



Village of Arlington Heights
Plat and Subdivision Committee
Community Room, 3rd Floor
Arlington Heights Village Hall
33 S. Arlington Heights Road
Arlington Heights, IL 60005
April 8, 2015
6:30 PM

I. CALL TO ORDER

II. ROLL CALL

III. APPROVAL OF MINUTES

IV. REPORTS

V. OLD BUSINESS

VI. NEW BUSINESS

- A. Holy Nation Presbyterian Church - 2501 N. Chestnut Ave. - T1491
Parking Variation
- B. Collision Damage Experts - 9 E. College Dr. - T1496
Land Use Variation
- C. Verizon Wireless Antenna at Luther Village - 800 W. Oakton Ave. -
T1499
Special Use for Rooftop Wireless Antenna

VII. OTHER BUSINESS

VIII. ADJOURNMENT

Persons with disabilities requiring auxiliary aids or services, such as an American Sign Language interpreter or written materials in accessible formats, should contact David Robb, Disability Services Coordinator, at 33 S. Arlington Heights Road, Arlington Heights, Illinois 60005, (847)368-5793 (Voice), (847)368-5980 (Fax) or drobb@vah.com.



Item: Holy Nation Presbyterian Church - 2501 N. Chestnut Ave. - T1491

Department: Planning & Community Development

Requested Action

1. Parking variation associated with a church, synagogue and other places of worship.
2. Comprehensive Plan Amendment from Schools to Institutional.

Variations Required

1. A variation from Chapter 28, Section 11.4, Schedule of Parking Requirement to allow a reduction to the required number of parking stalls from 279 spaces to 62 spaces, a variation of 217 spaces.

RECOMMENDATION

On December 16, 2014, the Staff Development Committee reviewed the Petitioner's request and will require additional information prior to rendering a formal recommendation. Such information shall include, but shall not be limited to the following:

1. Provide a written justification for the parking variation based on the criteria outlined in the Village's Zoning Ordinance, more specifically:
 - The property in question cannot yield a reasonable return if permitted to be used only under the condition allowed by the regulations of that zone; and
 - The plight of the owners is due to unique circumstances; and
 - The variation, if granted, will not alter the essential character of the locality.
2. A parking analysis should be submitted that includes peak parking occupancy data at the Church's existing location as well as estimates of the parking demand at the proposed location, including future increase to the congregation. The parking analysis should discuss any impacts to the surrounding public streets.
3. Provide information to determine the parking requirement for the area to be leased by Glenkirk.

4. Provide information on the frequency of additional functions to be held, the types of programs, hours, and the anticipated number of people that would attend.
5. Provide a diagram for possible additional parking on-site.
6. These are preliminary comments only and should not be relied upon as identification of the only major issues. The Staff Development Committee reserves the right to change its position on issues upon submittal of a formal application and detailed review.

ATTACHMENTS:

Description	Type
Staff Report	Report
Supporting Documents	Exhibits
Location Map	Exhibits

STAFF DEVELOPMENT COMMITTEE REPORT

To: Plat and Subdivision Committee
Prepared By: Latika Bhide, Development Planner
Meeting Date: April 8, 2015
Date Prepared: April 2, 2015
Project Title: Holy Nation Presbyterian Church
Address: 2501 N. Chestnut Avenue

BACKGROUND INFORMATION

Petitioner: Kee H. Han, Architect
Address: K. H. Han and Architects
 9933 Lawler Ave., Suite 446
 Skokie, IL 60077

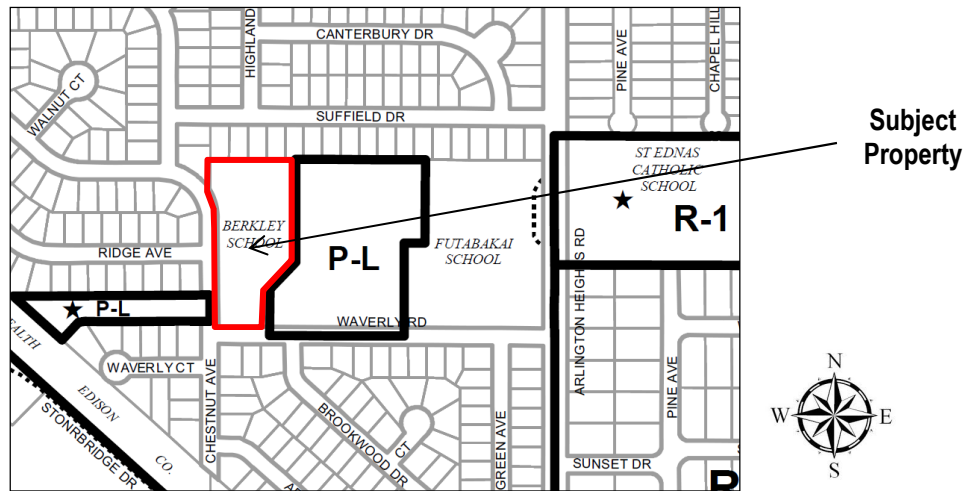
Existing Zoning: R-3, One Family Dwelling District

Requested Action:

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2. Comprehensive Plan Amendment from Schools to Institutional

Variations Required:

- A variation from Chapter 28, Section 11.4, Schedule of Parking Requirement to allow a reduction to the required number of parking stalls from 279 spaces to 62 spaces, a variation of 217 spaces

**Surrounding Properties**

Direction	Current Zoning	Land Use	Comprehensive Plan
North	R-3	Single Family Residences	Single Family Detached
South	R-3	Single Family Residences	Single Family Detached
East	P-L	Park	Parks
West	R-3 & P-L	Single Family Residences & ComEd ROW	Single Family Detached

Project Background

The subject site which is located on the east side of Chestnut Avenue, north of Waverly Road, is approximately 4.2 acres in area and is zoned R-3, One Family Dwelling District. There is an existing building on the property that is approximately 29,424 square feet in area. In 1993, the property was rezoned from P-L Public Land District to R-3 One Family Dwelling District and a special use permit for a private school was approved for Glenkirk to operate a school serving people with intellectual and developmental disabilities.

The existing parking lot is located on the south and northwest sides of the building and there a total of 62 parking stalls on-site (The petitioner has indicated that there are 65 parking stalls on-site, but the Plat of Survey provided delineates 62 stalls. This discrepancy must be clarified). The south parking area is accessible via a driveway along Waverly Road and the northwest parking area is accessible via two driveways along Chestnut Avenue.

Holy Nation Presbyterian Church is looking to acquire the property at 2501 Chestnut Avenue and convert it to a place of worship that will serve their parishioners. The Church is currently located in Mount Prospect. There are 49 parking spaces at the current location. The petitioner has indicated that the Church employs one pastor and three assistant pastors. Their congregation size is currently 80 people and anticipated to grow to 160 people over the next 10 to 15 years. The petitioner has provided a summary of the worship services to be held. Worship services will be held on Sunday from 6:00 am to 3:30 pm, Wednesday and Friday from 8:00 pm to 9:30 pm and on Saturday from 9:00 am to 12:00 pm. In addition the Church is proposed to be used for food donations, bible camps, etc.

As depicted on the proposed floor plan, the Church will lease back an approximately 3,769 square feet space to Glenkirk to be used as an educational space. The remaining area will be occupied by the Church. The building's interior will be remodeled to include a sanctuary, fellowship hall, chapels, office areas, classrooms, gymnasium, kitchen, lunch room, storage areas, etc. The petitioner has provided information on the anticipated number of people attending the various services. As part of the formal review process, the petitioner must provide information on the frequency of additional functions and the anticipated number of people that would attend.

Zoning and Comprehensive Plan

To proceed forward, the Plan Commission must review and the Village Board must approve the parking variation. Churches, synagogues, and other places of worship are permitted by right in the R-3, One Family Dwelling District.

According to the Village's Comprehensive Plan the subject site is designated as Schools given that the historical use has been for a public school and then private school. It is recommended that the Comprehensive Plan is amended to Institutional if the variation is granted. The site is a park site reservation indicating that that the Park District has an interest in the site, however that applies when subdividing property.

Building, Site and Landscape Issues

If the petitioner proposes any exterior modifications then a Design review will be required. With respect to the interior improvements, the petitioner should contact the Building Department as soon as possible to ensure that all improvements meet Code requirements. A description regarding how every room will be used should be provided, so a determination can be made whether the proposed uses are considered a change of use.

Per Chapter 28, a three-foot high continuous row of shrubs is required to screen the parking lot from the public view (Waverly Dr. and Chestnut Ave.), and curbed islands with shade trees at the end of each row of parking and after every 20 parking stalls are required for the parking lot. It appears that there is a continuous row of shrubs along Waverly Dr. and Chestnut Ave. as well as curbed islands with shade trees. The landscaping will need to be reviewed as part of the formal Plan Commission review to determine if Code is being met.

Traffic & Parking Issues

With respect to parking, the Code required parking demand is based on the collective parking requirement for each of the different uses within the facility (Chapter 28, Section 11.2-6, Collective Provision). This parking methodology has been consistently applied to other projects within the Village, including but not limited to 1st United Methodist Church, St. James, St. Edna's, Mision Juan Diego, and Our Lady of the Wayside to name a few. Based on the known uses that are proposed for the building, a total of 279 parking stalls are required. At this time, the site has a total of 62 parking stalls thereby resulting in a deficit of 217 parking spaces (see Table 1, next page).

Table 1: Parking Summary

Use	Size	Parking Ratio	Required Parking
Sanctuary	3,398 SF (200 seats)	1/5 seats	40 spaces
Chapel 1	517 SF (50 seats)	1/5 seats	10 spaces
Chapel 2	517 SF (50 seats)	1/5 seats	10 spaces
Infant Room	134 SF	1/300 SF	0 spaces
Media Room	136 SF	1/300 SF	0 spaces
Storage	314 SF	1/300 SF	1 space
Vestibule	241 SF	1/300 SF	1 space
Fellowship Hall	2,426 SF (156 seats)	30% of capacity (15 net SF per occupant for unconcentrated tables & chairs)	49 spaces
Kitchen	635 SF	1/300 SF	2 spaces
Storage	214 SF	1/300 SF	1 space
Vestibule	276 SF	1/300 SF	1 space
Classroom	481 SF	30% of capacity (20 net SF per occupant)	7 spaces
Storage	256 SF	1/300 SF	1 space
Lobby	3,939 SF	1/300 SF	13 spaces
Office	1,381 SF	1/300 SF	5 spaces
Lunch Room	312 SF	1/300 SF	1 space
Storage	184 SF	1/300 SF	0 spaces
Utility Room	145 SF	1/300 SF	0 spaces
Boiler Room	461 SF	1/300 SF	2 space
Gymnasium	2,253 SF	30% of capacity (5 SF net SF per occupant for assembly without fixed seats – standing space)	135 spaces
Area Leased by Kirkland	3,769 SF	1/2 employees + 1 space/classroom	Information needed to determine the parking requirement
Total Required			279 spaces*
Total Provided			62 spaces
Surplus / (Deficit)			(217) spaces

* The variation required will be modified once information is provided to determine the number of parking spaces required for the area leased by Kirkland.

The following variation has been identified based upon the current information provided.

- **A variation from Chapter 28, Section 11.4, Schedule of Parking Requirements, to allow a reduction to the minimum number of parking stalls from 279 to 62 spaces, a variation of 217 spaces.**

The applicant has indicated that the maximum expected number of people would be 80 for the Sunday fellowship. And that they would require no more than 25 parking spaces to accommodate the peak demand. Before the Staff Development Committee can render a final recommendation relative to the above mentioned variation, the applicant must submit a parking analysis that includes peak parking occupancy data at the Church's existing location as well as estimates of the parking demand at the proposed location including future growth in the congregation. The parking analysis should discuss any impacts to the surrounding streets. The applicant must also provide a written justification for the parking variation. There may be opportunities on site for additional parking.

RECOMMENDATION

On December 16, 2014, the Staff Development Committee reviewed the Petitioner's request and will require additional information prior to rendering a formal recommendation. Such information shall include, but shall not be limited to the following:

1. Provide a written justification for the parking variation based on the criteria outlined in the Village's Zoning Ordinance, more specifically:
 - *The property in question cannot yield a reasonable return if permitted to be used only under the condition allowed by the regulations of that zone; and*
 - *The plight of the owners is due to unique circumstances; and*
 - *The variation, if granted, will not alter the essential character of the locality.*
2. A parking analysis should be submitted that includes peak parking occupancy data at the Church's existing location as well as estimates of the parking demand at the proposed location, including future increase to the congregation. The parking analysis should discuss any impacts to the surrounding public streets.
3. Provide information to determine the parking requirement for the area to be leased by Glenkirk.
4. Provide information on the frequency of additional functions to be held, the types of programs, hours, and the anticipated number of people that would attend.
5. Provide a diagram for possible additional parking on-site.
6. These are preliminary comments only and should not be relied upon as identification of the only major issues. The Staff Development Committee reserves the right to change its position on issues upon submittal of a formal application and detailed review.

April 2, 2015

Bill Enright, AICP

Deputy Director of Planning and Community Development

C: *Randy Recklaus, Village Manager*

Holy Nation Presbyterian Church

2501 N. Chestnut Ave.
Arlington Heights, Illinois 60005

Proposal for
Plat and Subdivision Committee Review

Prepared by
K. H. Han and Architects, Inc.

Table of Contents

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2. About Holy Nation Presbyterian Church
3. Plot of Survey
4. Existing Floor Plan
5. Proposed Floor Plan
6. Room Schedule
7. Hour of Operation
8. Worship Service Schedule
9. Sunday Worship Service Floor Diagram

Project Summary

1. Site Location: 2501 N. Chestnut Ave.
2. Lot Size: Approx. 4.2 acre
3. Building Area: 29,424 sq. ft.
4. Existing parking spaces: 65 spaces
5. Current location of Church: Community Presbyterian Church
407 Main Street
Mt. Prospect, IL.
Current location parking spaces: 49

6. Background:

The subject property is currently used for facility to serve people with intellectual and developmental disabilities by Glenkirk. The tentative buyer (Holy Nation Presbyterian Church) is proposing new use of the property for the church worship services.

Currently the subject property has 65 parking spaces including 3 handicapped spaces. HNPC is applying variation from the required number of parking spaces to allow 65 spaces.

The current number of congregational members is approx. 80 and only requires no more than 25 parking spaces in order accommodate peak parking demand.

7. Total number of employee: (1) Pastor
(3) Assistant Pastor
8. Congregation size: Current: 80
Anticipated within 10 to 15 years: 160

Holy Nation Church

Denominational Group: Evangelism Assembly of America

Church History

Holy Nation Presbyterian Church (HNPC) was founded on March 1, 1987. It has since been incorporated on August 1, 1988. The organization acquired a building located on 3434 W Foster Ave Chicago IL, 60625 on September of 1988 with less than 10 families under the ministry of Pastor Ki Baek Shin. HNPC has been in this location for the past 25 years

In 2004, HNPC's leadership shifted from Pastor Ki Baek Shin to his son, Pastor Joshua Shin. With a small growth of families attending, HNPC is seeking to make a permanent move from Chicago to Arlington Heights as a central location of the majority of its members. We have about 80 members attending our church on a weekly basis.

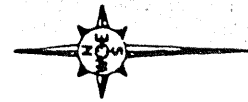
Mission Statement

Holy Nation Presbyterian Church is called to fulfill the will of God through evangelism and missions, and proclaim the Gospel of Christ. We are dedicated to serve others through religious programs that benefit all people, and support the needs of the congregation spiritually through Jesus Christ.

Who We Are

Holy Nation Presbyterian Church is a small community of believers centered on God's will of evangelism and missions through the Gospel of Christ. We have services that are held in both Korean and English languages throughout the week, and all members of the community are welcome to attend in our open door policy. Through this open policy, we plan to use our church as a voting location for people to come to and vote, be a place of support for individuals and families with their problems, such as divorce and relationship problems, hold food donations, have community vacation bible school, and serve the community in other areas that may be possible as a local community church.

Jens K. Doe
SURVEY SERVICE, INC.
Registered Land Surveyors

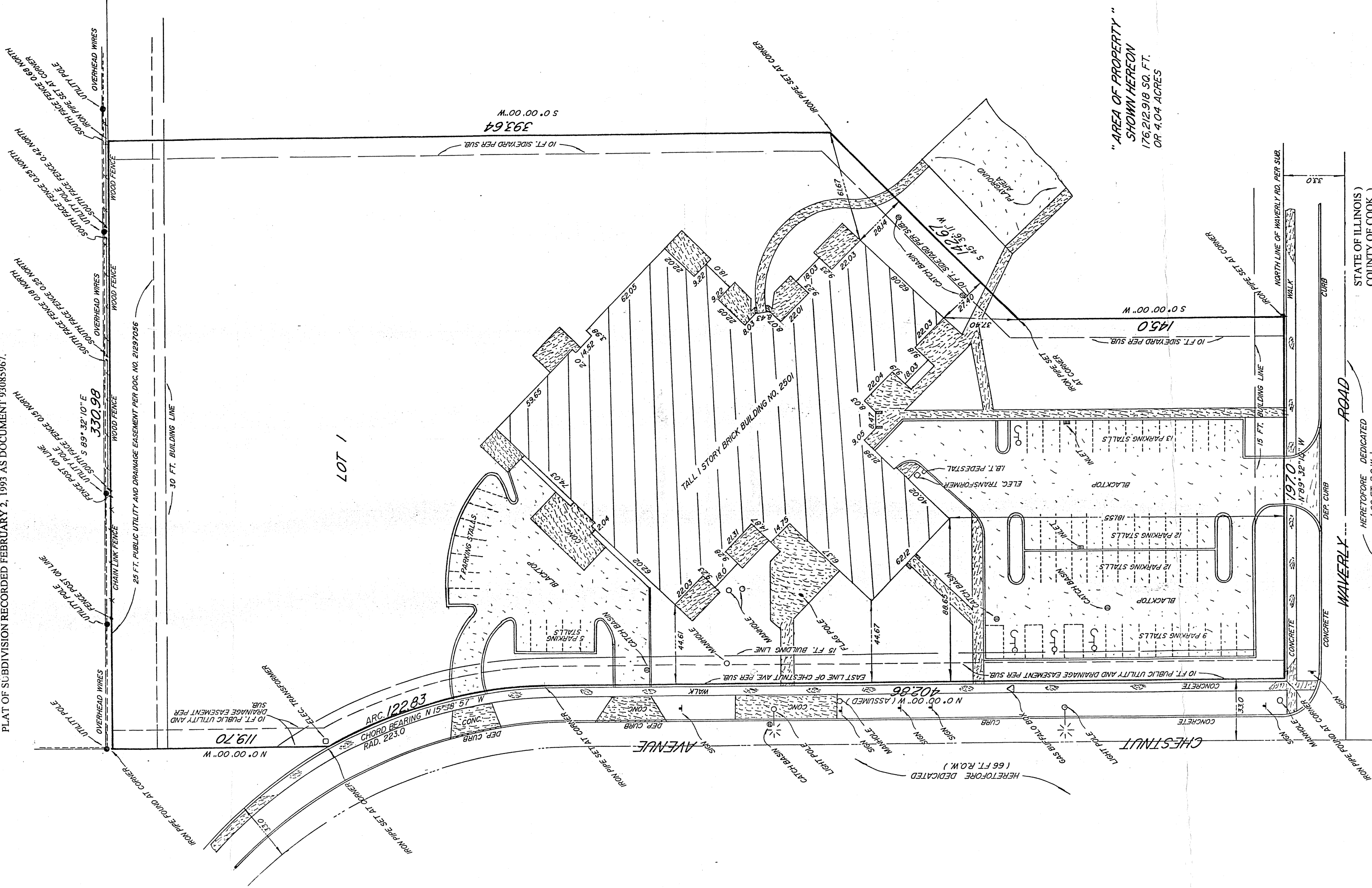


ORDER NO.
961250
SCALE: 1 INCH = 40 FEET

PLAT OF SURVEY

of

LOT 1 IN RAND / BERKLEY SCHOOL SUBDIVISION A SUBDIVISION OF PART OF THE WEST HALF OF THE NORTHWEST QUARTER OF SECTION 17, TOWNSHIP 42 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS ACCORDING TO PLAT OF SUBDIVISION RECORDED FEBRUARY 2, 1993 AS DOCUMENT 93085967.



HEREFORE DEDICATED
(66 FT. R.O.W.)

THE PROPERTY SHOWN HEREON IS LOCATED IN ZONE C (AREA OF MINIMAL FLOODING)
PER FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 170056 0005 B.
EFFECTIVE DATE : MARCH 1, 1984.

