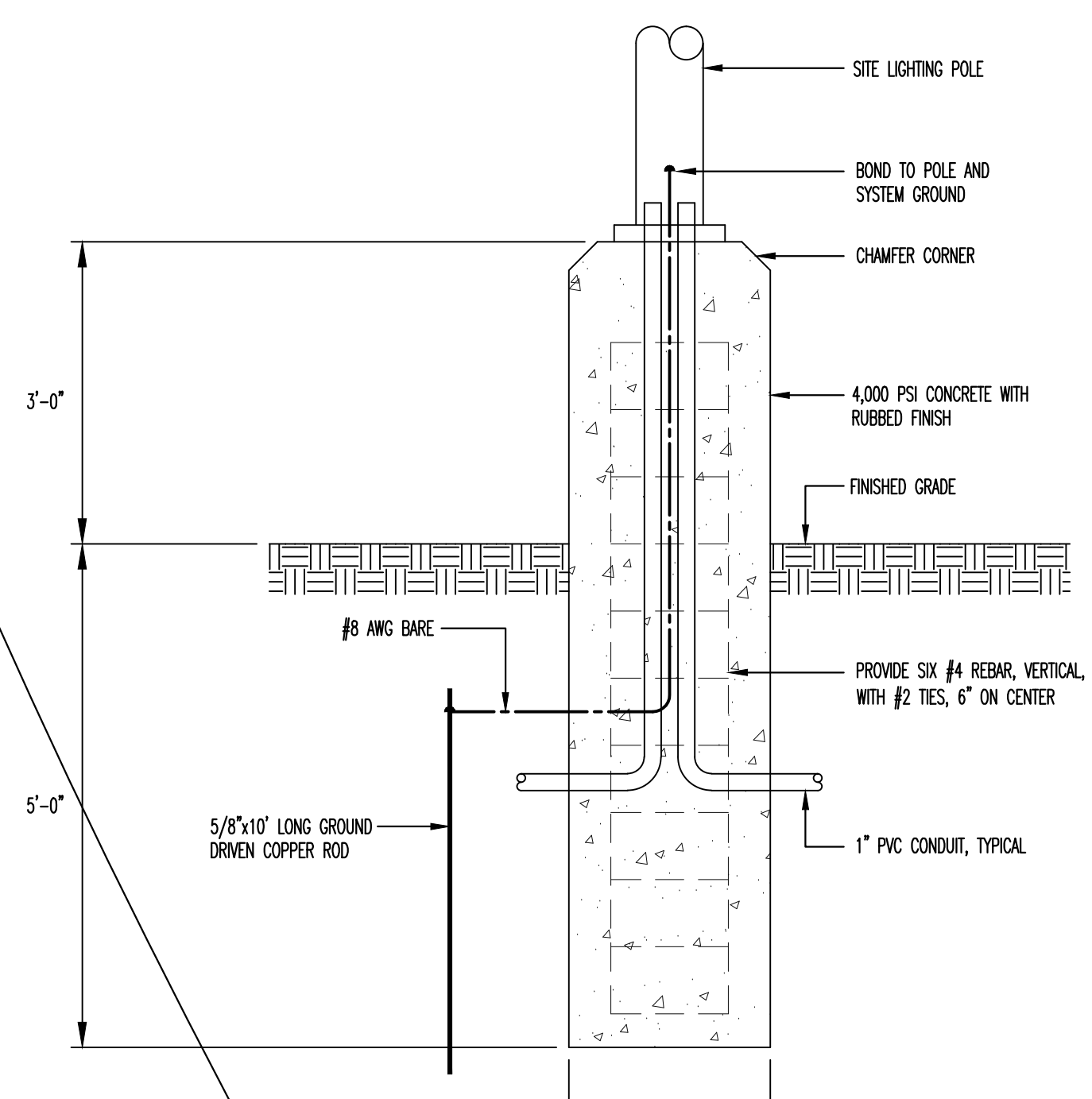
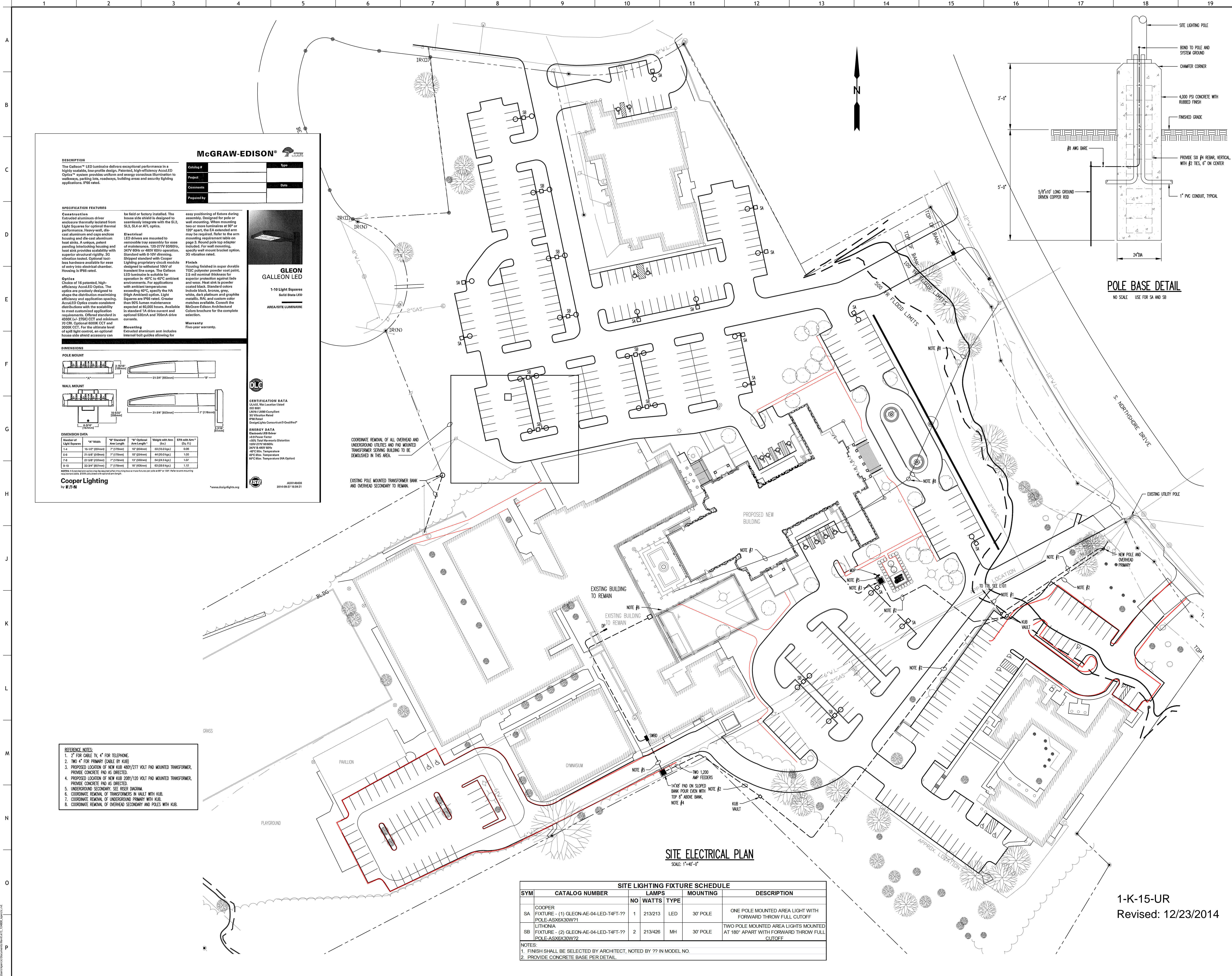