DIMENSIONS SHOWN HEREON ARE NOT TO BE ASSUMED OR SCALED

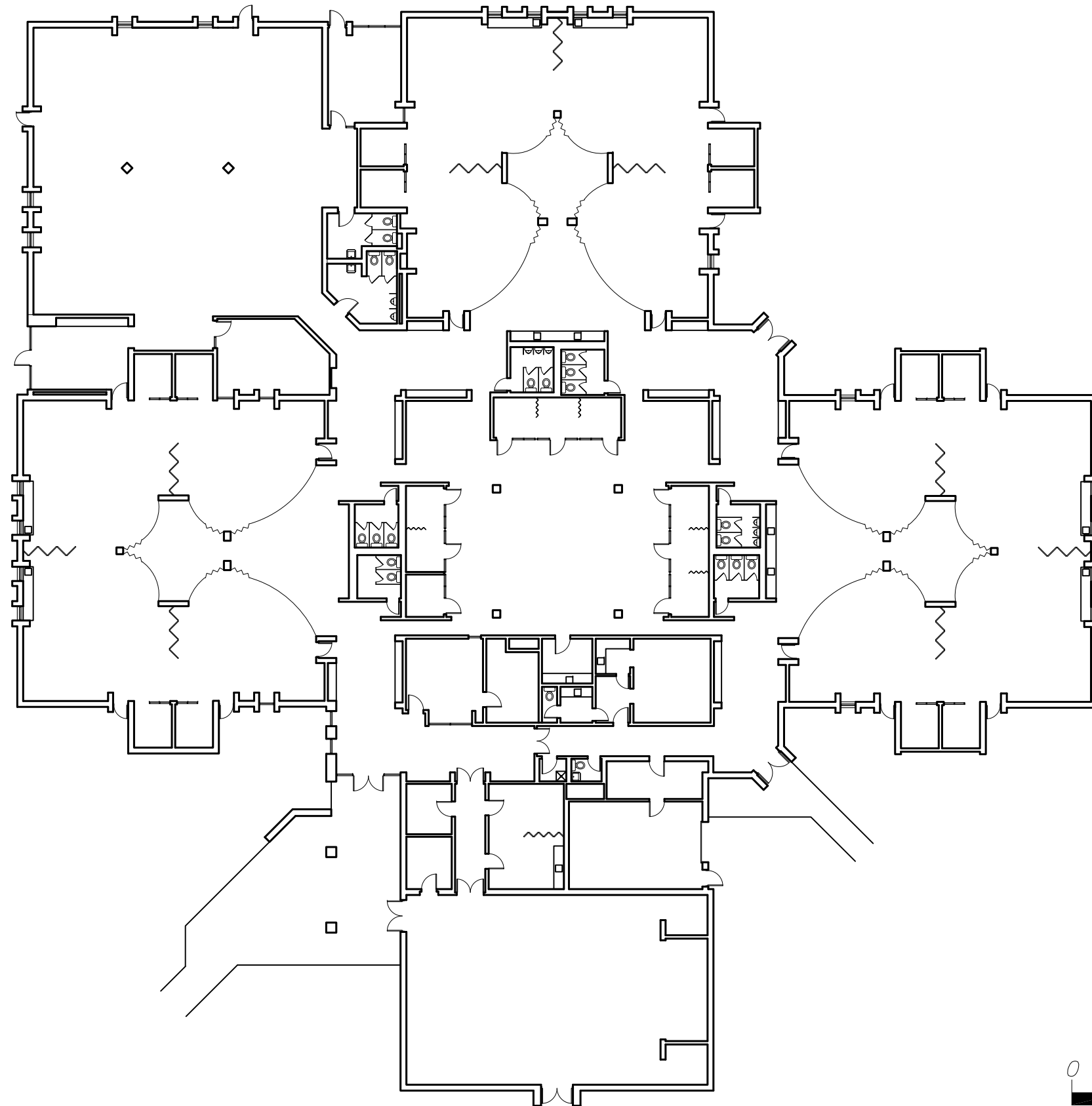
TOTAL NUMBER OF PARKING STALLS SHOWN HEREON = 62 WHICH INCLUDES 4 HANDICAP STALLS.

STATE OF ILLINOIS)
COUNTY OF COOK)

JENS K. DOE SURVEY SERVICE, INC. DOES HEREBY CERTIFY TO :
CHICAGO TITLE INSURANCE COMPANY, GLENKIRK - ILLINOIS
HEALTH FACILITIES AUTHORITY AND HARRIS TRUST AND
SAVINGS BANK THAT THIS MAP OR PLAT AND THE SURVEY ON
WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH
MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ ACSM
LAND TITLE SURVEYS, " JOINTLY ESTABLISHED AND ADOPTED BY
ALTA AND ACSM IN 1992, AND INCLUDES ITEMS 1, 3, 4, 7 (a), 8, 9,
10, 11, AND 13 OF TABLE A THEREOF, AND PURSUANT TO THE
ACCURACY STANDARDS (AS ADOPTED BY ALTA AND ACSM AND
IN EFFECT ON THE DATE OF THIS CERTIFICATION) OF A URBAN
SURVEY.

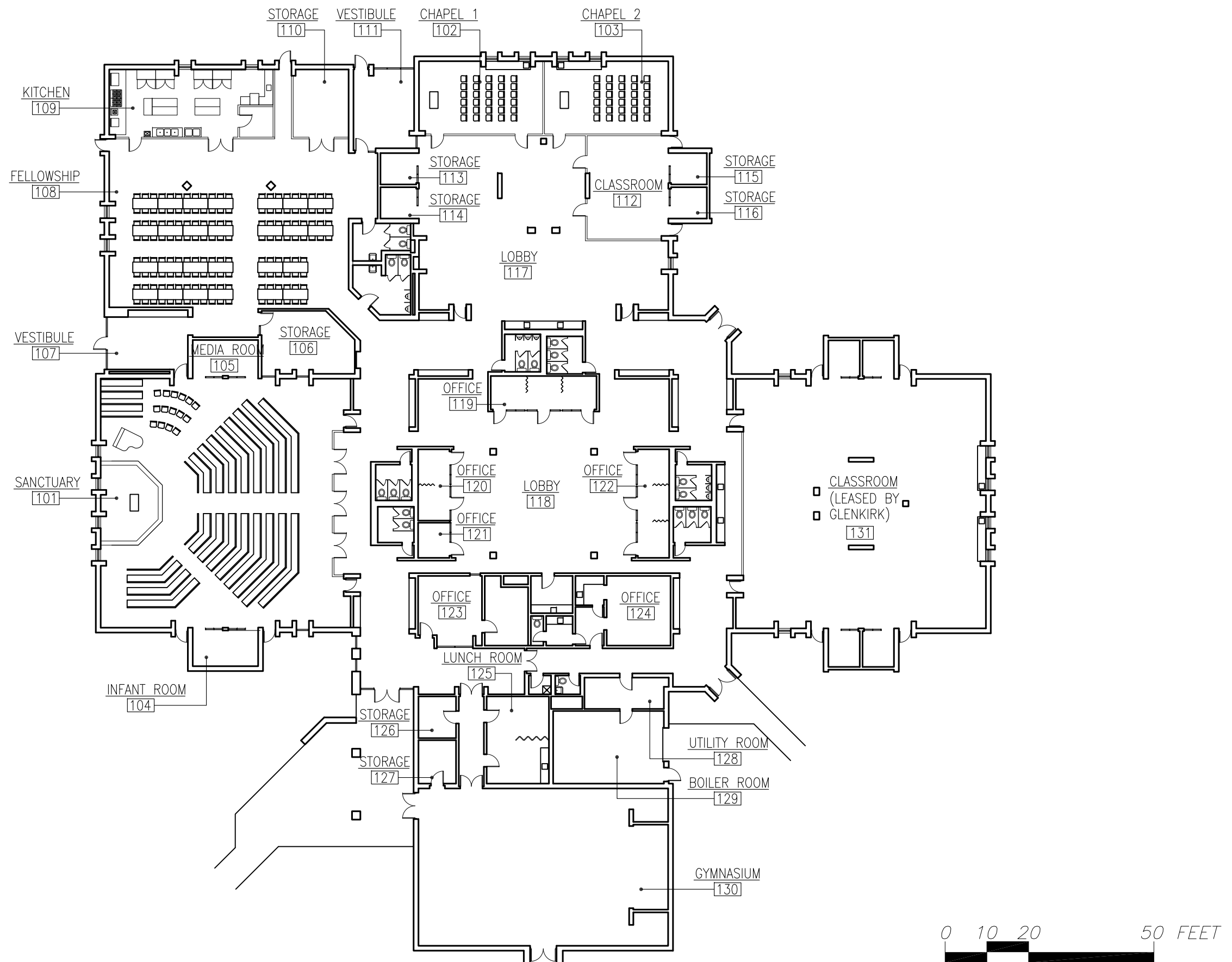
DATED THIS 3RD DAY OF JANUARY, 1997.

John M. Henrickson
JOHN M. HENRICKSON
(Illinois Registered Land Surveyor No. 2669)



0 10 20 50 FEET





ROOM SCHEDULE

ROOM NUMBER	ROOM NAME	AREA (SQ. FT.)	REMARKS
101	SANTUARY	3398	200 SEATS
102	CHAPEL 1	517	50 SEATS
103	CHAPEL 2	517	50 SEATS
104	INFANT ROOM	134	
105	MEDIA ROOM	136	
106	STORAGE	314	
107	VESTIBULE	241	
108	FELLOWSHIP	2426	156 SEATS WITH TABLES
109	KITCHEN	635	
110	STORAGE	214	
111	VESTIBULE	276	
112	CLASSROOM	481	
113	STORAGE	64	
114	STORAGE	64	
115	STORAGE	64	
116	STORAGE	64	
117	LOBBY	1996	
118	LOBBY	1943	
119	OFFICE	203	
120	OFFICE	129	
121	OFFICE	63	
122	OFFICE	195	
123	OFFICE	411	
124	OFFICE	380	
125	LUNCH ROOM	312	
126	STORAGE	90	
127	STORAGE	94	
128	UTILITY ROOM	145	
129	BOILER ROOM	461	
130	GYMNASIUM	2253	
131	Educational Space by Glenkirk	3769	LEASE SPACE Operation Hours: 8:00 am - 4:00 pm Monday thru. Friday

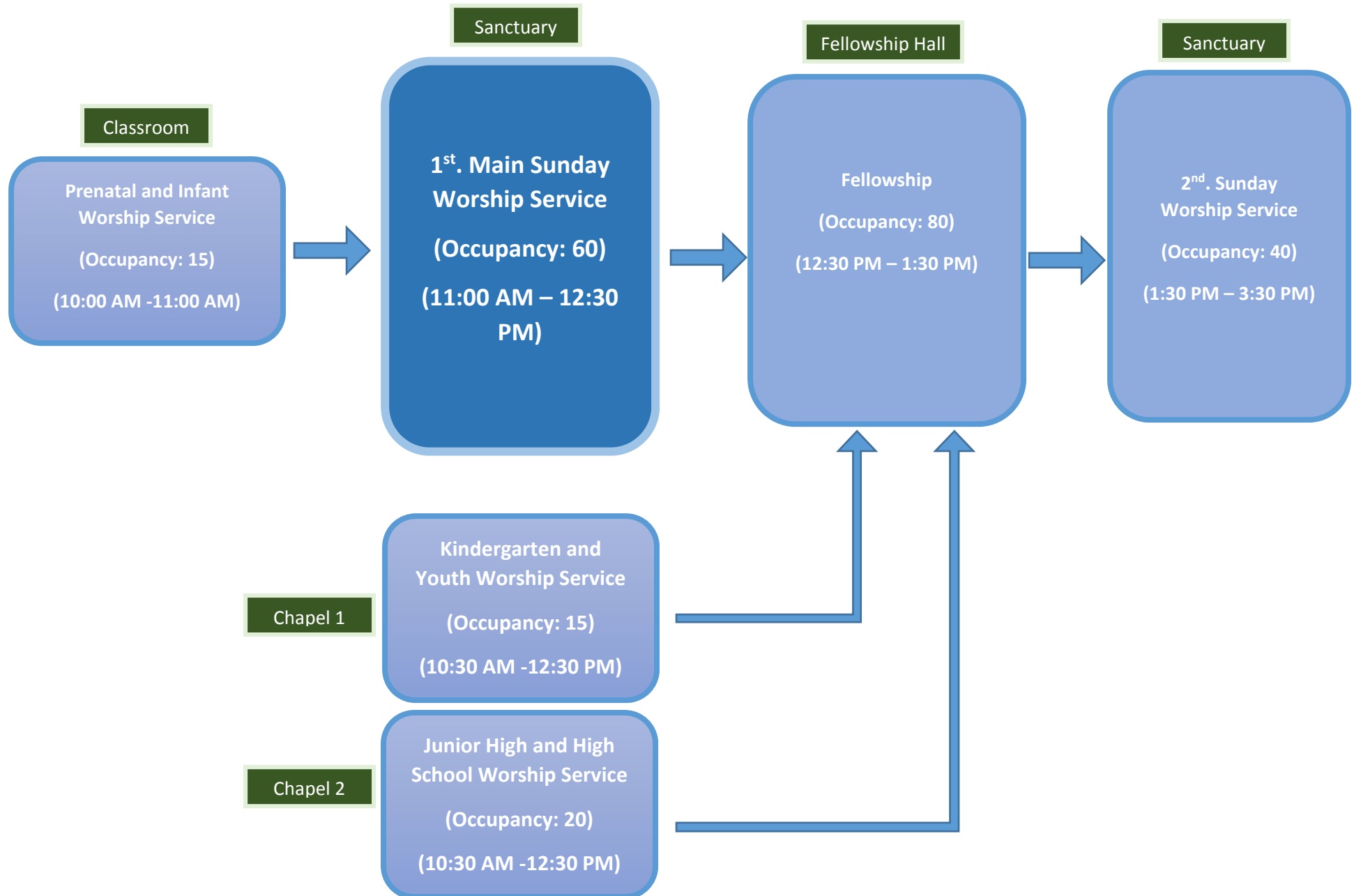
Hours of Operation with Use and Occupancy

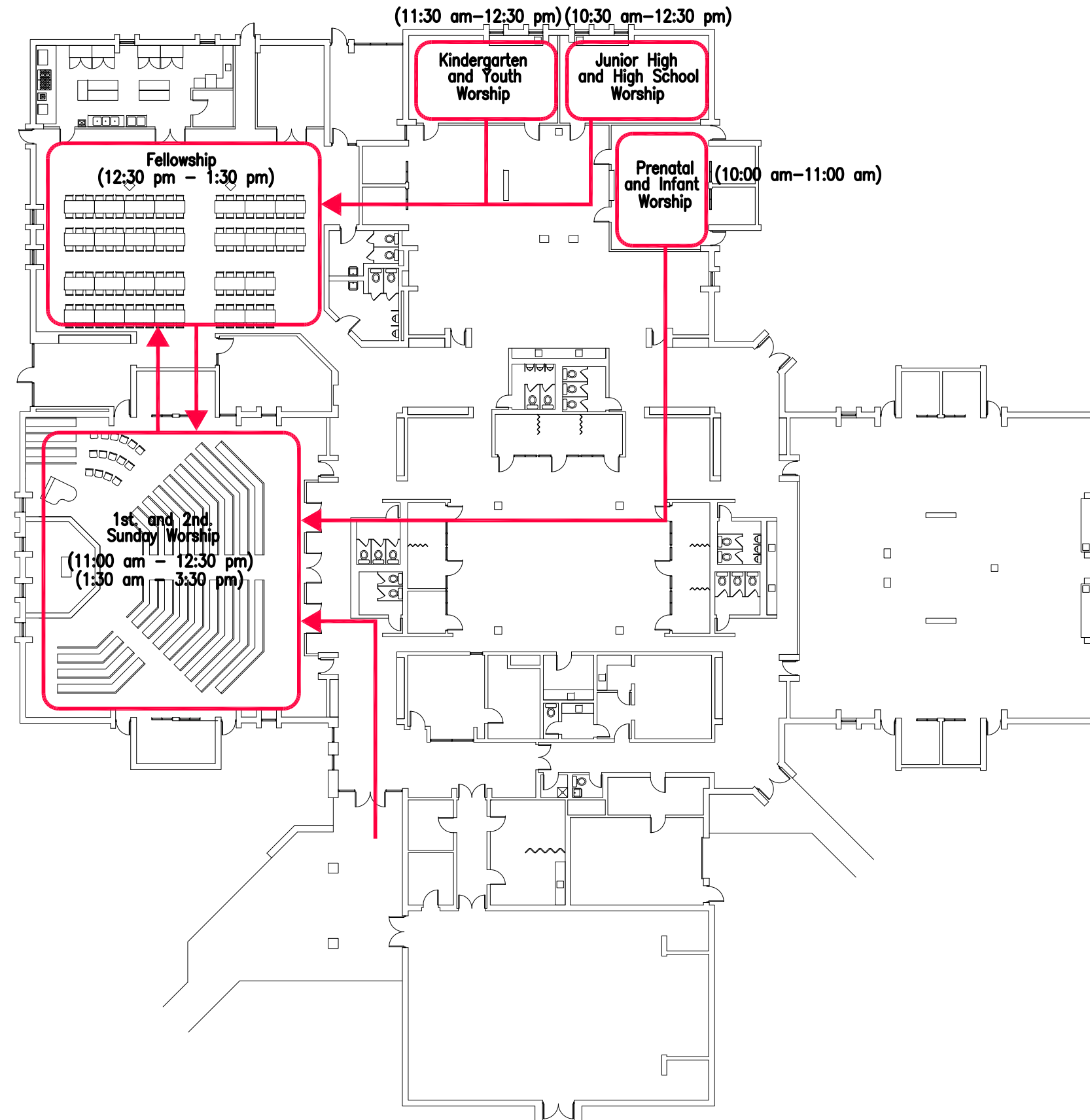
Day	Worship Service	Time	Location	Expected number of congregational members
Sunday	Early Morning Prayer Service	6:00 am - 7:00 am	Sanctuary	40
	Prenatal and Infant Worship Service	10:00 am - 11:00 am	Classroom	15
	Kinergarten and Youth Worship Service	10:30 am - 12:30 am	Chapel 1	15
	Junior High and High School Worship Service	10:30 am - 12:30 pm	Chapel 2	20
	1st. Main Sunday Worship Service	11:00 am - 12:30 pm	Sanctuary	60
	Fellowship	12:30 pm - 1:30 pm	Fellowship Hall	80
	2nd. Sunday Worship Service	1:30 pm - 3:30 pm	Sanctuary	40
Wednesday	Night Worship Service	8:00 pm - 9:30 pm	Sanctuary	60
Friday	Night Worship Service	8:00 pm - 9:30 pm	Sanctuary	60
Saturday	Discipleship Training	9:00 am - 12:00 pm	Sanctuary	50

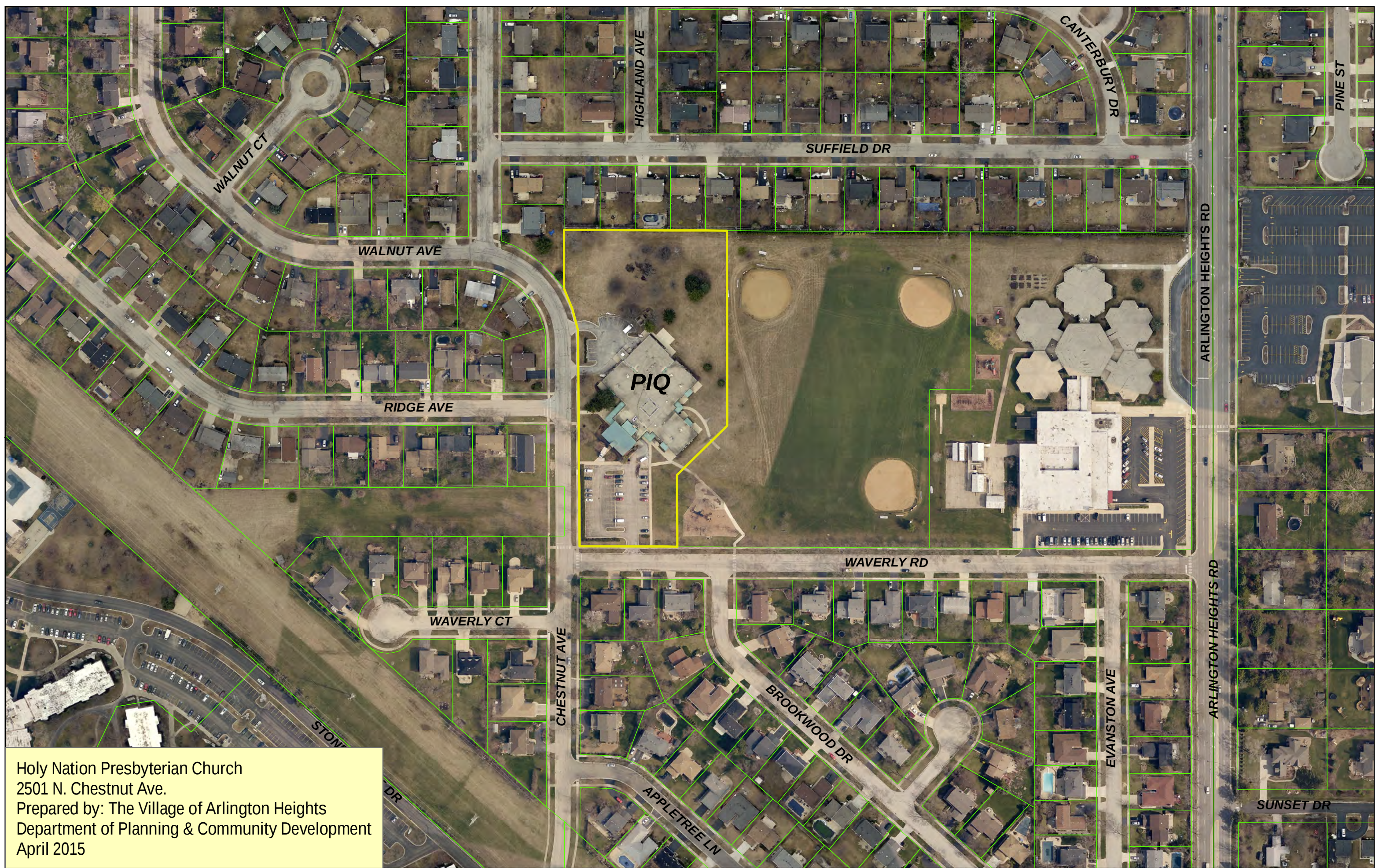
Expected Maximum Occupancy Load at any given time: 80

Sunday Worship Service Schedule

(Expected Maximum Occupancy Load at any given time: 80)







Holy Nation Presbyterian Church
2501 N. Chestnut Ave.
Prepared by: The Village of Arlington Heights
Department of Planning & Community Development
April 2015



Item: Collision Damage Experts - 9 E. College Dr. - T1496

Department: Planning & Community Development

Requested Action

A Land Use Variation to allow "Major Motor Vehicle Repair" in the M-1 district.

Variations Identified

1. Chapter 28, Section 6.12-1(3) Traffic Engineering Approval, to waive the requirement for a traffic and parking analysis from a qualified professional Engineer.
2. Chapter 28, Section 11.4 Schedule of Parking Requirements, to allow a reduction in parking from the required 64 to 43, a variation of 21 parking spaces.

Recommendation

The Staff Development Committee is not supportive of the request for a Land Use Variation at this location. If the applicant should elect to submit a Plan Commission application, the following must be addressed:

1. The Petitioner shall provide a written justification based on the following land use variation criteria:
 - The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone.
 - The plight of the owner is due to unique circumstances.
 - The variation, if granted, will not alter the essential character of the locality.
2. As part of the review process, any variations sought from the Zoning Ordinance must meet the hardship criteria as set forth in the Zoning Ordinance, more specifically:
 - The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone;
 - The plight of the owner is due to unique circumstances; and
 - The variation, if granted, will not alter the essential character of the locality.
3. Submittal of a Plan Commission application for formal review and public hearing.

4. A neighborhood meeting shall be required early in the development review process, prior to scheduling a public hearing of the Plan Commission.
5. Additional information must be provided on any potential noise and odors generated by this use. Provide details of the filtration system that is proposed to be used.
6. Additional information must be provided regarding the odors that may be generated and how they are proposed to be mitigated. This should include information about ventilation systems proposed to be installed and how they would mitigate the odors.
7. A traffic study and parking analysis must be submitted. If a variation is requested, then a written justification from the variation criteria must be provided.
8. These are preliminary comments only and should not be relied upon as identification of the only major issues. The Staff Development Committee reserves the right to change its position on issues upon submittal of a formal application and detailed review.

ATTACHMENTS:

Description	Type
Staff Report	Report
Narrative	Correspondence
Plat of Survey	Exhibits
Location Map	Exhibits

STAFF DEVELOPMENT COMMITTEE REPORT

To: Plat and Subdivision Committee
Prepared By: Latika Bhide, Development Planner
Meeting Date: April 8, 2015
Date Prepared: April 2, 2015
Project Title: Collision Damage Experts
Address: 9 E. College Dr.

BACKGROUND INFORMATION

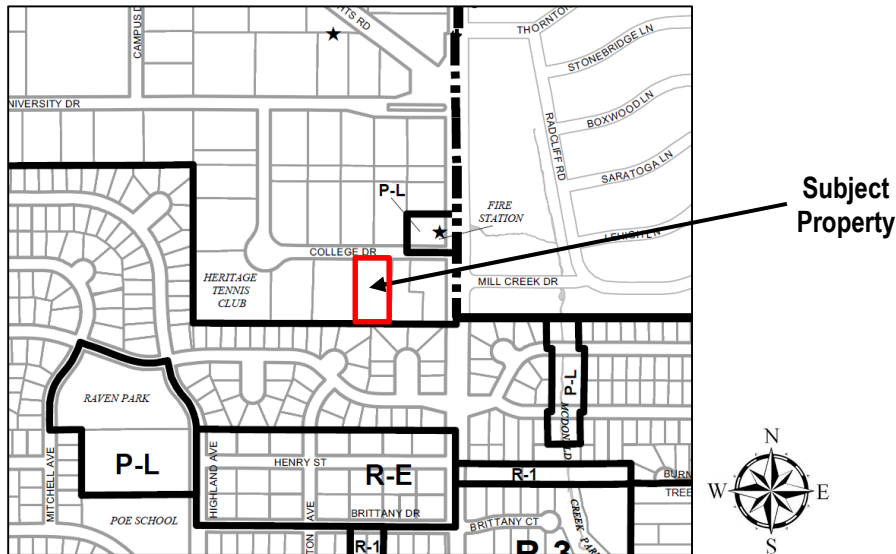
Petitioner: Chuck Freiberg
Address: 5710 S. Western Avenue
 Chicago, IL 60636
Existing Zoning: M-1, Research, Development, and Light Manufacturing District

Requested Action:

- A Land Use Variation to allow "Major Motor Vehicle Repair" in the M-1 district.

Variations Identified:

- Chapter 28, Section 6.12-1(3) *Traffic Engineering Approval*, to waive the requirement for a traffic and parking analysis from a qualified professional Engineer.
- Chapter 28, Section 11.4 Schedule of Parking Requirements, to allow a reduction in parking from the required 64 to 43, a variation of 21 parking spaces.



Surrounding Properties

Direction	Existing Zoning	Existing Use	Comprehensive Plan
North	M-1, Research, Development, and Light Manufacturing District	Industrial (vacant), Church	R&D, Mfg., Warehouse, Commercial
South	R-3, One-Family Dwelling District	Single Family Residential	Single Family Detached
East	M-1, Research, Development, and Light Manufacturing District	Industrial (Astrotech, Vimex, I-Cubed)	R&D, Mfg., Warehouse
West	M-1, Research, Development, and Light Manufacturing District	Office (vacant)	R&D, Mfg., Warehouse

Background

The subject property is approximately 1.34 acres in area with a free-standing building totaling approximately 24,700 square feet in area. The space within the building is divided into office space, production area and warehouse space. Collision Damage Experts will occupy the entire building. The existing parking lot is located along the perimeter of the property on the east, south and west sides and has 43 parking spaces that are accessible via two driveways along College Drive.

The petitioner is interested in opening an Auto Body Repair center - Collision Damage Experts - at this location. This use is classified as "Major motor vehicle repair" which includes engine rebuilding or major reconditioning of worn or damaged motor vehicles or trailers; collision service, including body, frame or fender straightening or repair; and overall painting of vehicles. Since the use is not permitted in the M-1 district, a land use variation would be necessary to allow this use to operate at this location.

The petitioner has indicated that vehicles are delivered to the site by towing companies. The towing company typically has keys to the yard and vehicles are delivered to the site including at night and over the weekend, but the towing company could be instructed not to deliver vehicles in the night. The petitioner has indicated that cars would not be stored outdoors unless they were deemed a "total loss". If stored outdoors, they would remain for no longer than 48 hours and the tow truck could come and remove them. No vehicles will be available for sale on-site. The petitioner has indicated that there will be overhead doors along the perimeter of the building including along the south property line, adjoining residential property. The petitioner has indicated that all repair and refurbishing activity will be conducted indoors, the building is completely air conditioned and the overhead doors will remain closed. There is an existing loading dock for the building that will be filled in and serve as the paint booth. The petitioner has indicated that they will employ approximately 15-22 people at this location. The business will typically be open from 7:00 am to 6:00 pm on Monday through Friday and 8:00 am to 2:00 pm on Saturday. The petitioner anticipates 20 customers each day, mostly by appointment.

Zoning and Comprehensive Plan

The site is currently zoned M-1 Research, Development, & Light Manufacturing District. Because the use is not permitted in the M-1 district; therefore the petitioner must submit a written justification based on the following hardship criteria:

- **The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone; and**
- **The plight of the owner is due to unique circumstances; and**
- **The variation, if granted, will not alter the essential character of the locality.**

The Village's Comprehensive Plan designates this property as 'R&D, Mfg., Warehouse'. **The Staff Development Committee does not support the proposed use at this location as this use is not compatible with the single family homes to the south.** If the Petitioner elects to proceed forward, then the following issues should be addressed.

Building, Site, and Landscape Related Issues

If the petitioner proposes any exterior modifications then a Design review will be required. With respect to the interior improvements, the petitioner should contact the Building Department as soon as possible to ensure that all improvements meet Code requirements. Any proposed spray booth must meet all applicable Code requirements, including but not limited to flammability and ventilation requirements. A triple basin will be required for this use. A MWRD permit will be required and must be and must be coordinated through the Village's Engineering Department. The Petitioner must comply with all applicable accessibility, building, health, noise, odor and life safety code requirements.

The petitioner needs to provide additional information regarding any potential noise and odors generated by this use, as single-family homes are located immediately to the south. The distance between the building at 9 E. College Drive and the residences to the south (114 E. Burr Oak Dr. and 10 E. Burr Oak Dr.) is approximately 148 feet and 160 feet respectively. Staff would advise the Petitioner that the any noise generated by the use shall not exceed the decibels levels as outlined in Section 28-5.1-17.2 of the Village Code. Also, objectionable sounds of an intermittent nature which are not easily measured shall be controlled so as not to become a nuisance to adjacent uses. Staff would also advise the Petitioner that it shall be unlawful to cause or to knowingly permit the emission of objectionable odors in quantities so as to be readily detectable by an observer at any point on the boundary line of any premises or beyond.

If the Village determines that the proposed use does not comply with the aforementioned code requirements, then the Petitioner will need to incorporate additional measures and/or improvements that will address the noise and odor issues.

Currently there is minimal landscaping on the site. Additional landscaping shall be provided as possible. The Zoning Regulations require that for parking lots which provide more than twenty stalls, landscape islands at the end of every row of parking are required. Also, areas containing more than four parking spaces are required to be effectively screened on each side adjoining or fronting on any property situated in a residence district or adjoining any public way by a well-maintained wall, fence, or densely planted compact hedge designed to provide year round opacity or berm and hedge. This will be reviewed further once a formal site and landscape plan has been provided for review. Also, as part of the formal review process, the screening along the south property line shall be reviewed.

Traffic & Parking Related Issues

Per the Zoning Regulations, office uses require 1 parking space for each 300 square feet of floor area. Automobile Service Stations are required to provide one space for each employee plus three spaces for each service bay. The petitioner has indicated that there will be 8 service bays and a maximum of 25 employees at this site. Therefore, Collision Damage Experts would therefore require 67 parking spaces. A current survey must be provided that accurately illustrates the number of parking spaces on-site. A parking chart for the site is attached.

The following variations are requested:

USE	CODE USE	SF/Employees/Bays	PARKING CALC (SF)	PARKING RATIO (1:X)	PARKING REQUIRED
Collision Damage Experts- Office	Office	5,400*	5,400	1:300	18
Collision Damage Experts	Automobile Service Stations	22 employees, 8 service bays	NA	1/employee + 3/service bay	46
			Parking Required		64
			Parking Provided		43*
			Surplus/(Deficit)		(21)

*The applicant must confirm the square footage of the office area

- **Chapter 28, Section 11.4 Schedule of Parking Requirements, to allow a reduction in parking for the center from the required 64 to 43, a variation of 21 parking spaces.**

Per Chapter 28, Zoning Regulations, a traffic study and parking analysis prepared by a qualified professional engineer is required for any project seeking a Land Use Variation that is not located adjacent to a major or secondary arterial street.

The following variations are requested:

- **Chapter 28, Section 6.12-1(3) *Traffic Engineering Approval*, to waive the requirement for a traffic study and parking analysis from a Certified Traffic Engineer.**

Staff does not support the variation from the requirement to provide a traffic study and parking analysis. Staff would need additional information including parking counts at the petitioner's other facilities, number of vehicles to be stored on the site, location of the outdoor storage area, vehicle drop-off, etc. before making a recommendation on the variation from the required number of parking spaces.

If requested, the petitioner must submit a response to the variation hardship criteria.

Recommendation

The Staff Development Committee is not supportive of the request for a Land Use Variation at this location. If the applicant should elect to submit a Plan Commission application, the following must be addressed:

1. The Petitioner shall provide a written justification based on the following land use variation criteria:
 - **The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone.**
 - **The plight of the owner is due to unique circumstances.**
 - **The variation, if granted, will not alter the essential character of the locality.**
2. As part of the review process, any variations sought from the Zoning Ordinance must meet the hardship criteria as set forth in the Zoning Ordinance, more specifically:
 - **The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone;**
 - **The plight of the owner is due to unique circumstances; and**
 - **The variation, if granted, will not alter the essential character of the locality.**
3. Submittal of a Plan Commission application for formal review and public hearing.
4. A neighborhood meeting shall be required early in the development review process, prior to scheduling a public hearing of the Plan Commission.
5. Additional information must be provided on any potential noise and odors generated by this use. Provide details of the filtration system that is proposed to be used.
6. Additional information must be provided regarding the odors that may be generated and how they are proposed to be mitigated. This should include information about ventilation systems proposed to be installed and how they would mitigate the odors.
7. A traffic study and parking analysis must be submitted. If a variation is requested, then a written justification from the variation criteria must be provided.
8. These are preliminary comments only and should not be relied upon as identification of the only major issues. The Staff Development Committee reserves the right to change its position on issues upon submittal of a formal application and detailed review.

____ April 2, 2015

Bill Enright, Deputy Director of Planning and Community Development

C: Randy Recklaus, Village Manager
All Department Head

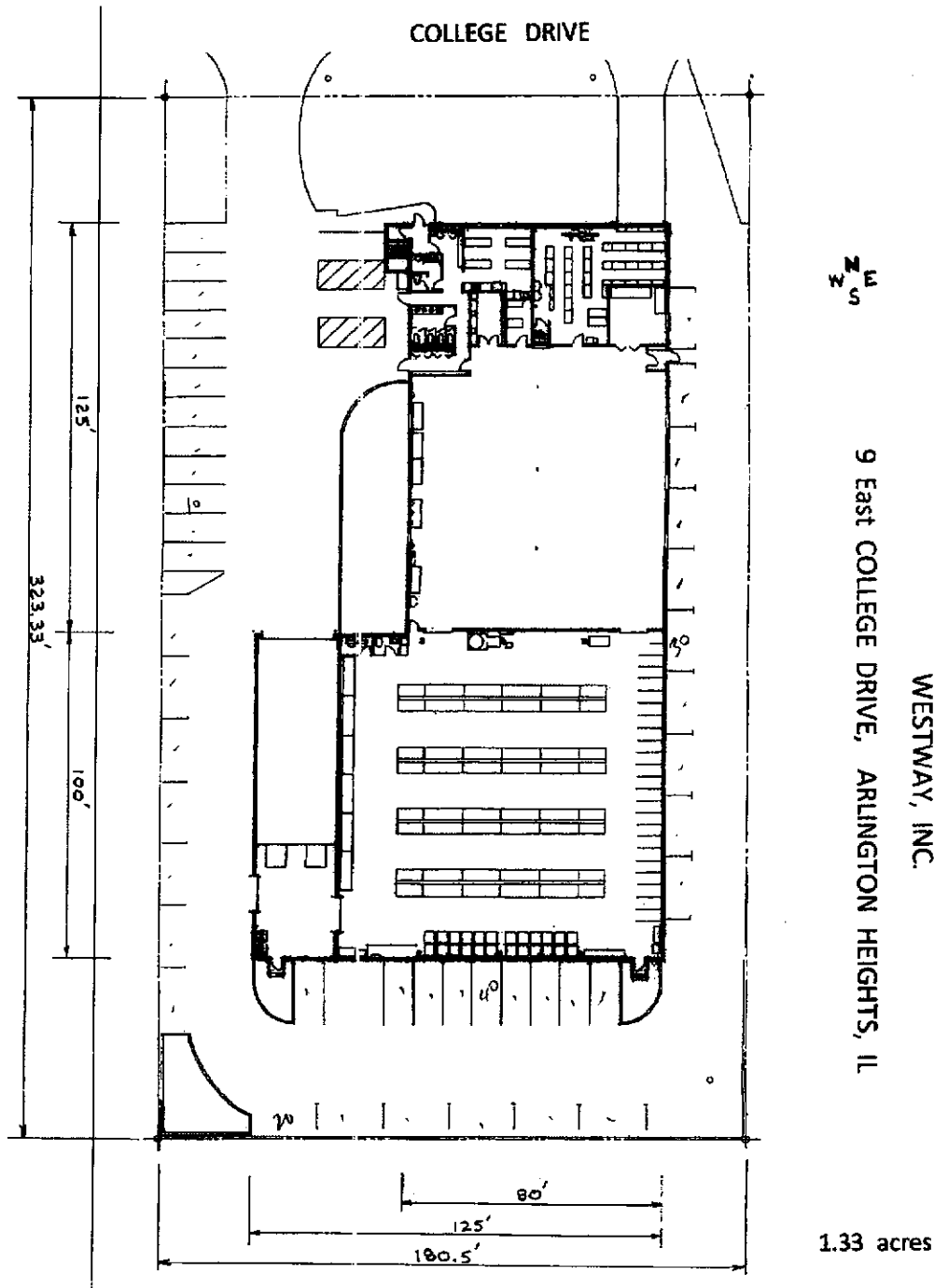
Use Description

CDE intends to use the property for auto body repair, and part and vehicle remanufacturing, refurbishing and refinishing. The vehicles that will be repaired at the facility will be cars or light trucks that have been damaged by an auto accident or by a weather incident, such as hail. The Building is completely insulated and it appears to be sound proof. There is also more than adequate parking on site, and appropriate road access and frontage. This building is 24,700 sf with a 2 story office consisting of 2,700 sf on each level; the second level is non usable. The remaining floor space of approximately 22,000 sf will be used for vehicle disassembly; for vehicle staging; for fabrication; for vehicle and part remanufacturing, refurbishing and refinishing; and for receiving, warehousing, and distributing vehicle supplies and parts. All repair and refurbishing activity will take place indoors, so there will be no odors, fumes, or dust discharge from the operations. In particular, any painting that is done will be done within spray booths, mitigating the chance that fumes or odors would become a nuisance to the neighbors.

The operation of business will be typically from 7:00 am until 6:00 pm Monday through Friday and 8:00 am until 2:00 Saturday. There is very little traffic associated with this use. If the business is successful, CDE anticipates 20 customers coming in and out each day, mostly by appointment. There will also be some deliveries by small trucks. CDE expects to have 5 to 10 employees on site at the start of operations, and once the site is fully operational, CDE anticipates between 15-22 full time employees at this site.

At this time, CDE does not operate any towing service at its operations and CDE does not intend to do so in the future. Very few vehicles are ever stored outside because it is company policy to bring all drivable vehicles into the building at night for storage. The exception would be a totaled vehicle parked within the secured parking area which is un-drivable. If a vehicle is un-drivable, it will be screened and obscured from neighboring properties.