PROJECT NUMBER  
142400  
PROJECT NAME  
CATHEDRAL OF THE SACRED HEART  
OWNER  
Sacred Heart Cathedral and Cathedral School  
PROJECT ADDRESS  
711 S. NORTHSORE DR.  
KNOXVILLE, TN 37919

CONSULTANTS

PARTNER-IN-CHARGE	SHP
PROJECT MANAGER	JTW
DRAWN BY	JTW
REVIEWED BY	SHP
ISSUE DATE	12.22.2014
REVISIONS	

**L100**  
LANDSCAPE PLAN



**POLE BASE DETAIL**  
NO SCALE USE FOR SA AND SB

**McGraw-Edison**

**DESCRIPTION**  
The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated.

**1-10 Light Squares**  
Solid state LED  
AREA/SITE LUMINAIRE

**GLEON GALLEON LED**

**DESCRIPTION**  
Extruded aluminum driver enclosure thermally isolated from Light Square for optimal thermal performance. Heavy-well, die-cast aluminum and caps enclose housing and die-cast aluminum heat sink. A unique, patent pending, interlocking housing and heat sink provides scalability with superior structural rigidity, 35 vibration tested. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

**Optics**  
Choice of 18 patented, high-efficiency AccuLED Optics. The optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (w/ 2700K CCT and minimum 75 CRI). Optional 8000K CCT and 3000K CCT. For the ultimate level of spill light control, an optional house shield accessory can be field or factory installed. The house shield is designed to seamlessly integrate with the SL2, SL2.5, SL4 or APL optics.

**Electrical**  
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Standard with 0-10V dimming. Shipped standard with Cooper Lighting proprietary circuit module designed to withstand 100V of transient line surge. The Galleon LED luminaire is suitable for operation in 40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA High Ambient option. Light Squares are IP66 rated. Greater than 80% lumen maintenance expected at 60,000 hours. Available to meet customized application requirements. Offered standard in 4000K (w/ 2700K CCT and minimum 75 CRI). Optional 8000K CCT and 3000K CCT. For the ultimate level of spill light control, an optional house shield accessory can be field or factory installed.

**Finish**  
Housing finished in super durable TGIC polyurethane powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. PAH and custom color matches available. Consult the McGraw Edison Architectural Colors brochure for the complete selection.

**Warranty**  
Five-year warranty.

**CERTIFICATION DATA**  
UL94 V-0, Wet Location Listed, IES E90, LM79 LAMB Compliant, 2500000 Hours Mean Life, IP66 Rated, DesignLife Consortium Qualified

**ENERGY DATA**  
McGraw Edison Driver, 2500000 Hour Factor, 120V/277V 60/60Hz, 347V & 480V 60Hz, 40°C Max. Temperature, 40°C Min. Temperature, 80°C Max. Temperature (HA Option)

**Cooper Lighting**  
#21-N

- REFERENCE NOTES:**
- 2" FOR CABLE TV, 4" FOR TELEPHONE.
  - TWO 4" FOR PRIMARY (CABLE BY KUB)
  - PROPOSED LOCATION OF NEW KUB 480V/277 VOLT PAD MOUNTED TRANSFORMER, PROVIDE CONCRETE PAD AS DIRECTED.
  - PROPOSED LOCATION OF NEW KUB 208V/120 VOLT PAD MOUNTED TRANSFORMER, PROVIDE CONCRETE PAD AS DIRECTED.
  - UNDERGROUND SECONDARY, SEE ISSUED DRAWING.
  - COORDINATE REMOVAL OF TRANSFORMERS IN VAULT WITH KUB.
  - COORDINATE REMOVAL OF UNDERGROUND PRIMARY WITH KUB.
  - COORDINATE REMOVAL OF OVERHEAD SECONDARY AND POLES WITH KUB.