9 East College Drive Arlington Hts, IL

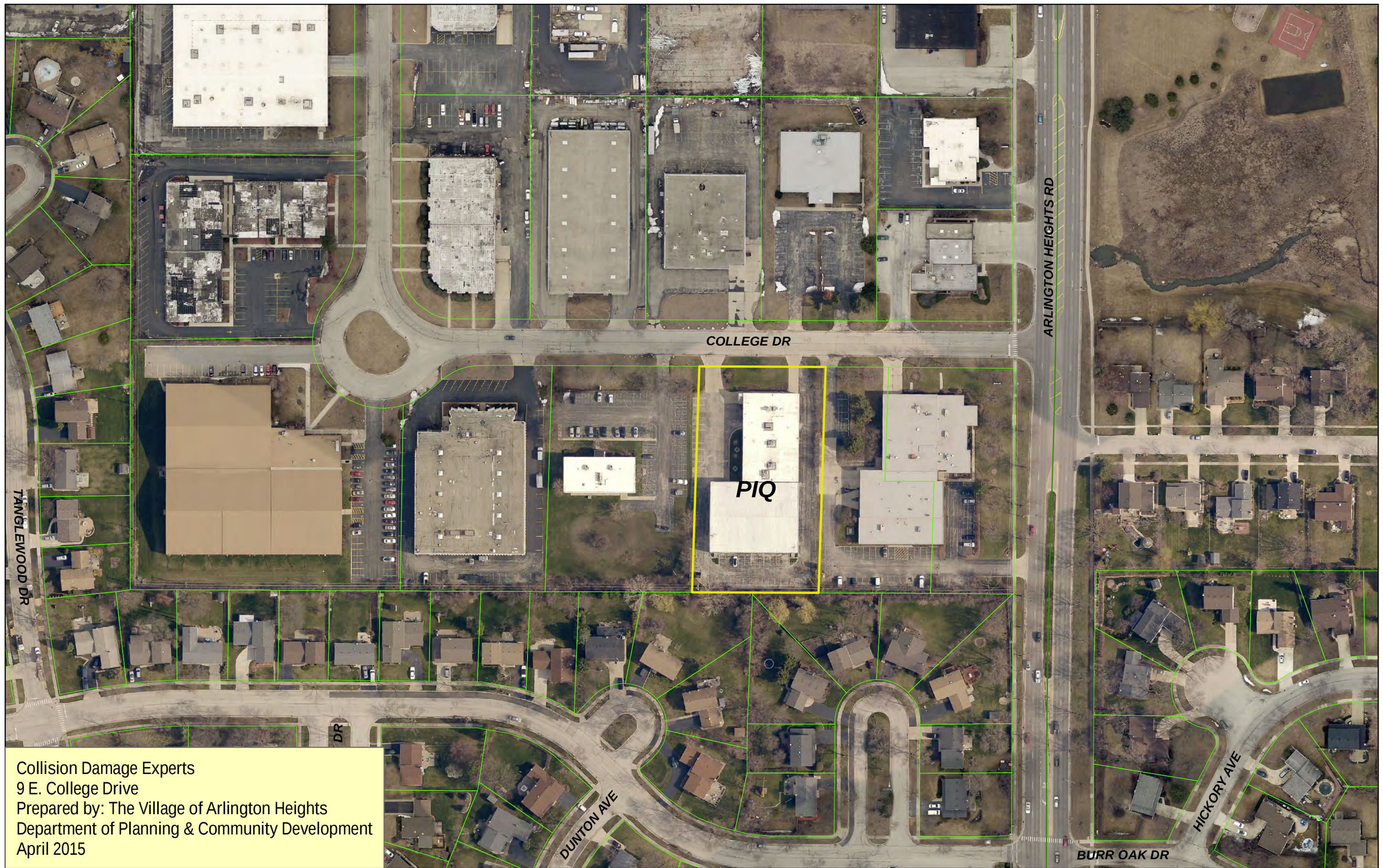


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MILNER
CARPENTER

444 E. HILLCREST DR
SUITE 230
DEKALB, IL
(815) 754-4000



Collision Damage Experts
9 E. College Drive
Prepared by: The Village of Arlington Heights
Department of Planning & Community Development
April 2015



Item: Verizon Wireless Antenna at Luther Village - 800 W. Oakton - T1499

Department: Planning & Community Development

Requested Action

A Special Use Permit for a rooftop wireless antenna.

Variations Identified

1. Chapter 28, Section 6.12-1 from the requirement to provide a traffic study and parking analysis prepared by a qualified professional engineer.
2. Chapter 28, Section 6.13 from the requirement that fences shall not exceed a height of five feet to allow eight feet eleven inches.

Recommendation

The Staff Development Committee is not supportive of the current request for a Special Use, as submitted. If the applicant should elect to submit a Plan Commission application, the following must be addressed:

1. Submittal of a Plan Commission application for formal review and public hearing.
2. Provide a propagation report that includes a coverage plot depicting "current coverage" and "proposed coverage" with the addition of this site.
3. Provide plans that show all four building elevations.
4. Provide a letter from the owner stating that they concur with having additional antennas on the building.
5. Provide a letter from the Northwest Central Dispatch indicating that the proposed frequencies are compatible with Village and other public and private telecommunication frequencies.
6. Provide a letter/documentation that demonstrates that the proposed antenna structures comply with all applicable FCC/EPA standards

7. Provide details regarding the trees to be removed and provide replacement trees as required per the Ordinance.

8. These are preliminary comments only and should not be relied upon as identification of the only major issues. The Staff Development Committee reserves the right to change its position on issues upon submittal of a formal application and detailed review.

ATTACHMENTS:

Description

Staff Report

Plan Set

Justification

Location Map

Type

Report

Correspondence

Exhibits

Exhibits

STAFF DEVELOPMENT COMMITTEE REPORT

To: Plat and Subdivision Committee
Prepared By: Latika Bhide, Development Planner
Meeting Date: April 8, 2015
Date Prepared: April 2, 2015
Project Title: Dolan Realty Advisors on behalf of Verizon Wireless
Address: 800 W. Oakton Street

BACKGROUND INFORMATION

Petitioner: Douglas K. Dolan, Dolan Realty Advisors, LLC (on behalf of Verizon)
Address: 144 W. Lockwood Ave., Suite 200
 Webster Groves, MO 63119

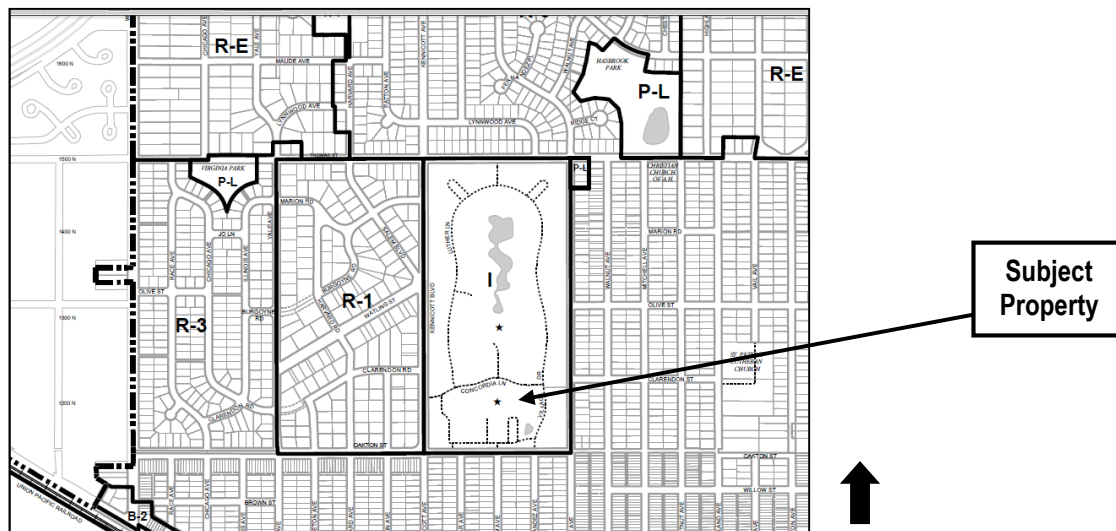
Existing Zoning: I, Institutional

Requested Action:

- A Special Use Permit for a rooftop wireless antenna.

Variations Identified:

- Chapter 28, Section 6.12-1 from the requirement to provide a traffic study and parking analysis prepared by a qualified professional engineer;
- Chapter 28, Section 6.13 from the requirement that fences shall not exceed a height of five feet to allow eight feet eleven inches.

**Surrounding Properties**

Direction	Zoning	Existing Land-Use	Comprehensive Plan
North	R-3	Single Family Residences	Single Family Detached
South	R-3	Single Family Residences	Single Family Detached
East	R-3	Single Family Residences	Single Family Detached
West	R-1	Single Family Residences	Single Family Detached Estate

Background

The subject property, 800 W. Oakton Avenue, is zoned I-Institutional and is approximately 73.6 acres in area. The northern portion of the site, which is an independent senior living development, is known as Luther Village. The southern portion of the site is known as Lutheran Home, and includes several components including a skilled nursing facility, a memory support wing, senior assisted living, a child and adult day care facility, and a chapel. Verizon Wireless would like to install rooftop cellular antennas at Lutheran Home, on the southern portion of the site. They are proposing to add the antennas within a fiberglass enclosure that would be an extension of the existing elevator shaft/penthouse. The proposed enclosure is 10 feet in height and the overall height of the building, lower penthouse, elevator shaft and the proposed extension would be 59 feet. The antenna will be located approximately 350 feet from Oakton Street and approximately 465 feet from Kennicott Boulevard. In addition to the antennas, the petitioner is proposing to add a generator on a 4' x 10' concrete pad behind a brick screen wall 8 feet 11 inches tall and a 11'-6" x 16'-10 1/2" lessee equipment shelter on the west side of the building.

Radio and Telephone Antenna are required to obtain a Special Use Permit in the 'I', Institutional District per Chapter 28, Section 6.14-2. The petitioner applied for a Special Use Waiver pursuant to Chapter 28 Section 6.14-2.3. The Planning Department rejected the application for a Special Use Waiver because:

- **The additional antennas constitute a substantial increase to the number of existing antenna.**
It appears that there are 12 antennas existing at this location. An additional 9 antennas are being proposed at this time. This represents a substantial increase to the number of existing antenna at this location.
- **The proposed antennas project more than 12 feet from the highest point of the roofline of the building.**
The roofline of the building in question is at 30' (this height is indicated to the top of the parapet wall, not the roof deck. As part of the formal Plan Commission review, the height to the roof deck must be provided). The total height of the building, lower penthouse, elevator shaft and the proposed enclosure for the antennas will be 59 feet, which is 29 feet higher than the roofline of the building.
- **The antennas do not blend in with the existing architectural character of the building.**
The antenna enclosure is proposed on top of the elevator shaft/penthouse which is located on top of the lower penthouse. The lower penthouse, elevator shaft/penthouse and the proposed enclosure are 29 feet above the roofline of the building and it questionable whether they would blend in with the existing architectural character of the building.

The Staff Development Committee has concerns with the proliferation of the antennas at this site as well as the proposed location of the antennas, sited higher than the elevator shaft/penthouse. Verizon Wireless has indicated that they have evaluated other alternatives in the search area, including building a new tower, existing towers and collocating on the Arlington Heights Water Tank. They have indicated that they cannot provide a site with more concealment than the proposed site as the proposed antennas will be concealed behind a screen wall that will be painted to match the existing penthouse.

Zoning and Comprehensive Plan

The site is currently zoned I, Institutional. Because the use is permitted as a Special Use in the 'I' district, therefore the petitioner must submit a written justification based on the following special use criteria:

- **That said special use is deemed necessary for the public convenience at this location.**
- **That such case will not, under any circumstances of the particular case, be detrimental to the health, safety, morals or general welfare of persons residing or working in the vicinity.**
- **That the proposed use will comply with the regulations and conditions specified in this ordinance for such use, and with the stipulations and conditions made a part of the authorization granted by the Village Board of Trustees.**

Additionally, the following standards are considered when determining whether approval of an application for a commercial antenna structure is in the public interest:

- **The petitioner must demonstrate that there is not technically suitable space available on an existing tower or structure within the geographic area to be serviced.**

- **A landscaping plan shall be submitted that demonstrates substantial screening of the antenna and related structures from adjacent land uses. Screening must consist of a well-maintained masonry wall of brickwork or stonework, solid wood fence, densely planted compact hedge or berm and hedge.**

The Village's Comprehensive Plan designates this property as 'Institutional'.

Building, Site and Landscape Related Issues

The petitioner is proposing a generator pad and equipment shelter on the west side of the building in question. Per the plans provided, three trees are proposed to be removed to accommodate the generator pad and equipment shelter. As part of the formal Plan Commission submittal, the petitioner must provide information on the trees to be removed and replacement trees as required per the Ordinance must be provided.

The petitioner has indicated that the generator on the west side of the building will be screened by a brick wall. The wall is proposed to be two feet higher than the top of the generator and will be 8'-11" tall. Also, a six foot tall wood fence is proposed behind the equipment shelter. This height must be reduced to five feet or a variation requested.

Therefore, the following variation is required:

- Chapter 28, Section 6.13 from the requirement that fences shall not exceed a height of five feet to allow eight feet eleven inches for the screen wall for the generator pad and to allow six foot fence for the equipment shelter.

The petitioner must submit a response to the variation hardship criteria.

- **The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone; and**
- **The plight of the owner is due to unique circumstances; and**
- **The variation, if granted, will not alter the essential character of the locality.**

Traffic & Parking Related Issues

Per Chapter 28, Section 6.12-1, a traffic study and parking analysis is required for any Special Use that is not located adjacent to a major or secondary arterial. The rooftop antenna will not have any impact on the parking and traffic circulation. Therefore staff supports the request for this variation.

The following variation is required:

- Chapter 28, Section 6.12-1 from the requirement to provide a traffic study and parking analysis prepared by a qualified professional engineer;

Recommendation

The Staff Development Committee is not supportive of the current request for a Special Use, as submitted. If the applicant should elect to submit a Plan Commission application, the following must be addressed:

1. Submittal of a Plan Commission application for formal review and public hearing.
2. Provide a propagation report that includes a coverage plot depicting "current coverage" and "proposed coverage" with the addition of this site.
3. Provide plans that show all four building elevations.
4. Provide a letter from the owner stating that they concur with having additional antennas on the building.
5. Provide a letter from the Northwest Central Dispatch indicating that the proposed frequencies are compatible with Village and other public and private telecommunication frequencies.
6. Provide a letter/documentation that demonstrates that the proposed antenna structures comply with all applicable FCC/EPA standards
7. Provide details regarding the trees to be removed and provide replacement trees as required per the Ordinance.
8. These are preliminary comments only and should not be relied upon as identification of the only major issues. The Staff Development Committee reserves the right to change its position on issues upon submittal of a formal application and detailed review.

April 3, 2015

Bill Enright, Deputy Director of Planning and Community Development

C: Randy Recklaus, Village Manager
All Department Heads

Y:\PLAT & SUBDIVISION COMMITTEE\2014\T1473 Verizon Antenna\01 Staff Report T1473.docx

THE CONSTRUCTION DOCUMENT DRAWINGS ARE INTERRELATED. WHEN PERFORMING THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

SECTION 01700 - PROJECT CLOSEOUT

PART I - GENERAL

- A. OBTAIN AND SUBMIT RELEASES ENABLING THE OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES; INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES AND SIMILAR RELEASES
- B. SUBMIT RECORD DRAWINGS, DAMAGE OR SETTLEMENT SURVEY, PROPERTY SURVEY, AND SIMILAR FINAL RECORD INFORMATION.
- C. COMPLETE FINAL CLEAN UP REQUIREMENTS, INCLUDING TOUCH-UP PAINTING, TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES.

PART 2 - FINAL CLEANING

1. COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATION OF COMPLETION.
 - A. CLEAN THE PROJECT SITE, YARD AND GROUNDS, IN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLUDING LANDSCAPE DEVELOPMENT AREAS, OF RUBBISH, WASTE MATERIALS, LITTER AND FOREIGN SUBSTANCES. SWEEP PAVED AREAS WITH BROOM CLEAN. REMOVE PETROLEUM-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS, RAKE GROUNDS THAT ARE NEITHER PLANTED NOR PAVED, TO A SMOOTH EVEN-TEXTURED SURFACE.
 - B. REMOVE TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIAL FROM THE SITE.
 - C. REMOVE SNOW AND ICE TO PROVIDE SAFE ACCESS TO THE SITE AND EQUIPMENT ENCLOSURE.
 - D. CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACED FINISHES TO A DIRT-FREE CONDITION FREE OF STAINS, FILMS AND OTHER FOREIGN SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES.
 - E. REMOVE DEBRIS FROM LIMITED ACCESS SPACES, INCLUDING ROOFS, EQUIPMENT ENCLOSURE, MANHOLES, AND SIMILAR SPACES.
 - F. REMOVE LABELS THAT ARE NOT PERMANENT LABELS.
 - G. TOUCH-UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES AND SURFACES. REPLACE FINISHES AND SURFACES THAT CAN NOT BE SATISFACTORILY REPAIRED OR RESTORED, OR THAT SHOW EVIDENCE OF REPAIR OR RESTORATION, DO NOT PAINT OVER "UL" AND SIMILAR LABELS, INCLUDING ELECTRICAL NAME PLATES.
 - H. LEAVE THE PROJECT CLEAN AND READY FOR OCCUPANCY.
 - I. DUST-OFF ALL EQUIPMENT, INCLUDING BATTERY PACKS, WITHIN EQUIPMENT ENCLOSURE.
 - J. WASH AND WAX FLOOR WITHIN EQUIPMENT ENCLOSURE.
2. REMOVAL OF PROTECTION: REMOVE TEMPORARY PROTECTION AND FACILITIES INSTALLED DURING CONSTRUCTION TO PROTECT PREVIOUSLY COMPLETED INSTALLATIONS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.

SECTION 02200 - EARTHWORK AND DRAINAGE

PART I - GENERAL

- WORK INCLUDED: SEE SITE PLAN.
2. DESCRIPTIONS
- ACCESS DRIVE W/ TURNAROUND AREA, LEASE AREA, AND IF APPLICABLE, UNDERGROUND UTILITY EASEMENTS ARE TO BE CONSTRUCTED TO PROVIDE A WELL DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR MATERIAL AND EQUIPMENT DELIVERIES AND MAINTENANCE PERSONNEL ACCESS.
3. QUALITY ASSURANCE
- A. APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (AS NEEDED).
- B. APPLY AND MAINTAIN GRASS SEED AS RECOMMENDED BY THE SEED PRODUCER (IF REQUIRED).
- C. PLACE AND MAINTAIN VEGETATION LANDSCAPING, IF INCLUDED WITHIN THE CONTRACT, AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.
4. SEQUENCING
- A. CONFIRM SURVEY STAKES AND SET ELEVATION STAKES PRIOR TO ANY CONSTRUCTION.
- B. COMPLETELY GRUB THE ACCESS DRIVE W/ TURNAROUND, UNDERGROUND UTILITY EASEMENTS, (IF APPLICABLE) AND LEASE AREA PRIOR TO FOUNDATION CONSTRUCTION, PLACEMENT OF BACKFILL AND SUB-BASE MATERIAL.
- C. CONSTRUCT TEMPORARY CONSTRUCTION AREA ALONG ACCESS DRIVE.
- D. BRING THE LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION PRIOR TO INSTALLING FOUNDATION.
- E. APPLY SOIL STERILIZER PRIOR TO PLACING BASE MATERIALS.
- F. GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION (INCLUDING UNDERGROUND UTILITY EASEMENTS) IMMEDIATELY AFTER BRINGING LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION, WATER TO ENSURE GROWTH.
- G. REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ZONE TO AN AUTHORIZED AREA OR AS DIRECTED BY PROJECT MANAGER.
- H. AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO STONE SURFACES.
5. SUBMITTALS
- A. BEFORE CONSTRUCTION
- IF LANDSCAPING IS APPLICABLE TO THE CONTRACT, SUBMIT TWO COPIES OF THE LANDSCAPE PLAN UNDER NURSERY LETTERHEAD. IF A LANDSCAPE ALLOWANCE WAS INCLUDED IN THE CONTRACT, PROVIDE AN ITEMIZED LISTING OF PROPOSED COSTS ON NURSERY LETTERHEAD (REFER TO PLANS FOR LANDSCAPING REQUIREMENTS).
- B. AFTER CONSTRUCTION
1. MANUFACTURER'S DESCRIPTION OF PRODUCT AND WARRANTY STATEMENT ON SOIL STERILIZED.
2. MANUFACTURER'S DESCRIPTION OF PRODUCT ON GRASS SEED AND FERTILIZER
3. LANDSCAPING WARRANTY STATEMENT.
6. WARRANTY
- A. IN ADDITION TO THE WARRANTY ON ALL CONSTRUCTION COVERED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPAIR ALL DAMAGE AND RESTORE AREA AS CLOSE TO ORIGINAL CONDITION AS POSSIBLE AT SITE AND SURROUNDINGS.
- B. SOIL STERILIZATION APPLICATION TO GUARANTEE VEGETATION FREE ROAD AND SITE AREAS FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
- C. DISTURBED AREAS WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION.
- D. LANDSCAPING, IF INCLUDED WITHIN THE SCOPE OF THE CONTRACT, WILL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION.

PART 2 - PRODUCTS

1. MATERIALS
- A. SOIL STERILIZER SHALL BE EPA-REGISTERED, PRE-EMERGENCE LIQUID:

TOTAL KILL
PRODUCT 910
EPA 10292-7

PHASAR CORPORATION
P.O. BOX 5123
DEARBORN, MI 48128
(313) 563-8000

FRAMAR INDUSTRIAL PRODUCTS
1435 MORRIS AVE.
UNION, NJ 07083
(800) 526-4924

AMBUSH HERBICI
EPA REGISTERED

FRAMAR INDUSTRIAL PRODUCTS
1435 MORRIS AVE.
UNION, NJ 07083
(800) 526-4924

- B. ROAD AND SITE MATERIALS SHALL CONFORM TO IDOT SPECIFICATIONS FILL MATERIAL (UNLESS OTHERWISE NOTED) - ACCEPTABLE SELECT FILL SHALL BE IN ACCORDANCE WITH STATE DEPARTMENT OF HIGHWAY AND TRANSPORTATION STANDARD SPECIFICATIONS..
- C. SOIL STABILIZER FABRIC SHALL BE MIRAFT - 500X.

PART 3 - EXECUTION

1. INSPECTIONS
LOCAL BUILDING INSPECTORS SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, UNLESS OTHERWISE SPECIFIED BY JURISDICTION.
2. PREPARATION
 - A. CLEAR TREES, BRUSH AND DEBRIS FROM LEASE AREA, ACCESS DRIVE W/ TURN-AROUND AND UNDER GROUND UTILITY EASEMENTS AS REQUIRED FOR CONSTRUCTION.
 - B. PRIOR TO OTHER EXCAVATION AND CONSTRUCTION, GRUB ORGANIC MATERIAL TO A MINIMUM OF SIX INCHES (6") BELOW GRADE.
 - C. UNLESS OTHERWISE INSTRUCTED BY LESSEE, TRANSPORT ALL REMOVED TREES, BRUSH AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED LANDFILL.
 - D. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, ROLL THE SOIL.
 - E. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, LINE THE AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.
3. INSTALLATION
 - A. GRADE OR FILL THE LEASE AREA AND ACCESS DRIVE W/ TURNAROUND AS REQUIRED IN ORDER THAT UPON DISTRIBUTION OF SPOILS, RESULTING FROM EXCAVATIONS, THE RESULTING GRADE WILL CORRESPOND WITH SAID SUB-BASE COURSE. ELEVATIONS ARE TO BE CALCULATED FROM BENCHMARK, FINISHED GRADES, OR INDICATED SLOPES.
 - B. CLEAR EXCESS SPOILS, IF ANY, FROM JOB SITE AND DO NOT SPREAD BEYOND THE LIMITS OF PROJECT AREA UNLESS AUTHORIZED BY PROJECT MANAGER AND AGREED TO BY LANDOWNER.
 - C. BRING THE ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION TO FACILITATE CONSTRUCTION AND OBSERVATION DURING CONSTRUCTION OF THE SITE.
 - D. AVOID CREATING DEPRESSIONS WHERE WATER MAY POND.
 - E. THE CONTRACT SHALL INCLUDE GRADING, BANKING, AND DITCHING, UNLESS OTHERWISE INDICATED.
 - F. WHEN IMPROVING AN EXISTING ACCESS DRIVE, GRADE THE EXISTING DRIVE TO REMOVE ANY ORGANIC MATTER AND SMOOTH THE SURFACE BEFORE PLACING FILL OR STONE.
 - G. PLACE FILL OR STONE IN SIX INCH (6") MAXIMUM LIFTS, AND COMPACT BEFORE PLACING NEXT LIFT.
 - H. THE TOP SURFACE COURSE, SHALL EXTEND A MINIMUM OF ONE FOOT (1') BEYOND THE SITE FENCE (UNLESS OTHERWISE NOTED) AND SHALL COVER THE AREA AS INDICATED.
 - I. APPLY RIPRAP TO THE SIDE SLOPES OF ALL FENCED SITE AREAS, PARKING AREAS, AND ALL OTHER SLOPES GREATER THAN 2:1.
 - J. APPLY RIPRAP TO THE SIDES OF DITCHES OR DRAINAGE SWALES.
 - K. RIPRAP ENTIRE DITCH FOR SIX FEET (6') IN ALL DIRECTIONS AT CULVERT OPENINGS.
 - L. APPLY SEED, FERTILIZER, AND STRAW COVER TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES, NOT OTHERWISE RIPRAPPED.
 - M. UNDER NO CIRCUMSTANCES WILL DITCHES, SWALES, OR CULVERTS BE PLACED SO THAT THEY DIRECT WATER TOWARDS, OR PERMIT STANDING WATER IMMEDIATELY ADJACENT TO SHELTER OR EQUIPMENT. IF DESIGNS OR ELEVATIONS ARE IN CONFLICT WITH THIS, ADVISE CONSTRUCTION MANAGER IMMEDIATELY.
 - N. IN DITCHES WITH SLOPES GREATER THAN 10%, MOUND DIMENSIONARY HEADWALLS IN THE DITCH AT CULVERT ENTRANCES. POSITION THE HEADWALL AT AN ANGLE NO GREATER THAN 60° OFF THE DITCH LINE. RIPRAP THE UPSTREAM SIDE OF THE HEADWALL AS WELL AS THE DITCH FOR SIX FEET (6') ABOVE THE CULVERT ENTRANCE.
 - O. APPLY SEED AND FERTILIZER TO SURFACE CONDITIONS WHICH WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEED TO EVEN THE SURFACE AND LOOSEN THE SOIL.
 - P. SOW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
 - Q. ENSURE GROWTH OF SEEDDED AND LANDSCAPED AREAS, BY WATERING, UP TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK THE BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.

SECTION 02830 - FENCING AND GATE(S)

PART I - GENERAL

1. WORK INCLUDED
SEE PLAN FOR SITE AND LOCATION OF FENCE AND GATE(S).
2. QUALITY ASSURANCE
ALL STEEL MATERIALS UTILIZED IN CONJUNCTION WITH THIS SPECIFICATION WILL BE GALVANIZED OR STAINLESS STEEL. WEIGHT OF ZINC COATING ON THE FABRIC SHALL NOT BE LESS THAN 12 OUNCES PER SQUARE FOOT OF MATERIAL COVERED. POSTS SHALL BE HOT-DIPPED IN GRADE 'E' ZINC, 18 OUNCES PER SQUARE FOOT.
3. SEQUENCING
IF THE SITE AREA HAS BEEN BROUGHT UP TO SURFACE COURSE ELEVATION (PRIOR TO THE FENCE CONSTRUCTION), FENCE POST EXCAVATION SPOILS MUST BE CONTROLLED TO PRECLUDE CONTAMINATION OF SAID SURFACE COURSE.

4. SUBMITTALS
- A. MANUFACTURER'S DESCRIPTIVE LITERATURE.
- B. CERTIFICATE OR STATEMENT OF COMPLIANCE WITH THE SPECIFICATIONS.

PART 2 - PRODUCTS

1. FENCE MATERIAL
- A. ALL FABRIC WIRE, RAILS, HARDWARE, AND OTHER STEEL MATERIALS SHALL BE HOT-DIPPED GALVANIZED.
 - B. FABRIC SHALL BE SEVEN-FOOT (7') HIGH OR TO MATCH EXISTING FENCE TWO-INCH CHAIN LINK MESH OF NO. 9 GAUGE (0.148") WIRE. THE FABRIC SHALL HAVE A KNUCKLED FINISH FOR THE TOP SELVAGES. FABRIC SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A-392 CLASS 1.
 - C. BARBED WIRE SHALL BE DOUBLE-STRAND, 12-1/2 GAUGE TWISTED WIRE, WITH 14-GAUGE, 4-POINT ROUND BARBS SPACED ON FIVE-INCH CENTERS.
 - D. ALL POSTS SHALL BE SCHEDULE - 40 MECHANICAL SERVICE PIPE AND SHALL BE TYPE 1 ASTM A-128 AND OF THE FOLLOWING DIAMETER

LINE	2" SCHEDULE 40 (2 3/8" O.D.)
CORNER	3" SCHEDULE 40 (3 1/2" O.D.)
GATE	3" SCHEDULE 40 (3 1/2" O.D.)
 - E. GATE POSTS SHALL BE EXTENDED 12 INCHES, INCLUDING DOME CAP, TO PROVIDE FOR ATTACHMENT OF BARBED WIRE.
 - F. ALL TOP AND BRACE RAILS SHALL BE 1/2" DIAMETER SCHEDULE - 40 MECHANICAL-SERVICE PIPE.
 - G. GATE FRAMES AND BRACES SHALL BE 1.90 INCH DIAMETER SCHEDULE 40 MECHANICAL-SERVICE PIPE. FRAMES SHALL HAVE WELDED CORNERS.
 - H. GATE FRAMES SHALL HAVE A FULL-HEIGHT VERTICAL BRACE, AND A FULL-WIDTH HORIZONTAL BRACE, SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
 - I. GATE HINGES SHALL BE MERCHANTS METAL MODEL 64386 HINGE ADAPTER WITH MODEL 6409, 188-DEGREE ATTACHMENT.
 - J. THE GUIDE (LATCH ASSEMBLY) SHALL BE HEAVY INDUSTRIAL DOUBLE GATE LATCH. SEE DETAIL.
 - K. LATCHES AND STOPS SHALL BE PROVIDED FOR ALL GATES.
 - L. PLUNGER ROD COMPLETE WITH RECEPTOR TO BE PROVIDED AT THE INACTIVE LEAF OF ALL DOUBLE GATE INSTALLATIONS.
 - M. ALL STOPS SHALL HAVE KEEPERS CAPABLE OF HOLDING THE GATE LEAF IN THE OPEN POSITION.
 - N. A NO. 7 GAUGE ZINC COATED TENSION WIRE SHALL BE USED AT THE BOTTOM OF THE FABRIC, TERMINATED WITH BAND CLIPS AT CORNER AND GATE POSTS.
 - O. A SIX-INCH BY 1/2-INCH DIAMETER EYEBOLT TO HOLD TENSION WIRE SHALL BE PLACED AT LINE POSTS.
 - P. STRETCHER BARS SHALL BE 3/16-INCH BY 3/4-INCH OR HAVE EQUIVALENT CROSS-SECTIONAL AREA.
 - Q. ALL CORNER GATE AND PANELS SHALL HAVE A 3/8-INCH TRUSS ROD WITH TURNBUCKLES.
 - R. ALL POSTS EXCEPT GATE POSTS SHALL HAVE A COMBINATION CAP AND BARBED WIRE SUPPORTING ARM. GATE POSTS SHALL HAVE A DOME CAP.
 - S. OTHER HARDWARE INCLUDES BUT MAY NOT BE LIMITED TO TIE CLIPS, BAND CLIPS AND TENSION BAND CLIPS.
 - T. BARBED WIRE GATE GUARDS SHALL BE FITTED WITH DOME CAPS.
 - U. BARBED WIRE SUPPORT ARMS SHALL BE PRESSED STEEL COMPLETE WITH SET BOLT AND LOCK WIRE IN THE ARM.
 - V. ALL CAPS SHALL BE MALLEABLE IRON, DOME OR ACORN SHAPED AS REQUIRED BY PIPE SIZE.
 - W. WHERE THE USE OF CONCERTINA HAS BEEN SPECIFIED, 24-INCH DIAMETERS COIL-BARBED TAPE, STAINLESS STEEL, CYCLONE FENCE MODEL GSP TO TYPE III SHALL BE FURNISHED. IT SHALL BE SUPPORTED ABOVE THE TOP RAIL BY USE OF SIX(6) WIRE BARBED WIRE ARMS POSITIONED ATOP EACH LINE/CORNER POST.

PART 3 - EXECUTION

1. INSPECTION
TO CONFIRM PROPER DEPTH AND DIAMETER OF POST HOLE EXCAVATIONS. ALL POST HOLES WILL BE EXCAVATED AS PER CONSTRUCTION DOCUMENTS.
2. INSTALLATION
- A. FOUNDATIONS SHALL HAVE A MINIMUM SIX INCH (6") CONCRETE COVER UNDER POST.
- B. ALL FENCE POSTS SHALL BE VERTICALLY PLUMB ; ONE QUARTER INCH (1/4")
- C. AT CORNER POSTS, GATE POSTS, AND SIDES OF GATE FRAME, FABRIC SHALL BE ATTACHED WITH STRETCHER AND TENSION BAND-CLIPS AT FIFTEEN(15) INCH INTERVALS.
- D. AT LINE POSTS, FABRIC SHALL BE ATTACHED WITH BAND-CLIPS AT FIFTEEN INCH (15") INTERVALS.
- E. FABRIC SHALL BE ATTACHED TO BRACE RAILS, TENSION WIRE AND TRUSS RODS WITH TIE-CLIPS AT TWO FOOT (2') INTERVALS.
- F. A MAXIMUM GAP OF ONE INCH WILL BE PERMITTED BETWEEN THE CHAIN LINE FABRIC AND THE FINAL GRADE.
- G. GATE SHALL BE INSTALLED SO LOCKS ARE ACCESSIBLE FROM BOTH SIDES.
- H. GATE HINGE BOLTS SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT UNAUTHORIZED REMOVAL.
- I. CONCRETE TO BE A MINIMUM OF 4,000 PSI AT 7 DAYS. CEMENT SHALL EXCEED ASTM C150, TYPE IIIA.
3. PROTECTION
- UPON COMPLETION OF ERECTION, INSPECT FENCE MATERIAL AND PAINT FIELD CUTS OR GALVANIZING BREAKS WITH ZINC-BASED PAINT, COLOR TO MATCH THE GALVANIZED METAL.
- APPLICABLE STANDARDS
- ASTM-A120 SPECIFICATION FOR PIPE, STEEL BLACK AND HOT-DIPPED ZINC COATED (GALVANIZED) WELDED AND SEAMLESS, FOR ORDINARY USES.
- ASTM-A123 ZINC (HOT-DIP GALVANIZED) COATING ON IRON AND STEEL PRODUCTS.
- ASTM-A153 STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE.
- ASTM-A392 SPECIFICATION FOR ZINC-COATED STEEL CHAIN LINK FENCE FABRIC.
- ASTM-A491 SPECIFICATION FOR ALUMINUM-COATED STEEL CHAIN LINK FENCE FABRIC
- ASTM-A525 STANDARD SPECIFICATION FOR STEEL SHEET ZINC COATED (GALVANIZED) BY THE HOT-DIPPED PROCESS.

ASTM-A570 SPECIFICATION FOR HOT-ROLLED CARBON STEEL SHEET AND STRIP.
STRUCTURAL QUALITY.

ASTM-A535 SPECIFICATION FOR ALUMINUM COATED STEEL BARBED WIRE.

FEDERAL SPECIFICATION RR-F-191- FENCING, WIRE AND POST METAL (AND GATES, CHAIN LINK FENCE FABRIC, AND ACCESSORIES)

DIVISION 3: CONCRETE

SECTION 03000 - BASIC CONCRETE MATERIALS AND METHODS

PART I - GENERAL

1. WORK INCLUDED
FORMWORK, REINFORCEMENT, ACCESSORIES, CAST-IN-PLACE CONCRETE, FINISHING, AND CURING.
2. INSPECTIONS
 - A. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING BUILDING DEPARTMENT INSPECTIONS REQUIRED FOR HIS SCOPE OF WORK.
 - B. ALL REINFORCING STEEL SHALL BE INSPECTED AND APPROVED BY THE LESSEE'S CONSTRUCTION MANAGER PRIOR TO PLACEMENT OF CONCRETE.
 - C. THE LESSEE'S CONSTRUCTION MANAGER SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS.
3. QUALITY ASSURANCE
 - A. CONSTRUCT AND ERECT CONCRETE FORMWORK IN ACCORDANCE WITH ACI 301 AND ACI 318.
 - B. PERFORM CONCRETE REINFORCING WORK IN ACCORDANCE WITH ACI 301, ACI 318, AND ASTM A184.
 - C. PERFORM CAST-IN-PLACE CONCRETE WORK IN ACCORDANCE WITH ACI 301, ACI 318, AND ACI 117-90.
 - D. OPEN FOUNDATION TRENCHES SHALL BE INSPECTED BY MES PRIOR TO CONCRETE INSTALLATION.
4. SUBMITTALS
SUBMIT CONCRETE MIX AND REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL BY LESSEE CONSTRUCTION MANAGER/ENGINEER. THE SHOP DRAWINGS SHALL BE SUBMITTED IN THE FORM OF TWO (2) CONCRETE MIX DESIGN INFORMATION SHEETS AND TWO (2) BLUELINE DRAWINGS FOR REINFORCING STEEL.

PART 2 - PRODUCTS

1. REINFORCEMENT MATERIALS
 - A. REINFORCEMENT STEEL, ASTM A615, 60 ksi YIELD GRADE, DEFORMED BILLET STEEL BARS, PLAIN FINISH.
 - B. WELDED STEEL WIRE FABRIC ASTM A185 PLAIN TYPE, IN FLAT SHEETS, PLAIN FINISH.
 - C. CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS. SIZED AND SHAPED FOR SUPPORTS OF REINFORCING.
 - D. FABRICATE CONCRETE REINFORCING IN ACCORDANCE WITH ACI 315, ACI 318, ASTM A184
2. CONCRETE MATERIALS
 - A. CEMENT: ASTM C150, PORTLAND TYPE
 - B. FINE AND COURSE AGGREGATES: ASTM C33 -- MAXIMUM SIZE OF CONCRETE AGGREGATE SHALL NOT EXCEED : ONE INCH (1") SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED OR ONE-THIRD (1/3) CLEAR DISTANCE BETWEEN OR BETWEEN REINFORCING.
 - C. WATER: CLEAN AND NOT DETRIMENTAL TO CONCRETE
 - D. AIR ENTRAINING ADMIXTURE: ASTM C260
 - E. BONDING AGENT: LATEX EMULSION FOR BONDING NEW TO OLD CONCRETE AS MANUFACTURED BY DAYTON SUPERIOR.
 - F. NON-SHRINK GROUT: PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICISING AGENTS.
3. CONCRETE MIX
 - A. CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE A.C.I. REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
 - B. MIX AND DELIVER CONCRETE IN ACCORDANCE WITH ASTM C94, ALT. 3.
 - C. PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT THE SITE. PROVIDE CONCRETE AS FOLLOWS:
 1. COMPRESSIVE STRENGTH: 4000 psi AT 7 DAYS.
SEE SHEET 5-1 FOR CAISSON CONCRETE COMPRESSIVE STRENGTH
 2. SLUMP: 3 INCHES

PART 3 - EXECUTION

1. INSERTS, EMBEDDED COMPONENTS AND OPENINGS
 - A. THE CONTRACTOR SHALL COORDINATE AND CROSS-CHECK ARCHITECTURAL, BUILDING & ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, AND OTHER ITEMS RELATED TO CONCRETE WORK AND ASSUME FULL RESPONSIBILITY FOR THE PROPER LOCATION BEFORE PLACING CONCRETE.
 - B. PROVIDE FORMED OPENINGS WHERE REQUIRED FOR WORK TO BE EMBEDDED IN AND PASSING THROUGH CONCRETE MEMBERS.
 - C. COORDINATE WORK OF OTHER SECTIONS IN FORMING AND SETTING OPENING, SLOTS, RECESSES, CHASES, SLEEVES, BOLTS, ANCHORS, AND OTHER INSERTS.
 - D. INSTALL CONCRETE ACCESSORIES STRAIGHT, LEVEL AND PLUMB.
2. REINFORCEMENT PLACEMENT
 - A. PLACE REINFORCEMENT, SUPPORTED AND SECURED AGAINST DISPLACEMENT.
 - B. ENSURE REINFORCING IS CLEAN, FREE OF LOOSE SCALE, DIRT, OR OTHER FOREIGN COATINGS.
 - C. WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
 - D. MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE THREE INCHES (3") UNLESS OTHERWISE NOTED.
 - E. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL NOT EXCEED THREE INCHES (3") NOR BE LESS THAN TWO INCHES (2")
3. PLACING CONCRETE
 - A. VIBRATE ALL CONCRETE.
 - B. ALL CONCRETE WORK SHALL ADHERE TO THE LATEST A.C.I. STANDARDS FOR WINTER POURING AND CURING PROCEDURES IF SEASONAL CONDITIONS APPLY
4. CURING
 - A. AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING.
 - B. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR A PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
5. PROVIDE HAND RUBBED SMOOTH FINISH TO ALL EXPOSED VERTICAL FORMED CONCRETE SURFACES.
6. FIELD QUALITY CONTROL
 - A. SUBMIT THREE (3) CONCRETE TEST CYLINDERS - TAKEN FOR EVERY 15 CUBIC YARD OR LESS. SUBMIT CONCRETE TESTS TO THE PROJECT MANAGER IN ACCORDANCE WITH ASTM , C-31 AND C-39.
 - B. SUBMIT ONE (1) ADDITIONAL TEST CYLINDER - TAKEN DURING COLD WEATHER POURS, AND CURED ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE IT REPRESENTS.
 - C. SUBMIT ONE (1) SLUMP TEST - TAKEN FOR EACH SET OF TEST CYLINDERS TAKEN.
7. DEFECTIVE CONCRETE
MODIFY OR REPLACE CONCRETE NOT CONFORMING TO REQUIRED LINES, DETAILS OR ELEVATIONS AT COST OF GC, AS DIRECTED BY ARCHITECT/ENGINEER.