**SITE ELECTRICAL PLAN**  
SCALE: 1"=40'-0"

SITE LIGHTING FIXTURE SCHEDULE					
SYM	CATALOG NUMBER	LAMPS		MOUNTING	DESCRIPTION
		NO	WATTS		
SA	COOPER FIXTURE - (1) GLEON-AE-04-LED-T4FT-??	1	213/213	LED 30' POLE	ONE POLE MOUNTED AREA LIGHT WITH FORWARD THROW FULL CUTOFF
	POLE-ASX6X30W71				
SB	LITHONIA FIXTURE - (2) GLEON-AE-04-LED-T4FT-??	2	213/426	MH 30' POLE	TWO POLE MOUNTED AREA LIGHTS MOUNTED AT 180° APART WITH FORWARD THROW FULL CUTOFF
	POLE-ASX6X30W72				

NOTES:  
1. FINISH SHALL BE SELECTED BY ARCHITECT, NOTED BY ?? IN MODEL NO.  
2. PROVIDE CONCRETE BASE PER DETAIL.

1-K-15-UR  
Revised: 12/23/2014

**bma**  
BARBER McMURRY architects since 1915

505 Market St Suite 300 Knoxville, TN 37902  
t. 865.934.1915 f. 865.546.0242  
bma1915.com

CATHEDRAL CONSULTANT

**MCCRERY Architects**  
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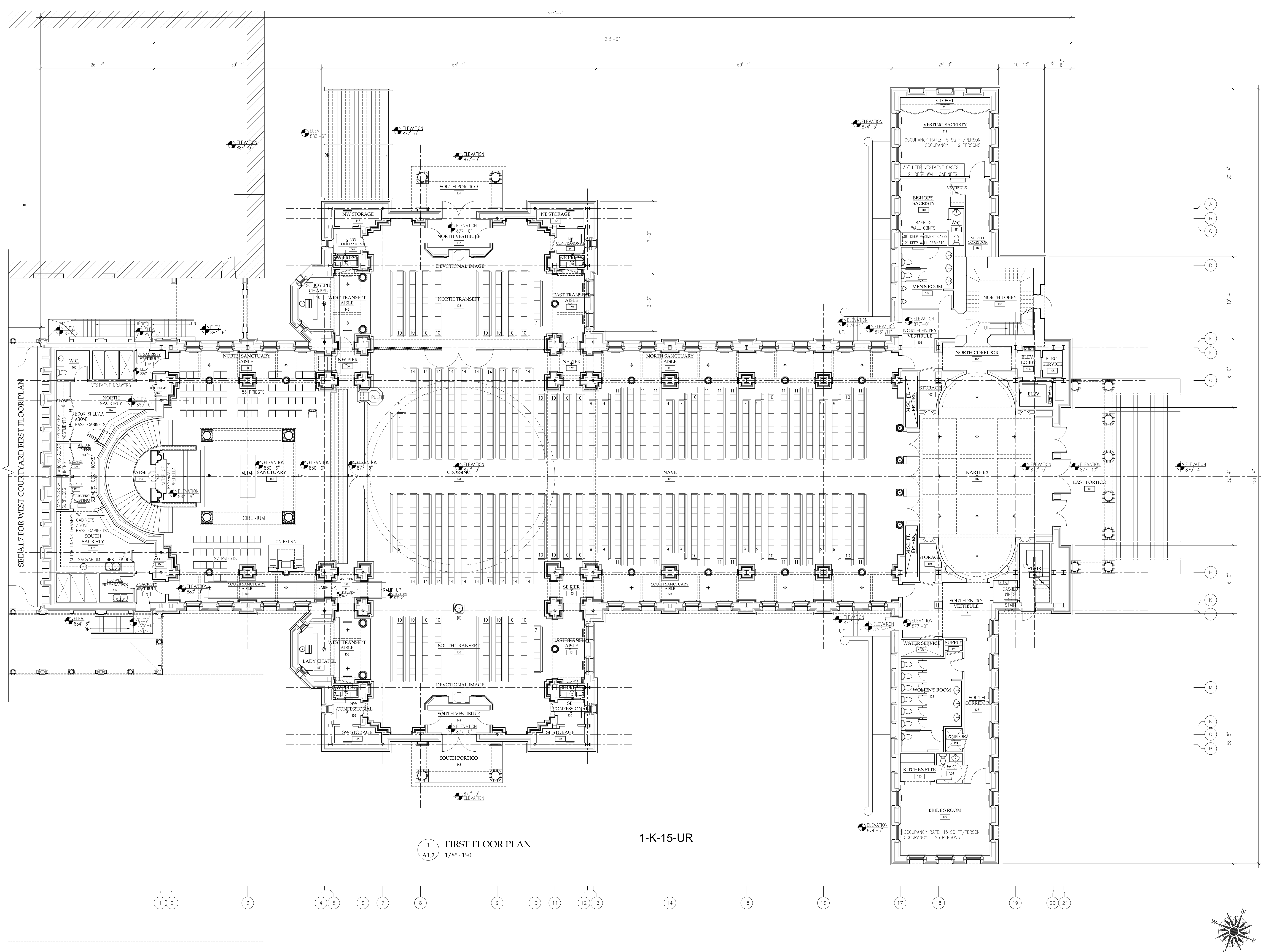
PROJECT NUMBER: 142400  
PROJECT NAME: CATHEDRAL OF THE SACRED HEART  
OWNER: Sacred Heart Cathedral and Cathedral School  
PROJECT ADDRESS: 711 S. NORTHSIDE DR. KNOXVILLE, TN 37919