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DRAWN BY:	LR8
CHECKED BY:	TAZ
DATE:	11/19/14
PROJECT #:	33-1607

SHEET TITLE
SPECIFICATIONS

SHEET NUMBER

SP-1

DIVISION 5: METALS

SECTION 05000 - METALS

PART 1 - GENERAL

- SECTION INCLUDES:
STRUCTURAL STEEL FRAMING MEMBERS, BASE PLATES, PLATES, BARS AND GROUTING UNDER BASE PLATES.
- SUBMITTALS:
SHOP DRAWINGS: INDICATE SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, CONNECTIONS, CAMBERS, LOADS, AND WELDED SECTIONS.
- QUALITY ASSURANCE
 - FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
 - PERFORM DESIGN UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE.

PART 2 - PRODUCTS

- MATERIALS:
 - STRUCTURAL STEEL MEMBERS: ASTM A572, GRADE 50
 - STRUCTURAL TUBING: ASTM A500, GRADE B
 - PIPE: ASTM A53, TYPE E OR S, GRADE B
 - BOLTS, NUTS, AND WASHERS: ASTM A325
 - ANCHOR BOLTS: ASTM A307
 - WELDING MATERIALS: AWS D1.1, TYPE REQUIRED FOR MATERIALS BEING WELDED
 - GROUT: NON-SHRINK TYPE, PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7000 psi AT 28 DAYS.
 - SHOP AND TOUCH-UP PRIMER: SSPC 15, TYPE 1, RED OXIDE
 - TOUCH-UP PRIMER FOR GALV. SURFACES: ZINC RICH TYPE
- FABRICATION:
CONTINUOUSLY SEAL JOINTED MEMBERS BY CONTINUOUS WELDS. GRIND EXPOSED WELDS SMOOTH.
- FINISH:
 - PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCE WITH SSPC SP-1 TO SP-10 PROCEDURES.
 - STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED.

PART 3 - EXECUTION

- EXAMINATION AND PREPARATION:
VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE.
- ERECTION:
 - ALLOW FOR ERECTION LOADS. PROVIDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRIDGING AND BRACING.
 - FIELD WELD COMPONENTS INDICATED ON SHOP DRAWINGS.
 - DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER.
 - AFTER ERECTION, TOUCH-UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED OR GALVANIZED WITH TOUCH-UP PRIMERS AS SPECIFIED UNDER SECTION 05000-METALS, PART 2 - PRODUCTS, H & I. SURFACES TO BE IN CONTACT WITH CONCRETE NOT INCLUDED.
- FIELD QUALITY CONTROL:
FIELD INSPECTION OF MEMBERS, CONNECTIONS, WELDS AND TORQUING.

DIVISION 16: ELECTRICAL

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

- CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND STARTING THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ANY DISCREPANCIES OR CONFLICTING INFORMATION.
- ELECTRICAL PLANS, DETAILS AND DIAGRAMS ARE DIAGRAMMATIC ONLY. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT WITH OWNER PRIOR TO INSTALLATION.
- EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, JUNCTION BOX, SWITCH BOX, ETC. THE TYPE OF TAGGING METHODS SHALL BE IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.).
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD WORKING CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED "I" WHERE APPLICABLE. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NBFU AND "UL" LISTED.
- ALL CONDUIT SHALL HAVE A PULL CORD.
- PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
- ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY UBC, NEC AND ALL APPLICABLE CODES.
- PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
- PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS. WEATHERPROOF RECEPTACLES SHALL HAVE SIERRA #WPD-3 LIFT COVERPLATES.

SECTION 16400 - SERVICE AND DISTRIBUTION

- WIRE AND CABLE CONDUCTORS SHALL BE COPPER, 600V, TYPE THHN OR THWN, WITH A MIN. SIZE OF #12 AWG, COLOR CODED. ALL RECTIFIER DROPS SHALL BE STRANDED TO ACCEPT CRIMP CONNECTORS.
- ALL CHEMICAL GROUND RODS SHALL BE "UL" APPROVED.
- METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE AS NOTED ON THE DRAWINGS. MANUFACTURED BY MILBANK OR APPROVED EQUAL, AND SHALL BE UTILITY COMPANY APPROVED.
- CONDUIT:
 - RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH GALVANIZED ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
 - ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTING SHALL BE GLAND RING COMPRESSION TYPE.
 - FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE. ALL FLEXIBLE CONDUITS SHALL HAVE FULL LENGTH GROUND WIRE.
 - ALL UNDERGROUND CONDUIT SHALL BE AS NOTED ON THE DRAWINGS AT A MINIMUM DEPTH OF 42" BELOW GRADE. IT IS REQUIRED AND WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO NOTIFY J.U.L.I.E. AT 1-800-892-0123 OR OTHER SUCH NOTIFYING AGENCY FORTY-EIGHT (48) HOURS PRIOR TO DIGGING.
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS ARE TO BE PAID BY THE CONTRACTOR.
- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS WITH WHITE ON BLUE BACKGROUND LETTERING (MINIMUM LETTER HEIGHT SHALL BE ONE FORTH INCH (1/4"). NAMEPLATES SHALL BE FASTENED WITH STAINLESS STEEL SCREWS, NOT ADHESIVE.
- UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS BY AN INDEPENDENT TESTING SERVICE ENGAGED BY THE CONTRACTOR SHALL BE SUBMITTED FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
- GROUNDING ELECTRODE SYSTEM
 - PREPARATION
 - SURFACE PREPARATION:
ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT. NO WASHERS ARE ALLOWED BETWEEN THE ITEMS BEING GROUNDED. ALL CONNECTIONS ARE TO HAVE A NON-OXIDIZING AGENT APPLIED PRIOR TO INSTALLATION.
 - GROUND BAR PREPARATION:
ALL COPPER GROUND BARS SHALL BE CLEANED, POLISHED AND A NON-OXIDIZING AGENT APPLIED. NO FINGERPRINTS OR DISCOLORED COPPER WILL BE PERMITTED.
 - SLEEVES:
ALL GROUNDING CONDUCTORS SHALL RUN THROUGH PVC SLEEVES WHEREVER CONDUCTORS RUN THROUGH WALLS, FLOORS OR CEILINGS. IF CONDUCTORS MUST RUN THROUGH EMT, BOTH ENDS OF CONDUIT SHALL BE GROUNDED. SEAL BOTH ENDS OF CONDUIT WITH SILICONE CAULK.
 - GROUND BARS
 - ALL GROUND BARS SHALL BE ONE FORTH INCH (1/4") THICK TINNED COPPER PLATE AND OF SIZE INDICATED ON DRAWINGS.
 - ALL CONNECTIONS TO THE GROUND BAR SHALL OBSERVE THE FOLLOWING SEQUENCE:
 - BOLT-HEAD
 - 2-HOLE LUG
 - TINNED COPPER BUSS BAR
 - STAR WASHER
 - NUT
 - EXTERNAL CONNECTIONS
 - ALL BURIED GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, TEE'S, CROSSES, ETC. ALL CABLE TO GROUND RODS, GROUND ROD SPLICES AND LIGHTNING PROTECTION SYSTEMS ARE TO BE AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE BY "CADWELD" AND INSTALLED PER MANUFACTURER'S RECOMMENDED PROCEDURES.
 - ALL ABOVE GRADE GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE CRIMP TYPE (COMPRESSION) CONNECTIONS (EXCEPT FOR THE ACEG AND GROUND ROD) MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED. ALL CABLE TO CABLE CONNECTIONS SHALL BE HIGH PRESSURE DOUBLE CRIMP TYPE CONNECTIONS. CONNECTIONS TO STRUCTURAL STEEL SHALL BE EXOTHERMIC WELDS.
 - GROUND RODS
ALL GROUND RODS SHALL BE 5/8-INCH DIAMETER X 10'-0" LONG "COPPERWELD" OR APPROVED EQUAL OF THE NUMBER AND LOCATIONS INDICATED. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH.
 - GROUND CONDUCTORS
ALL GROUND CONDUCTORS SHALL BE STANDARD TINNED SOLID BARE COPPER ANNEALED, AND OF SIZE INDICATED ON DRAWINGS UNLESS NOTED OTHERWISE.
 - LUGS
 - LUGS SHALL BE 2-HOLE, LONG BARREL, STRAND COPPER UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. LUGS SHALL BE THOMAS AND BETTS SERIES #548 _BE OR EQUIVALENT
 - 535 MCM DLO 54880BE
 - 262 MCM DLO 54872BE
 - #1/0 DLO 54862BE
 - #4/0 THWN AND BARE 54866BE
 - #2/0 THWN 54862BE
 - #2 THWN 54207BE
 - #6 DLO 54205BE
 - WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE, IT SHALL BE DONE GRADUALLY. THE CURVATURE OF THE TURN SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING CHART:

GROUNDING CONDUCTOR SIZE	MINIMUM BENDING RADIUS TO INSIDE EDGE
NO. 6 AWG TO NO. 4 AWG	6 INCHES
NO. 2 AWG TO NO. 1/0 AWG	8 INCHES
NO. 2/0 AWG TO 4/0 MCM	12 INCHES
250 MCM TO 750 MCM	24 INCHES

G. GROUND RING

- THE EXTERNAL GROUND RING ENCIRCLING THE TOWER (IF APPLICABLE) AND BETWEEN THE EQUIPMENT SHELTER PLATFORM ANCHORS SHALL BE MINIMUM NO. 2 A.W.G. SOLID TINNED BARE COPPER CONDUCTOR IN DIRECT CONTACT WITH THE EARTH AT THE DEPTH INDICATED ON THE DRAWINGS. CONDUCTOR BENDS SHALL HAVE A MINIMUM BENDING RADIUS OF EIGHT INCHES (8").
- ALL EXTERNAL GROUND RINGS ARE TO BE JOINED TOGETHER AND ALL CONNECTIONS MUST BE CADWELDED. NO LUGS OR CLAMPS WILL BE ACCEPTED.

H. FENCE/GATE

- GROUND EACH GATE POST, CORNER POST AND GATE AS INDICATED ON DRAWING GROUND CONNECTIONS TO FENCE POSTS AND ALL OTHER CONNECTIONS FOR THE GROUND GRID SYSTEM SHALL BE MADE BY EXOTHERMIC WELD PROCESS, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES, AND SPRAYED WITH COLD-GALVANIZED PAINT.

9. I.E.E.E. FALL POTENTIAL TESTS

A. FOR RAW LAND SITE

- GROUND TESTS SHALL BE PERFORMED AS INDICATED ON DRAWINGS. A BIDDLE GROUND OHMMER OR THE METHOD OF USING TWO AUXILIARY GROUND RODS (AS DESCRIBED IN I.E.E.E. STANDARDS NO. 81-1983, PART 1) MAY BE USED. THE I.E.E.E. METHOD REQUIRES THE USE OF AN A.C. TEST CURRENT. THE AUXILIARY TEST RODS MUST BE SUFFICIENTLY FAR AWAY FROM THE ROD UNDER TEST SO THAT THE REGIONS IN WHICH THEIR RESISTANCE IS LOCALIZED DO NOT OVERLAP. THE TEST POINT WILL BE THE GROUND ROD AND WILL CONSIST OF THE THREE POINT FALL OF POTENTIAL MEGGER TEST METHOD, USING THE BIDDLE NULL-BALANCE EARTH TESTER (MEGGER #250220-2 OR EQUIVALENT)
- CONTRACTOR TO CONDUCT GROUND RESISTANCE TEST IN THE FORMAT AS FOLLOWS:

B. EQUIPMENT PAD

- FIRST TEST - SHALL BE WITH FOUR GROUND RODS INSTALLED, ONE AT EACH CORNER OF THE PAD BUT NOT CONNECTED TO THE MAIN GROUNDING BUS. FURNISH WIRE TO CONNECT (TEMPORARY CLAMP) ALL FOUR GROUND RODS TOGETHER TO MAKE A SYSTEM TEST AFTER EACH ROD IS INDIVIDUALLY TESTED. IF ANY INDIVIDUAL ROD TESTS 25 OHMS OR MORE, THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT THE ROD CAN BE DRIVEN DEEPER UNTIL ALL FOUR RODS HAVE A RESISTANCE OF 10 OHMS OR LESS ON A DRY DAY.
- SECOND TEST - SHALL BE WITH THE GROUND RODS CONNECTED, WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST TEN (10) DAYS. THE MAXIMUM ALLOWABLE READING IS 5 OHMS TO GROUND. IF THE RESISTANCE OF THE ENTIRE SYSTEM EXCEEDS 5 OHMS, NOTIFY THE CONTRACTOR AND OWNER'S REPRESENTATIVE SO THAT ADDITIONAL AND/OR DEEPER RODS CAN BE INSTALLED.

C. TOWER

- FIRST TEST - SHALL BE WITH THREE GROUND RODS INSTALLED (MINIMUM), EQUALLY SPACED AROUND THE TOWER FOUNDATION, BUT NOT CONNECTED TO THE SHELTER PAD EXTERNAL GROUND RING. FURNISH WIRE TO CONNECT (TEMPORARY CLAMP) ALL THREE GROUND RODS TOGETHER TO MAKE A SYSTEM TEST AFTER EACH ROD IS INDIVIDUALLY TESTED. IF ANY INDIVIDUAL ROD TESTS 25 OHMS OR MORE, NOTIFY THE CONTRACTOR AND OWNER'S REPRESENTATIVE SO THAT THE ROD CAN BE DRIVEN DEEPER UNTIL ALL THREE (3) RODS HAVE A RESISTANCE OF 10 OHMS OR LESS ON A DRY DAY.
- SECOND TEST - SHALL BE WITH THE GROUND RODS CONNECTED, WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST TEN (10) DAYS. THE MAXIMUM ALLOWABLE READING IS 5 OHMS TO GROUND. IF THE RESISTANCE OF THE ENTIRE SYSTEM EXCEEDS 5 OHMS THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT EITHER ADDITIONAL AND/OR DEEPER RODS CAN BE INSTALLED.

D. EQUIPMENT PAD AND TOWER

- AFTER THE EQUIPMENT PAD AND TOWER GROUND RESISTANCE TEST IS COMPLETED, CONTRACTOR SHALL TIE EQUIPMENT PAD EXTERNAL GROUND RING AND TOWER EXTERNAL GROUND RING TOGETHER. AFTER FIRST AND SECOND TEST ALL CONNECTIONS MUST BE MADE USING EXOTHERMIC WELD. NO LUGS OR CLAMPS WILL BE ACCEPTED.
- AFTER ALL THE EXTERNAL GROUND RINGS ARE TIED TOGETHER, COMPLETE A MEGGER CHECK OF THE GROUND SYSTEM SHOULD BE DONE. THE MAXIMUM ALLOWABLE LEADING IS 5 OHMS TO GROUND.

10. GROUNDING RESISTANCE TEST REPORT

UPON COMPLETION OF THE TESTING FOR EACH SITE, A TEST REPORT SHOWING RESISTANCE IN OHMS WITH AUXILIARY POTENTIAL ELECTRODES AT 5 FEET AND 10 FEET INTERVALS UNTIL THE AVERAGE RESISTANCE STARTS INCREASING AND ALSO NOTE THAT 10-15 PHOTOS MUST BE TAKEN TO PROOF ENTIRE EXTERNAL GROUND RING SYSTEM BEFORE BACKFILL. TWO (2) SETS OF TEST DOCUMENTS ARE OF THE INDEPENDENT TESTING SERVICE TO BE BOUND AND SUBMITTED WITHIN ONE (1) WEEK OF WORK COMPLETION.

SECTION 16503 - POLES, POSTS, AND STANDARDS (SINGLE MAST AND SELF SUPPORTING TOWERS)

1. GENERAL

- LIGHTNING ROD AND EXTENSION PIPE INCLUDING ALL APPURTENANCES, TO BE FURNISHED BY OWNER, IF REQUIRED.
- PROVIDE TEMPORARY LIGHTING FOR TOWER AS PER FAA REGULATIONS DURING CONSTRUCTION, IF REQUIRED.

C. GROUNDING:

GROUND TOWER WITH A MINIMUM OF #2 AWG TINNED SOLID BARE COPPER CONDUCTOR CADWELDED TO TOWER BASE PLATE. TWO (2) GROUNDING LEADS PER TOWER BASE PLATE.

NO EXOTHERMIC WELDS SHALL BE ATTACHED DIRECTLY TO THE MONOPOLE TOWER SHAFT.

SECTION 16745 - TELECOMMUNICATIONS WIRING COMPONENTS (COAXIAL ANTENNA CABLE)

1. GENERAL

- ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.
- CERTAIN MATERIALS AND PRODUCTS WILL BE SUPPLIED BY THE OWNER (REFER TO GENERAL CONDITIONS FOR THE LIST OF OWNER FURNISHED EQUIPMENT, MATERIALS AND SUPPLIES FOR THESE ITEMS). THE CONTRACTOR IS RESPONSIBLE FOR PICKUP AND DELIVERY OF ALL SUCH MATERIALS
- ALL OTHER MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR.

2. MATERIALS:

A. COAXIAL CABLE:

- INSTALL COAXIAL CABLE AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS WITH COAXIAL CABLES SUPPORTED AT NO MORE THAN 3'-0" O.C. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE FEET (3') IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
- ALL COAX RUN LENGTHS GREATER THAN 175 FEET SHALL BE 1-5/8". ALL COAX. RUN LENGTH BETWEEN 101 FEET AND 174 FEET SHALL BE 1-1/4". AND IN LENGTH LESS THAN OR EQUAL TO 100 FEET SHALL BE 7/8".

3. ANTENNA AND COAXIAL CABLE GROUNDING

- ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

4. COAXIAL CABLE IDENTIFICATION

- TO PROVIDE EASY IDENTIFICATION AND UNIFORM MARKING OF ANTENNA CABLE, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LOCATIONS:

- FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE ANTENNA (WHERE THE COAXIAL CABLE AND JUMPER ARE CONNECTED).
- SECOND LOCATION IS INSIDE THE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT.

5. TESTING

LESSEE SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM THE COAXIAL SWEEP TEST & REPORT. THE CONTRACTOR IS TO PROVIDE ONE CLIMBER / QUALIFIED PERSONNEL TO ASSIST IN ANY REPAIRS AND WEATHERPROOFING ONCE THE TEST IS COMPLETE. THE CONTRACTOR IS TO PROVIDE LESSEE WITH A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST.

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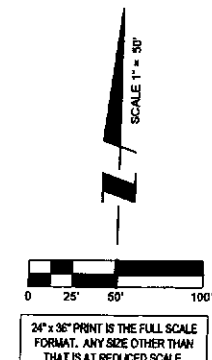
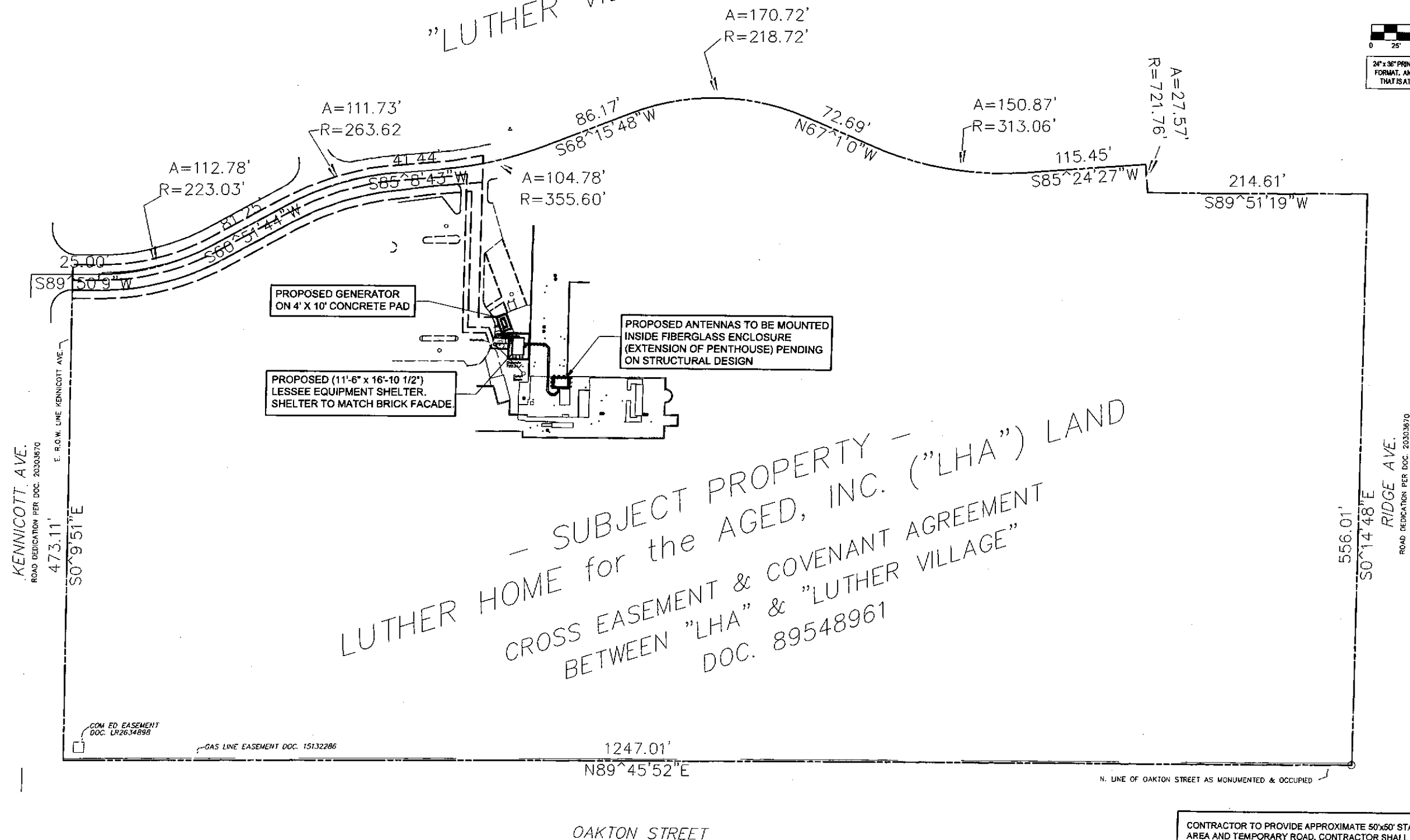
YALE &
OAKTON

800 W. OAKTON ST.
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HEIGHTS, IL 60004

DRAWN BY:	LRB
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DATE:	11/19/14
PROJECT #:	33-1607

SHEET TITLE
SPECIFICATIONS
SHEET NUMBER
SP-2

"LUTHER VILLAGE" LAND



SUBJECT PROPERTY -
LUTHER HOME for the AGED, INC. ("LHA") LAND
CROSS EASEMENT & COVENANT AGREEMENT
BETWEEN "LHA" & "LUTHER VILLAGE"
DOC. 89548961

OAKTON STREET

1 LOCATION PLAN
SCALE: 1" = 50'

CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT. CONTRACTOR SHALL PHOTOGRAPH AND VIDEOTAPE EXISTING PAVEMENT PRIOR TO CONSTRUCTION. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPLACED TO EXISTING OR BETTER CONDITION AT NO ADDITIONAL COST.

THE CONTRACTOR WILL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL INVESTIGATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLANS AND SPECIFICATIONS AND DISCLOSED BY THE SOIL STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING, AS REQUIRED ABOVE, OF SUCH DIFFERING SUBSURFACE CONDITIONS.

CONTRACTOR TO PROVIDE APPROXIMATE 50'x50' STAGING AREA AND TEMPORARY ROAD. CONTRACTOR SHALL COORDINATE WITH ANTENNA CONTRACTOR, A STAGING AREA AND TEMPORARY ROAD THAT IS ACCEPTABLE TO THE OWNER. STAGING AREA AND TEMPORARY ROAD SHALL BE RESTORED TO EXISTING CONDITIONS AS NECESSARY UPON COMPLETION OF THE PROJECT.

BEFORE AND DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL AS NECESSARY IN THE FORM OF SILT FENCES FOR THE SITE AND BALES AROUND ANY EXISTING MANHOLES, INLETS, OR CATCHBASINS SUSCEPTIBLE TO EROSION. EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED TO ENSURE PROPER FUNCTION. EROSION CONTROL SHALL BE REMOVED UPON COMPLETION OF WORK.

CHICAGO SMSA
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d/b/a VERIZON WIRELESS

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LOCATION PLAN

SHEET NUMBER

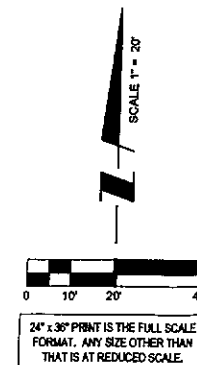
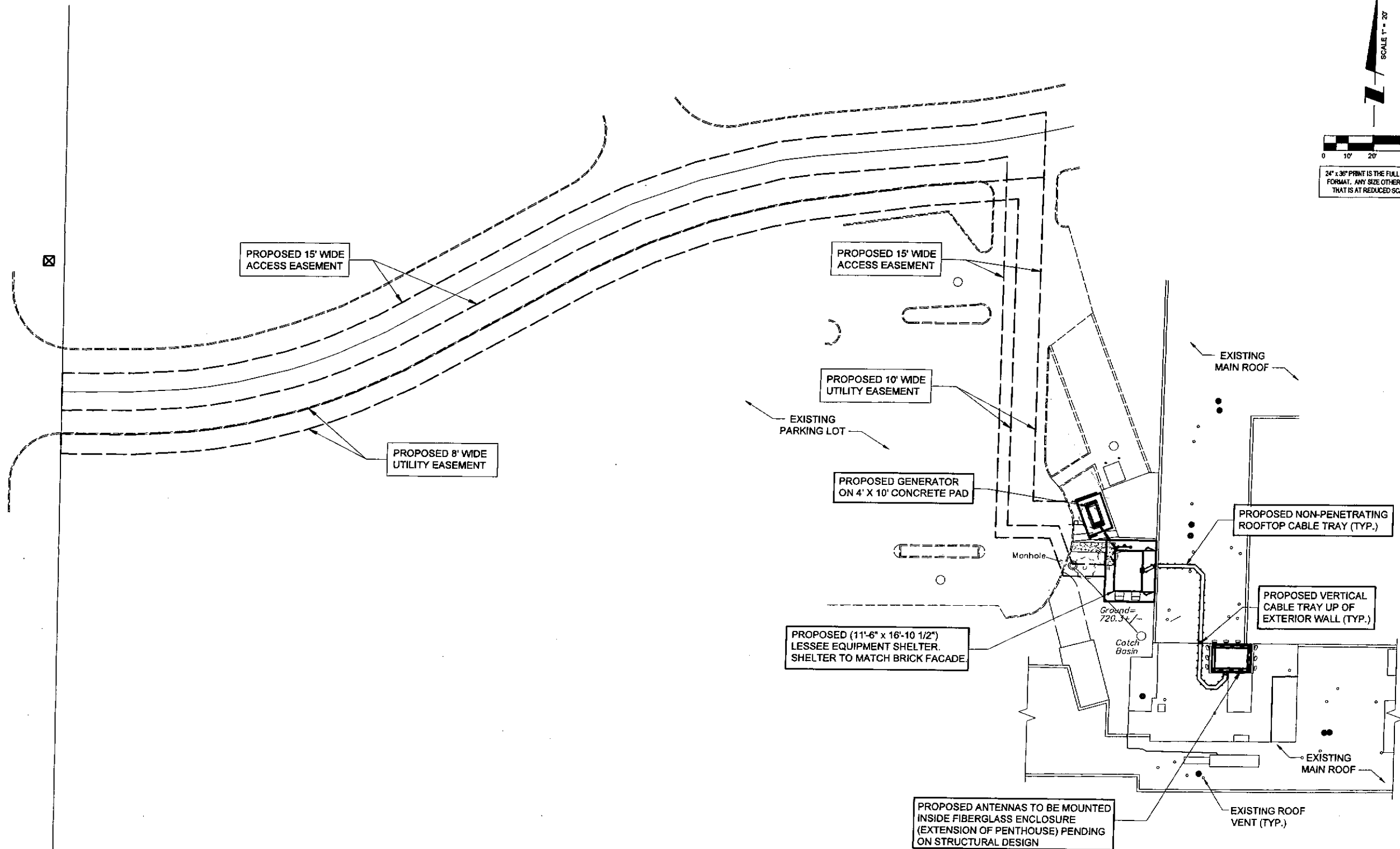
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KENNICOTT AVE.



1 LOCATION PLAN
SCALE: 1" = 20'

CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT. CONTRACTOR SHALL PHOTOGRAPH AND VIDEOTAPE EXISTING PAVEMENT PRIOR TO CONSTRUCTION. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPLACED TO EXISTING OR BETTER CONDITION AT NO ADDITIONAL COST.

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LOC. #282639

YALE & OAKTON

800 W. OAKTON ST.
ARLINGTON HEIGHTS, IL 60004

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PROJECT #:	33-1607

SHEET TITLE

LOCATION PLAN

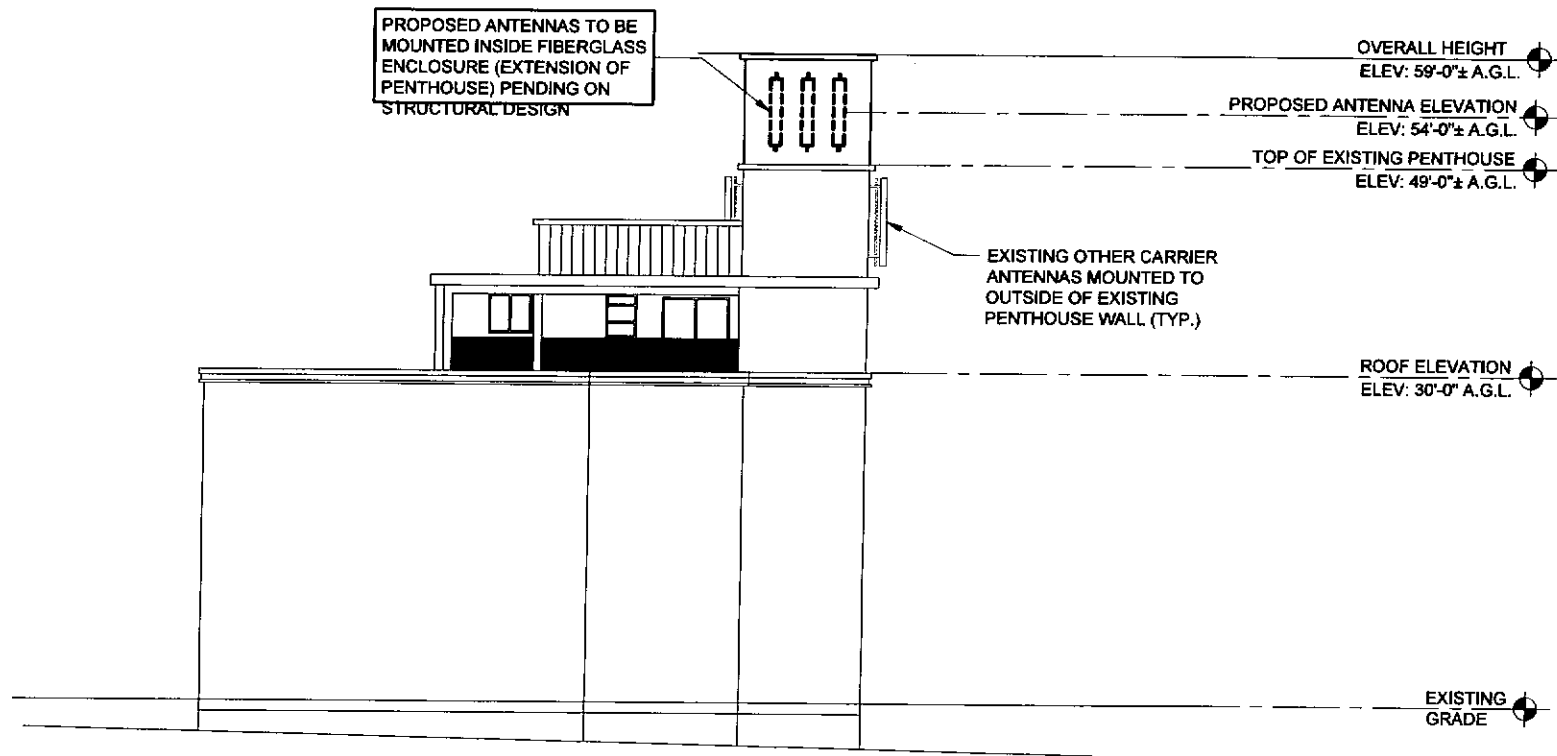
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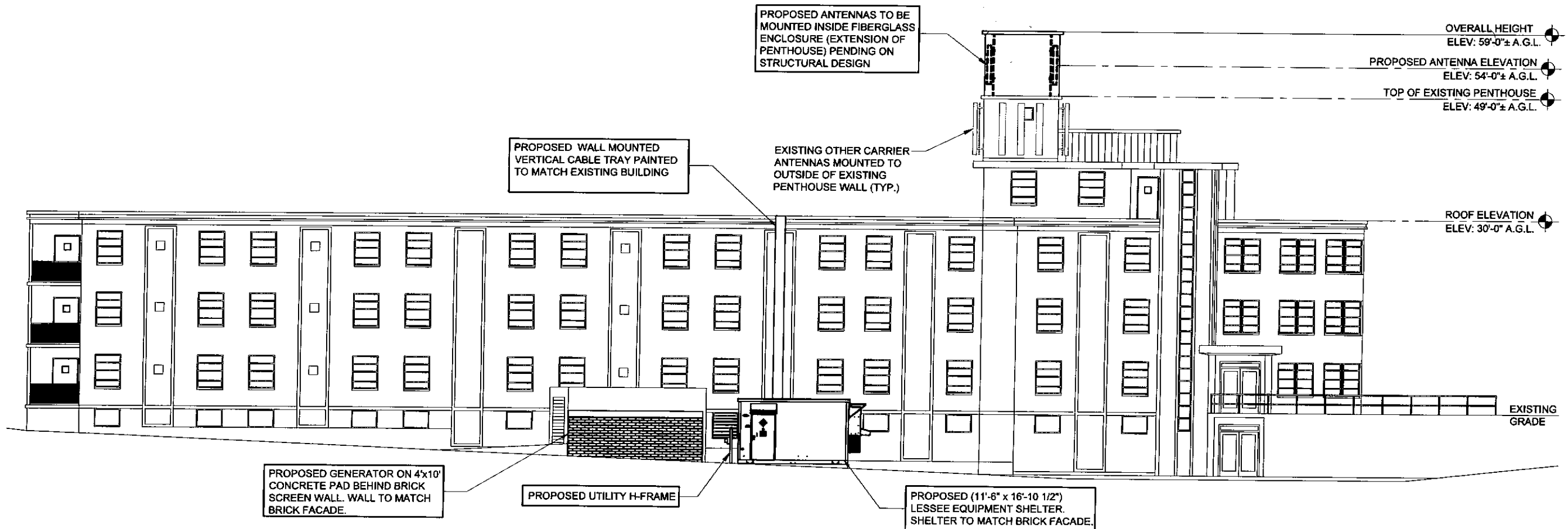
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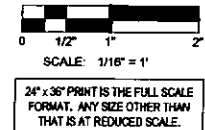
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1 EAST ELEVATION
SCALE: 1/8" = 1'-0"



2 WEST ELEVATION
SCALE: 1/8" = 1'-0"



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LOC. #282639

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DATE: 11/19/14
PROJECT #: 33-1607

SHEET TITLE
SITE ELEVATION

SHEET NUMBER
ANT-1

Cell Name	Yale & Oakton			Cell ID	3266
Location Number	282639	RF Engineer	Sabhi Siddiqui	Address	1220 Village Dr Luther Lane
Date of Request	8/14/2014	Market	Elgin-1	City/State/Zip	Arlington Heights, IL, 60004

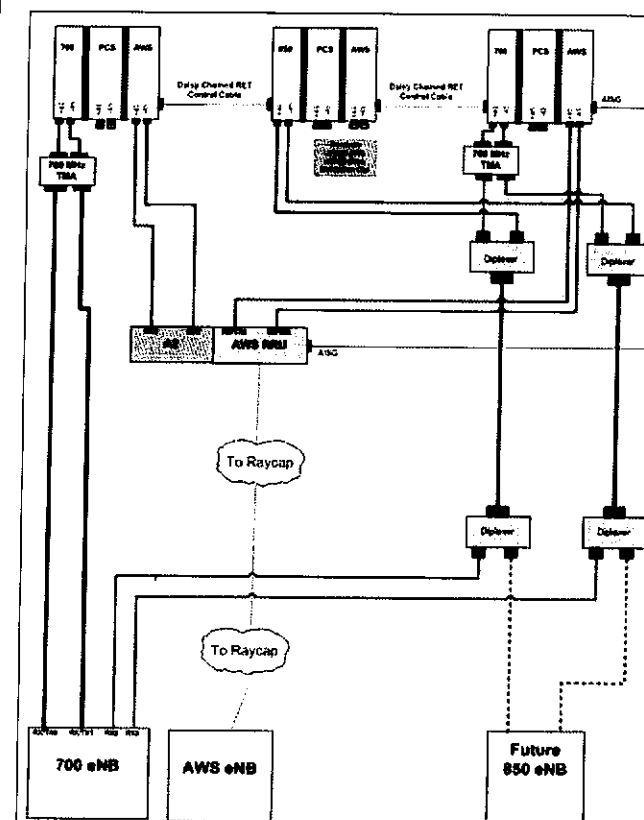
PPC CONNECTORS ONLY

ESTIMATED MAIN LINE HYBRID LENGTH

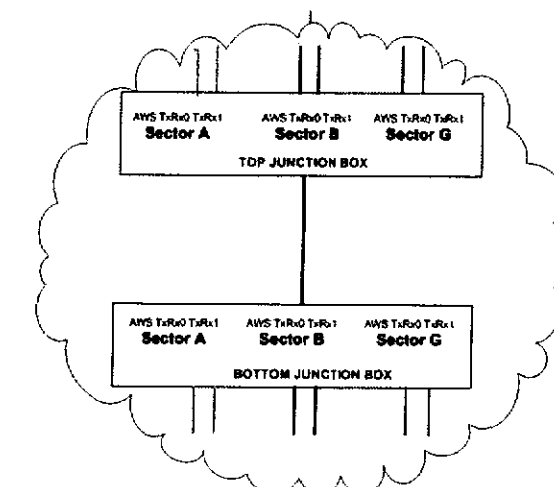
ANTENNA CENTERLINE (±)	CABLE TRAY LENGTH (±)	SHELTER (±)	TOTAL (±)
54'	100'	15'	169'

Proposed						
Passive Components	Location	Manufacturer	Component Model		Count	Action
	Top (Platform)					
	Top (Platform)					
	Top (Platform)	Westell	AWC-TTMA-700C-VG		6	Install
	Top (Platform)	Ericsson	RRUS 12 - AWS		3	Install
	Top (Platform)	Ericsson	A2		3	Install
	Top (Platform)	Raycap	RCMDC-3315-PF-48		1	Install
	Top (Platform)	ANDREW	CBC78-DF-8-DCB		6	Install
	Top (Platform)					
	Top (Platform)					
	Bottom (Shelter)	Raycap	RCMDC-3315-PF-48		1	Install
	Bottom (Shelter)	ANDREW	CBC78-DF-8-DCB		6	Install
	Bottom (Shelter)					
Coax	Sector	Coax Manufacturer	Type	Size	Count	Action
	Alpha	ANDREW		1 5/8	4	Install
	Beta	ANDREW		1 5/8	4	Install
	Gamma	ANDREW		1 5/8	4	Install
	AWS	Andrew	HFT1206-24S28-XXX	1 5/8	1	Install

2 COMBINER CABLE DATA INFORMATION
N.T.S.



3 CABLE DIAGRAM
N.T.S.



2 CABLE DIAGRAM @ JUNCTION BOX
N.T.S.

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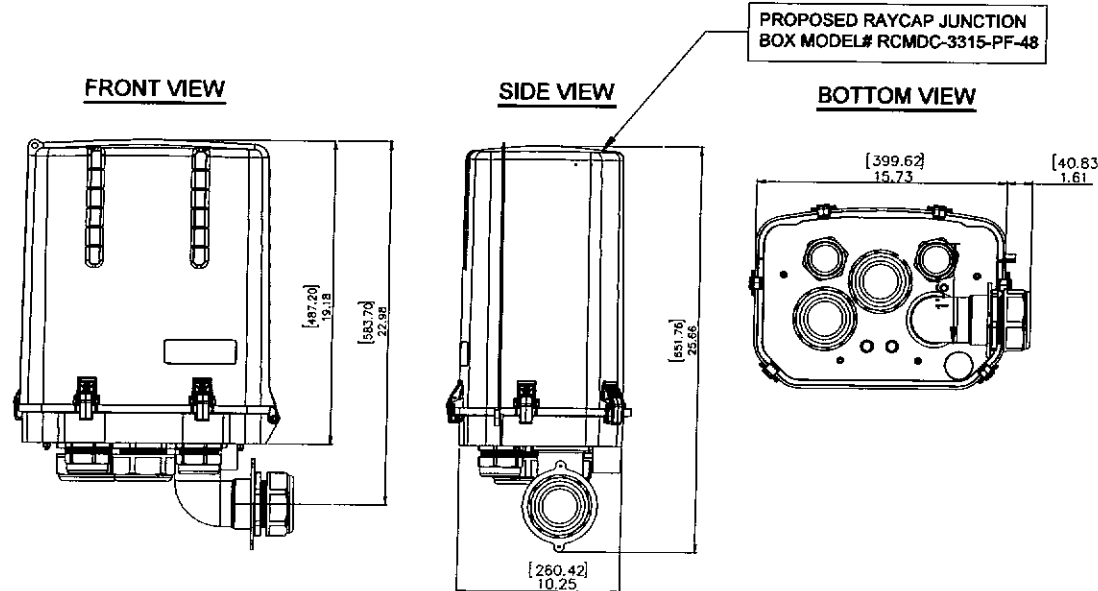
ANTENNA INFORMATION

SHEET NUMBER

ANT-2

SPECIFICATIONS DC SURGE PROTECTION FOR RRU/INTEGRATED ANTENNA RADIO HEAD
APPLICATION: TOWER / BASE / ROOFTOP / ROOFTOP DISTRIBUTION MODELS
WEIGHT: 32LBS (14.51 KG)

[mm]
INCHES



1 RAYCAP JUNCTION BOX DETAIL
SCALE: N.T.S.

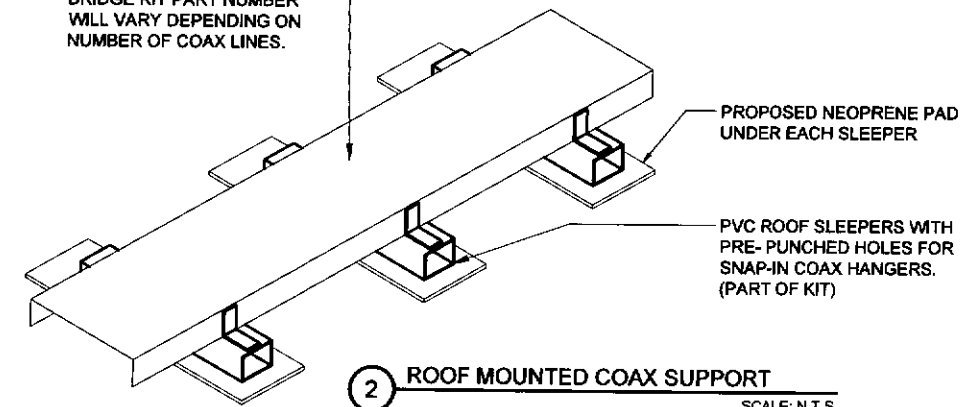
BRIDGE KIT P/N	# OF COAX LINES	BRIDGE WIDTH
B1542-11	4	11-1/2"
B1543	8	1'-9 1/2"
B1595	12	2'-9"
B3098	16	1'-9 1/2"

NOTE:
AT TURNS USE MICROFLECT
ADJUSTABLE SPLICES FOR 0°
TO 45° BENDS AND 45° TO 90°
BENDS

NOTE:
• CONTRACTOR TO SUPPLY
SUFFICIENT SLACK AT BOTH ENDS
OF CABLE TRAY. CABLE TRAY
SHOULD BE ABLE TO BE
TEMPORARILY SHIFTED FOR ROOF
MAINTENANCE.