CONSULTANTS:  
**FACILITY SYSTEMS CONSULTANTS, LLC**  
713 South Central Street, Suite 101  
Knoxville, Tennessee 37902  
Phone: (865) 246-0144 Fax: (865) 246-1084

PARTNER-IN-CHARGE: KLM  
PROJECT MANAGER: REM  
DRAWN BY: KMP  
REVIEWED BY: LTH  
ISSUE DATE: 11/12/2014  
REVISIONS:  
12/22/2014 USE-ON-REVIEW CONCEPT PLAN

**SE100**  
SITE ELECTRICAL PLAN

Agenda Item # 33



1 FIRST FLOOR PLAN  
A1.2 1/8" = 1'-0"

1-K-15-UR

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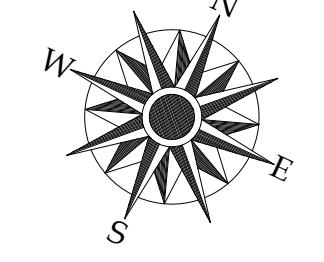
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HEART  
CATHEDRAL**

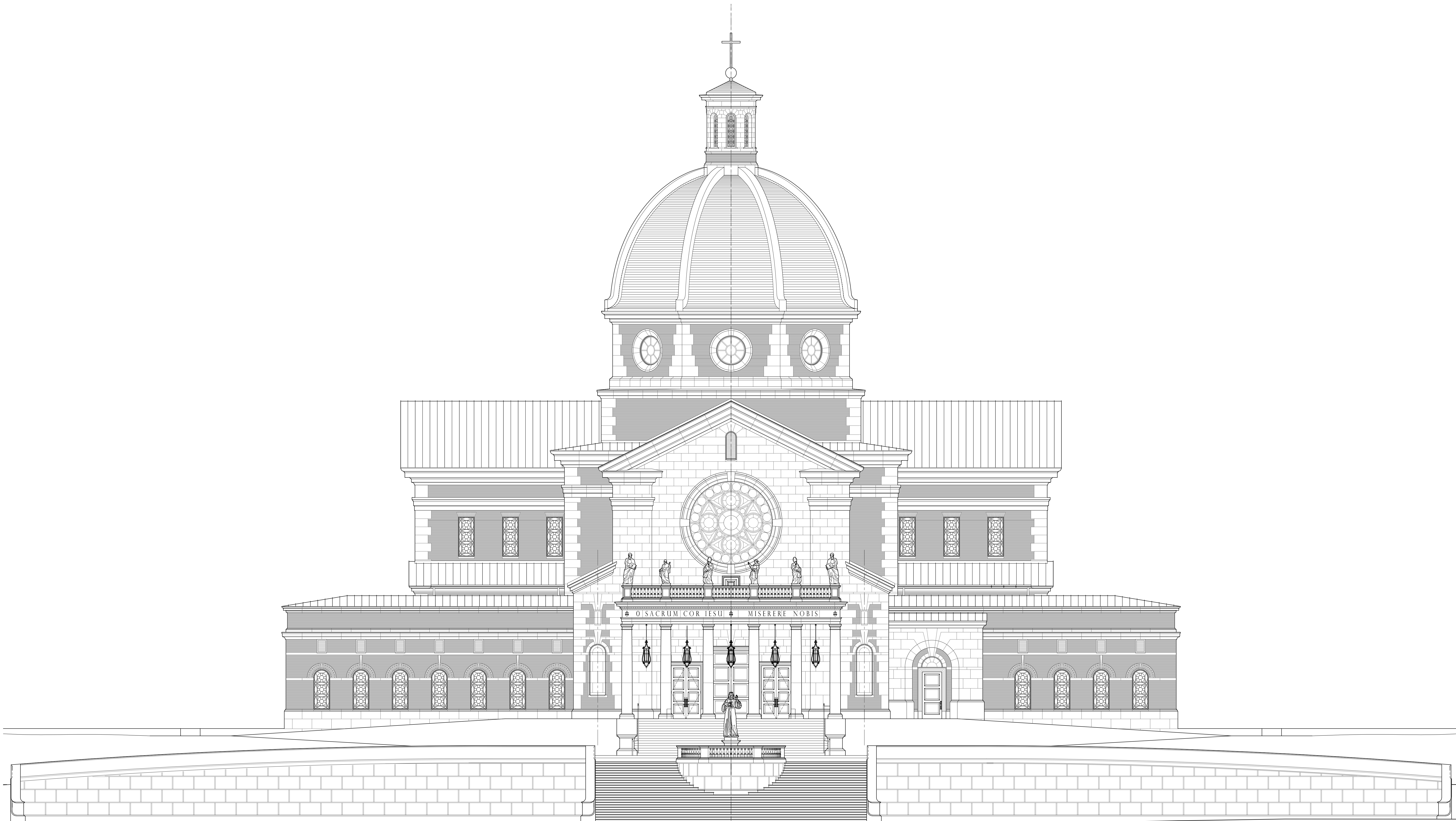
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DRAWING TITLE:  
**FIRST FLOOR PLAN**

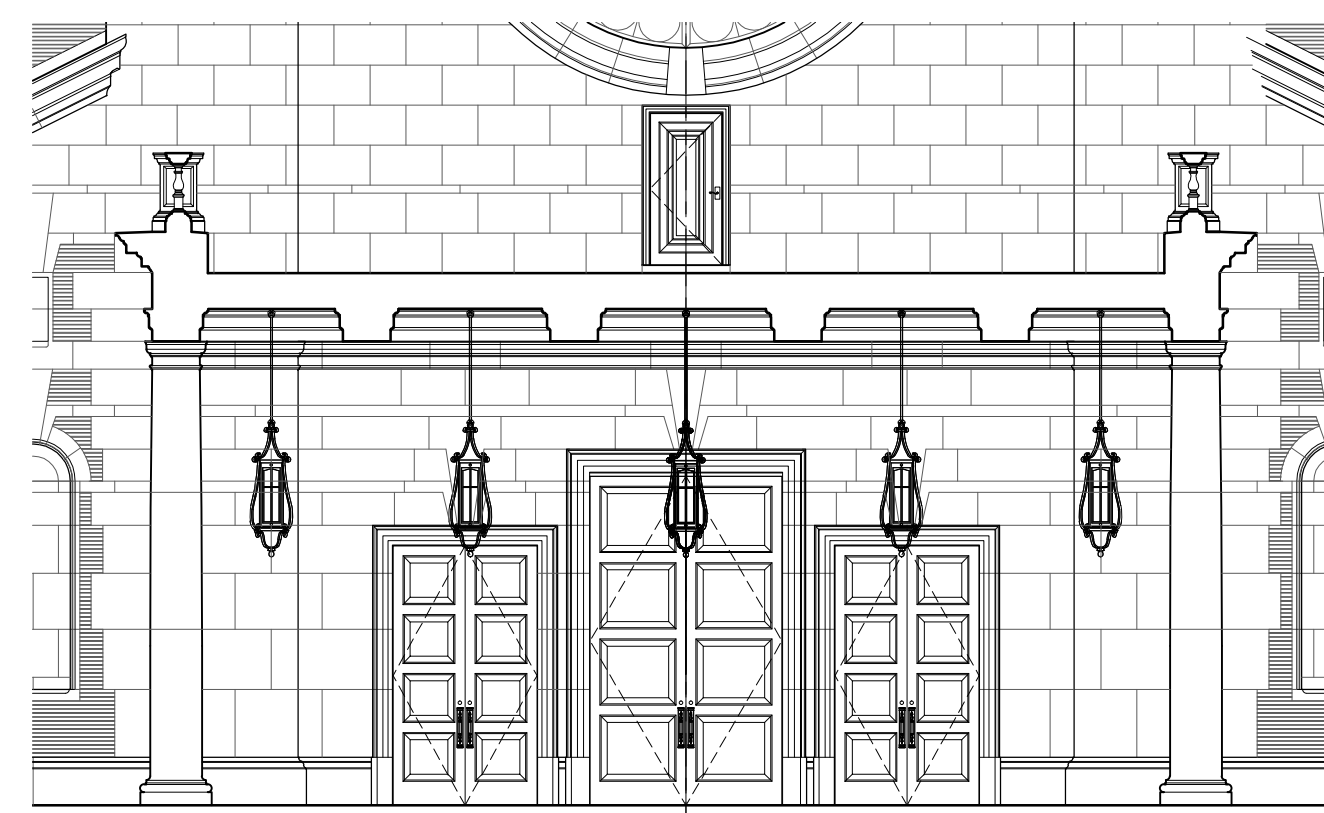
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DATE: NOVEMBER 13, 2014  
SCALE: 1/8" = 1'-0"  
DRAWING #:

**A1.2**  
ISSUE:  
SCHEMATIC DESIGN - 100%  
FILE:  
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2 EAST ELEVATION  
A2.1 1/8" - 1'-0"



1 ELEVATION OF ENTRY  
AT EAST PORTICO  
A2.1 1/8" - 1'-0"

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EAST ELEVATION

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DATE: NOVEMBER 13, 2014

SCALE: 1/8" = 1'-0"

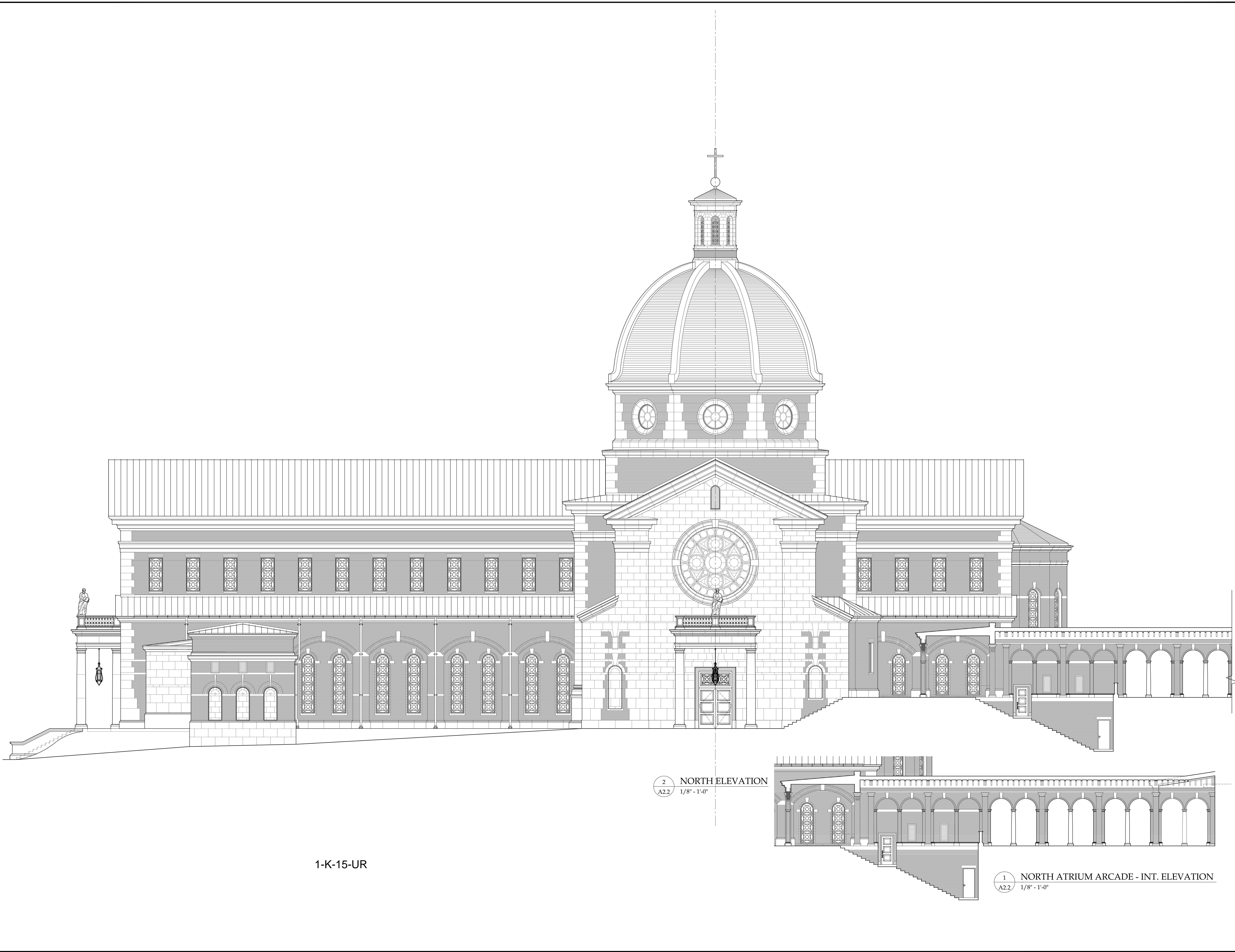
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A2.1

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2 NORTH ELEVATION  
A2.2 1/8" = 1'-0"

1 NORTH ATRIUM ARCADE - INT. ELEVATION  
A2.2 1/8" = 1'-0"

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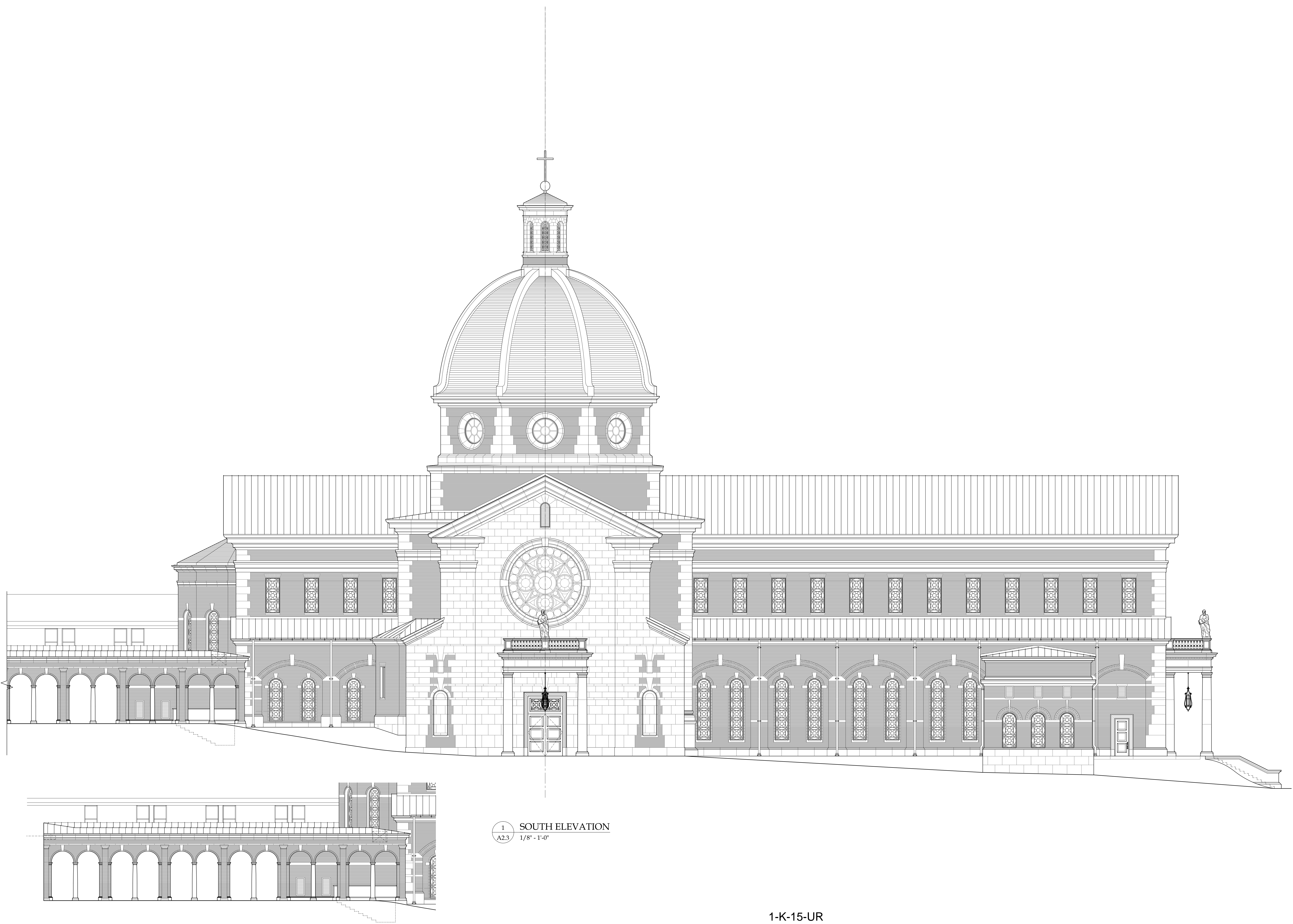
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1 SOUTH ELEVATION  
1/8" = 1'-0"

2 SOUTH ATRIUM ARCADE - ELEVATION  
1/8" = 1'-0"

1-K-15-UR

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SCALE: 1/8" = 1'-0"

DRAWING #:

A2.3

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AND SECTION

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DATE: NOVEMBER 13, 2014

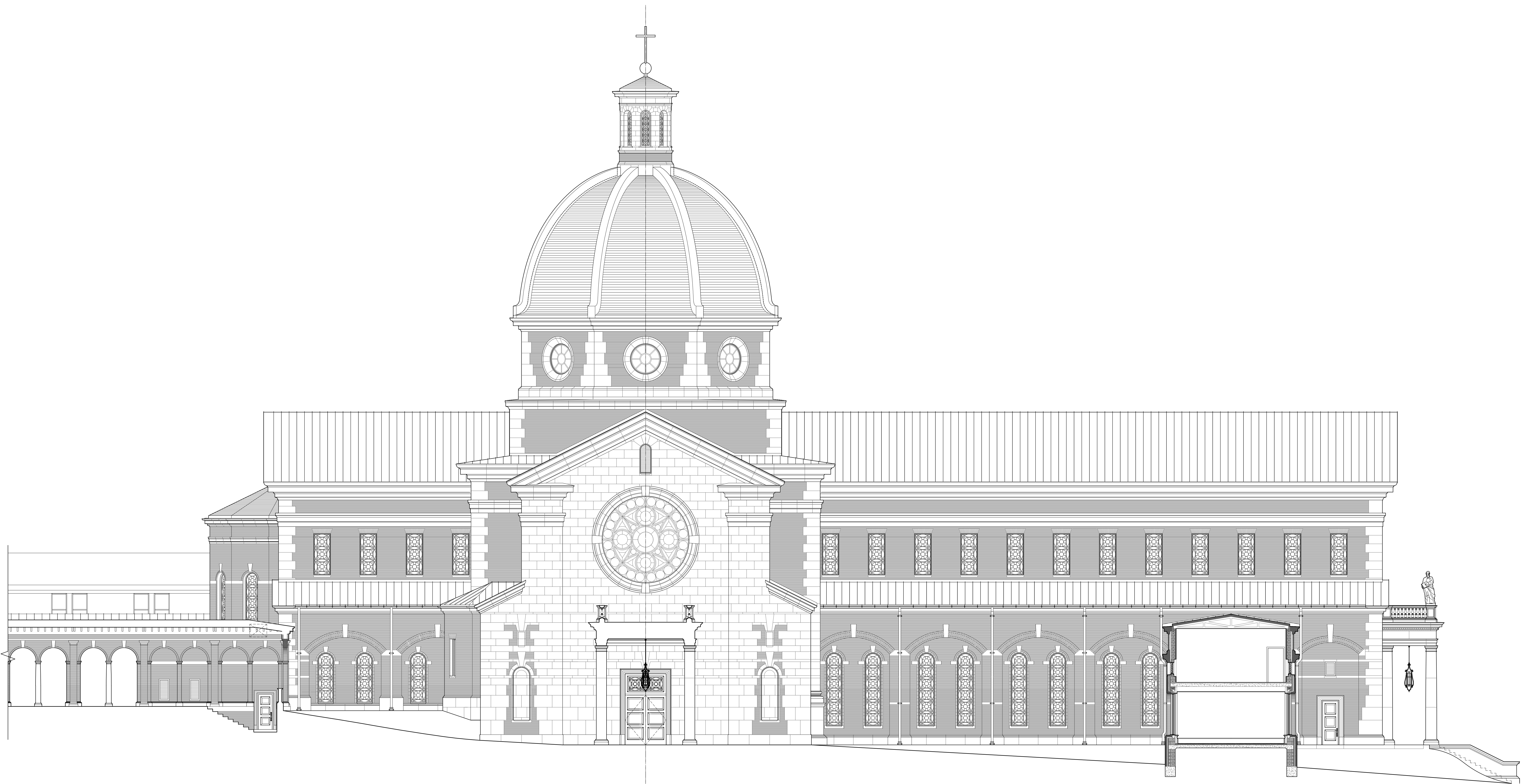
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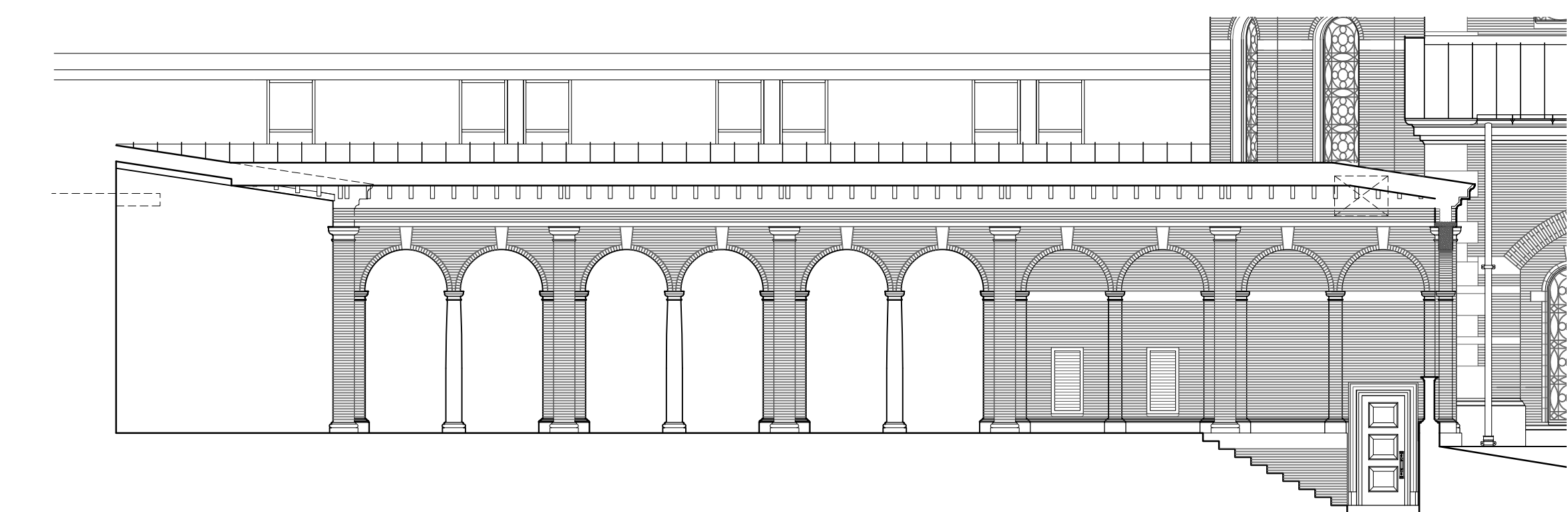
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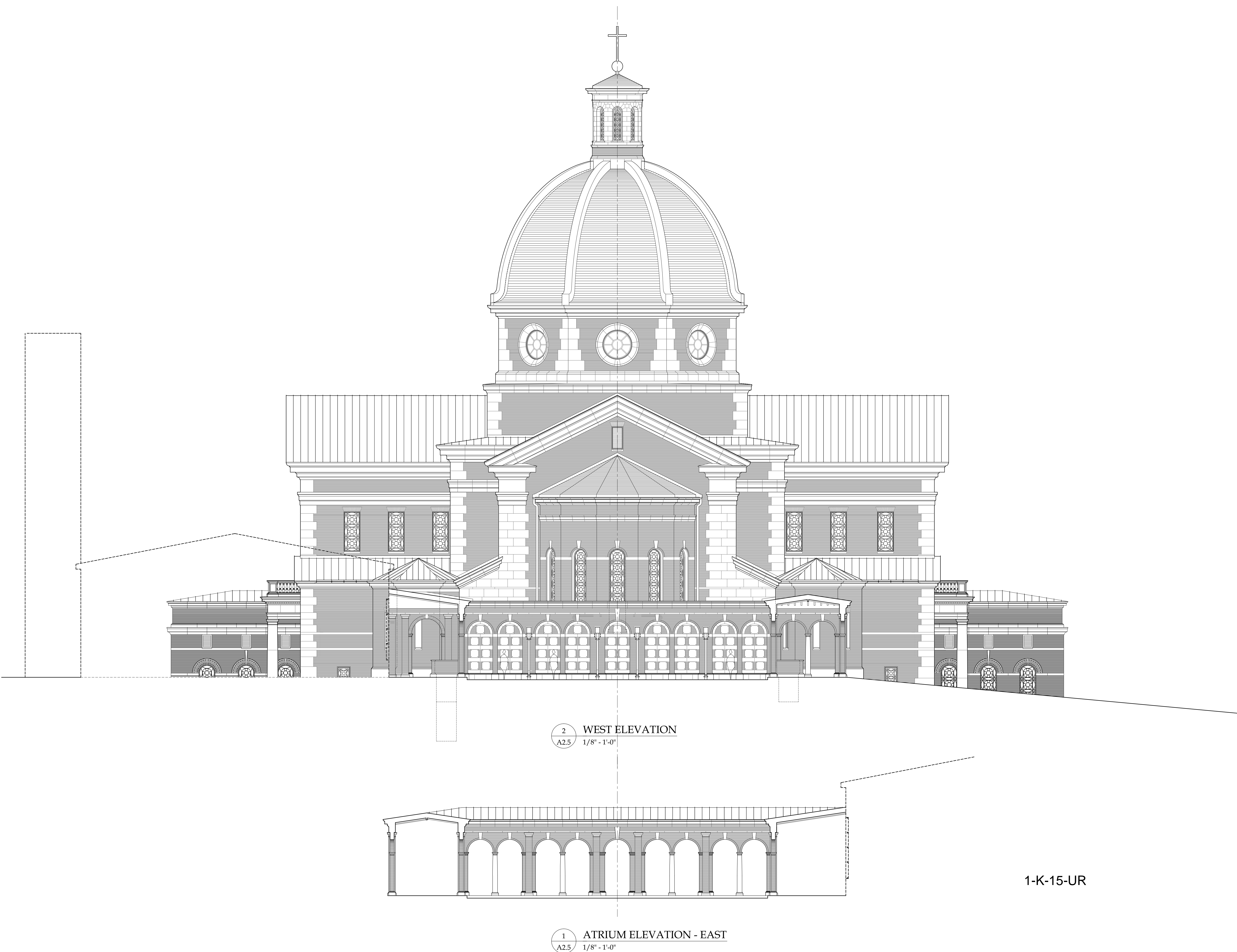


1 SOUTH REVEALED ELEVATIONS @ ATRIUM ARCADE, & SOUTH PORTICO  
A2.4 1/8" - 1'-0"



2 SOUTH ATRIUM ARCADE - INT. ELEVATION  
A2.4 1/8" - 1'-0"

1-K-15-UR



2 WEST ELEVATION  
A2.5 1/8" = 1'-0"

1 ATRIUM ELEVATION - EAST  
A2.5 1/8" = 1'-0"

1-K-15-UR

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DRAWING TITLE:

WEST ELEVATION

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SCALE: 1/8" = 1'-0"

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A2.5

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