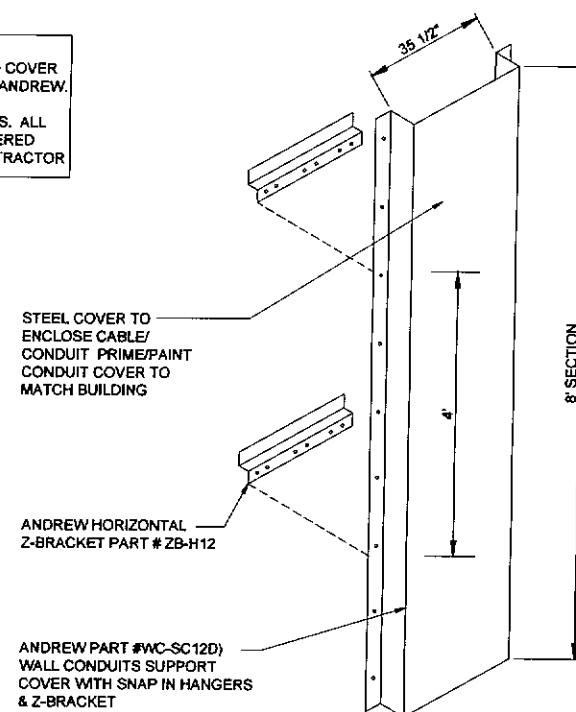
• IF CABLE BRIDGE REQUIRES
TEMPORARY RELOCATION (DUE
TO ROOF MAINTENANCE)
REMOVE THE BRIDGE COVER TO
EASE THE MOVEMENT OF THE
NON-PENETRATING SLEEPERS.

MICROFLECT COAX BRIDGE
KIT (NON-PENETRATING
ROOFTOP INSTALLATION)
BRIDGE KIT PART NUMBER
WILL VARY DEPENDING ON
NUMBER OF COAX LINES.

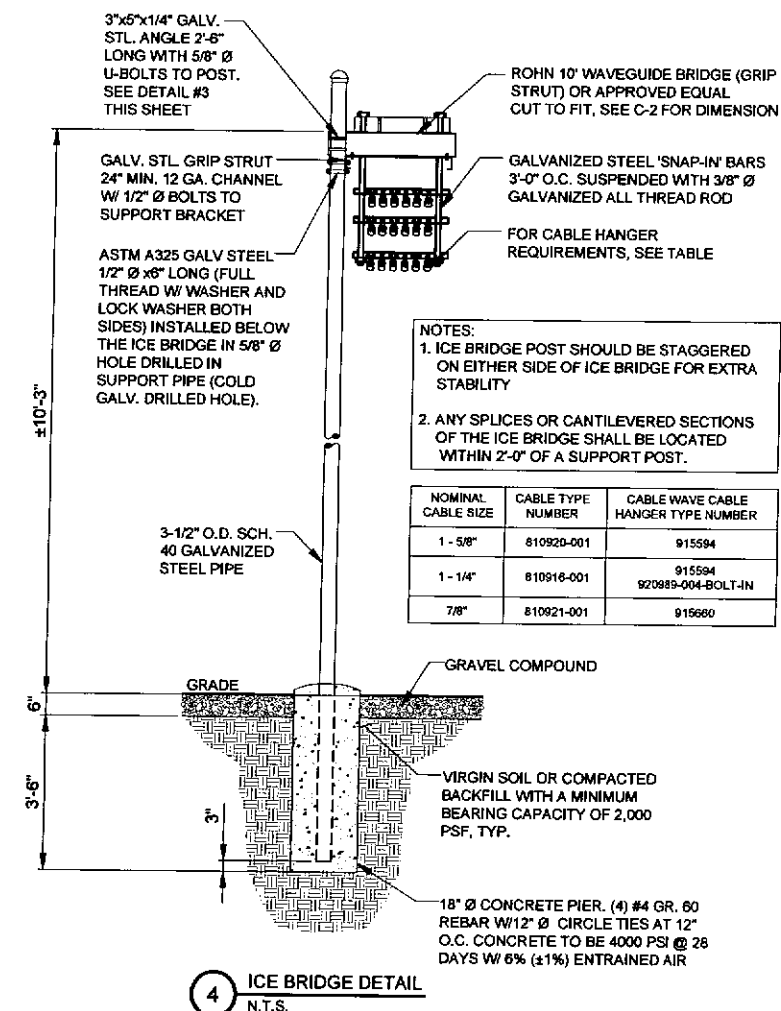


2 ROOF MOUNTED COAX SUPPORT
SCALE: N.T.S.

NOTE:
CABLE/CONDUIT WALL BRACKETS AND COVER
CAN BE ORDERED AS A KIT THROUGH ANDREW.
INSTALL BRACKETS AND COVER PER
MANUFACTURERS RECOMMENDATIONS. ALL
MOUNTING HARDWARE MUST BE ORDERED
SEPARATELY AND INSTALLED BY CONTRACTOR



3 WALL MOUNTED CABLE/CONDUIT
SUPPORT WITH COVER
SCALE: N.T.S.



4 ICE BRIDGE DETAIL
N.T.S.

NOTES:
1. ICE BRIDGE POST SHOULD BE STAGGERED
ON EITHER SIDE OF ICE BRIDGE FOR EXTRA
STABILITY
2. ANY SPLICES OR CANTILEVERED SECTIONS
OF THE ICE BRIDGE SHALL BE LOCATED
WITHIN 2'-0" OF A SUPPORT POST.

NOMINAL CABLE SIZE	CABLE TYPE NUMBER	CABLE WAVE CABLE HANGER TYPE NUMBER
1 - 5/8"	810920-001	915594
1 - 1/4"	810916-001	915594
7/8"	810921-001	915660

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LOC. #282639

YALE &
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SHEET TITLE
SITE DETAILS

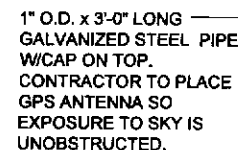
SHEET NUMBER

ANT-3



1 ENCLOSURE ENTRY PANEL GROUNDING DETAIL
N.T.S.

- NOTES:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. THIS DETAIL IS TYPICAL FOR EACH COAX CABLE WHERE IT IS SPECIFIED TO BE GROUNDED
 3. CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING SHELTER ENTRY PANEL.
 4. CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE IF APPLICABLE.
 5. USE ONLY TIN PLATED GROUNDING KITS.



3 GPS ANTENNA DETAIL

SCALE: N.T.S.

[illegible]

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SHEET TITLE
ANTENNA
MOUNTING
DETAILS

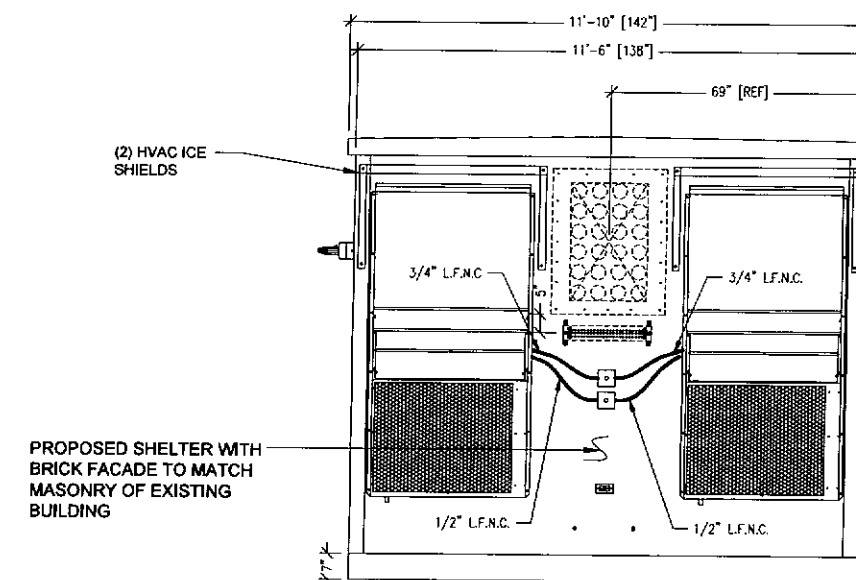
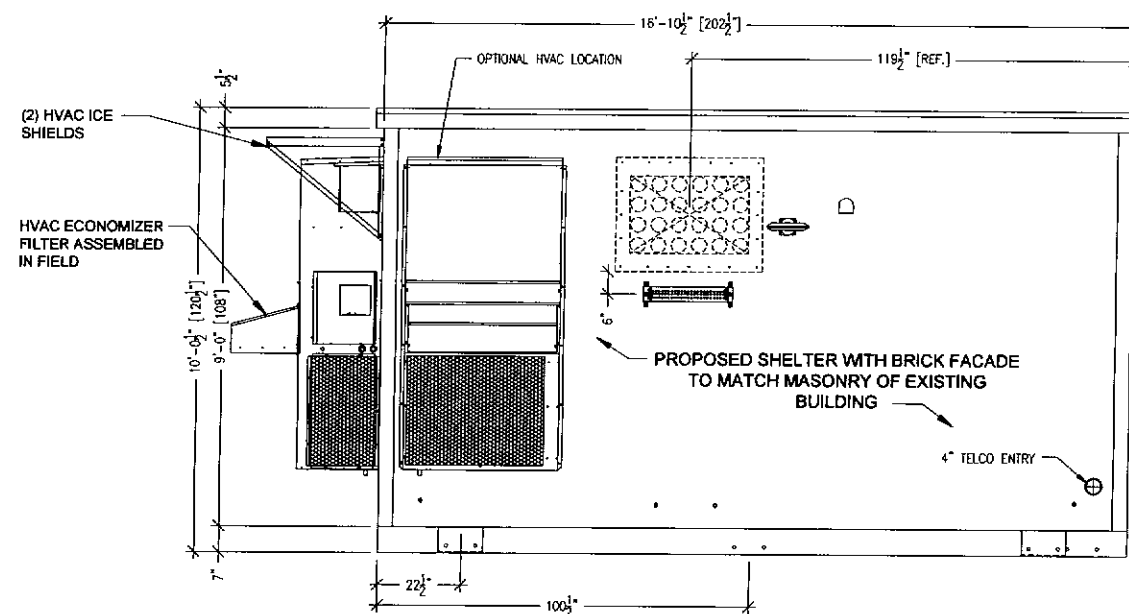
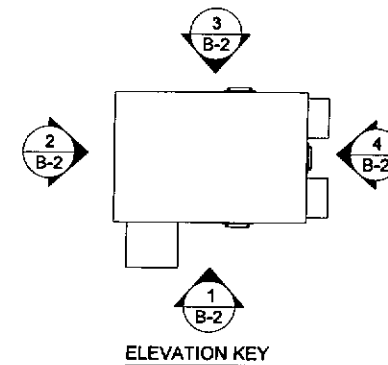
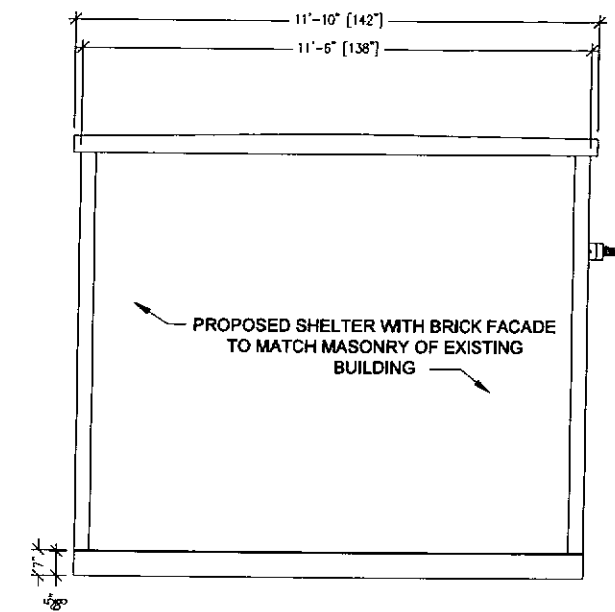
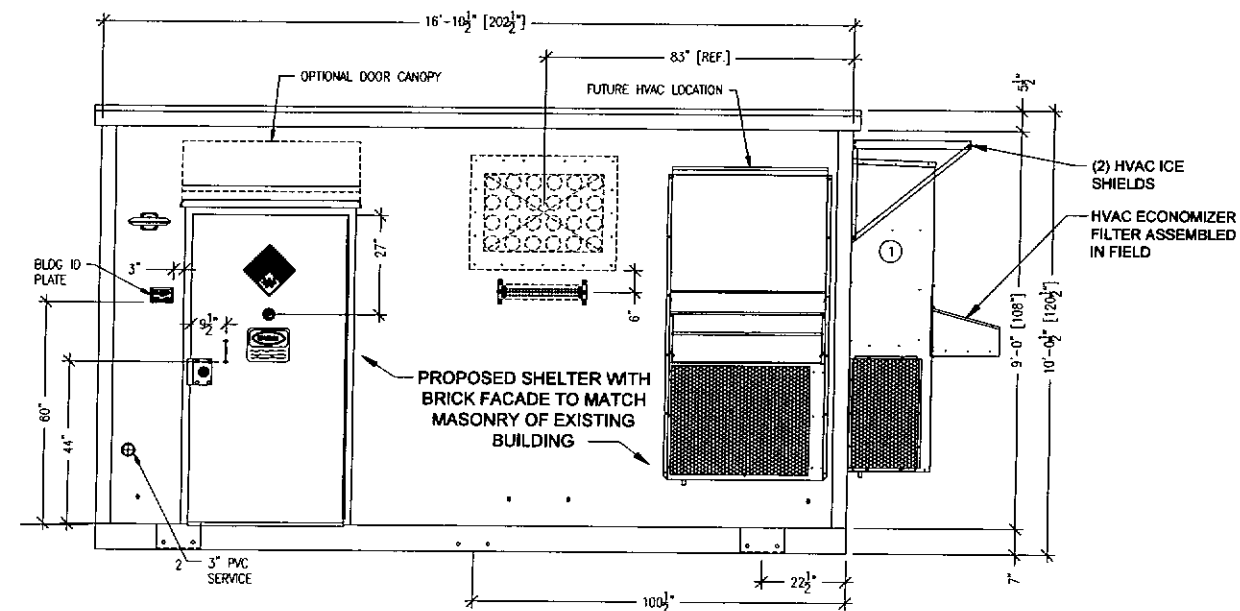
SHEET NUMBER

ANT-4

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d/b/a VERIZON WIRELESS



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LOC. #282639

YALE &
OAKTON

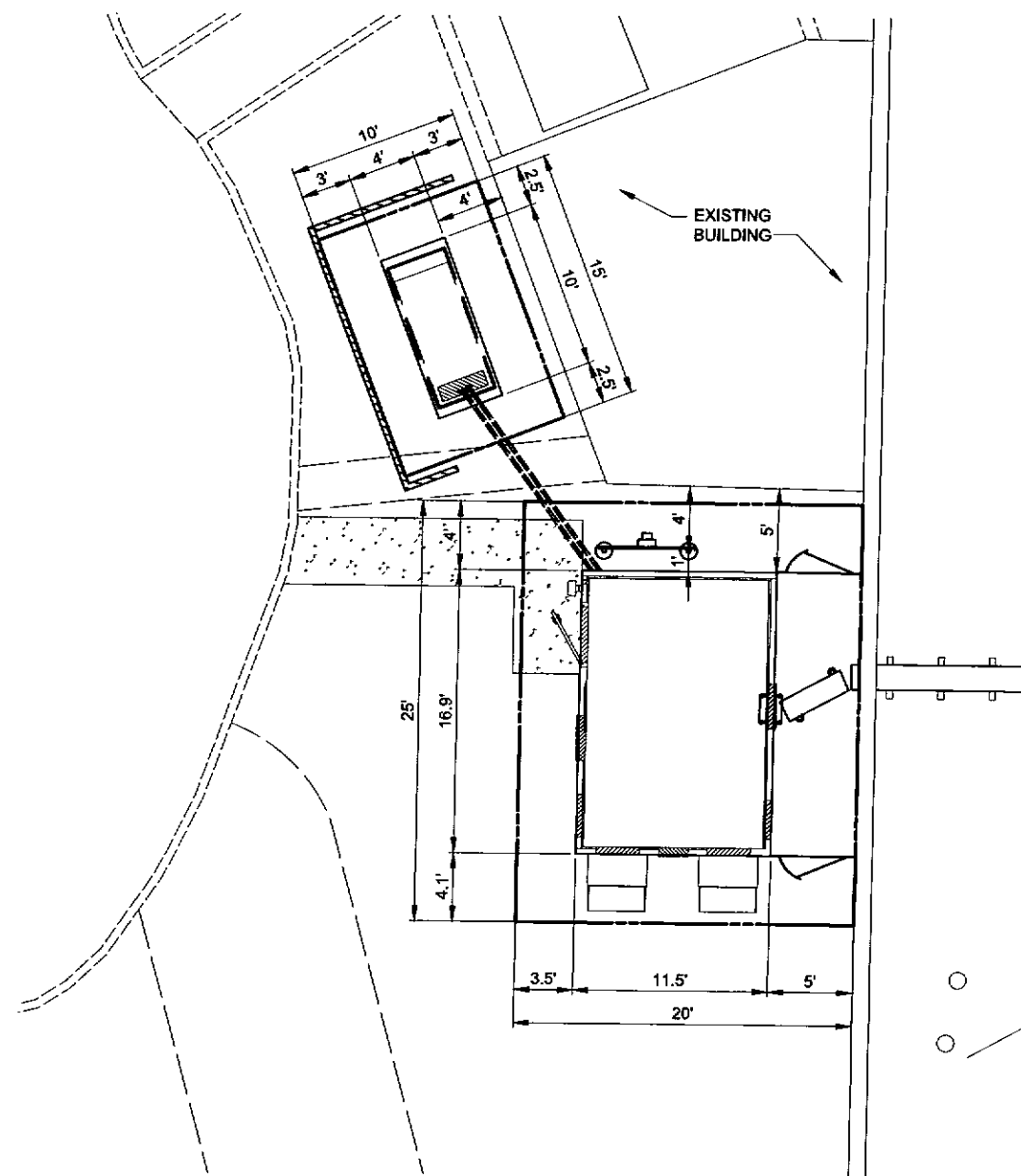
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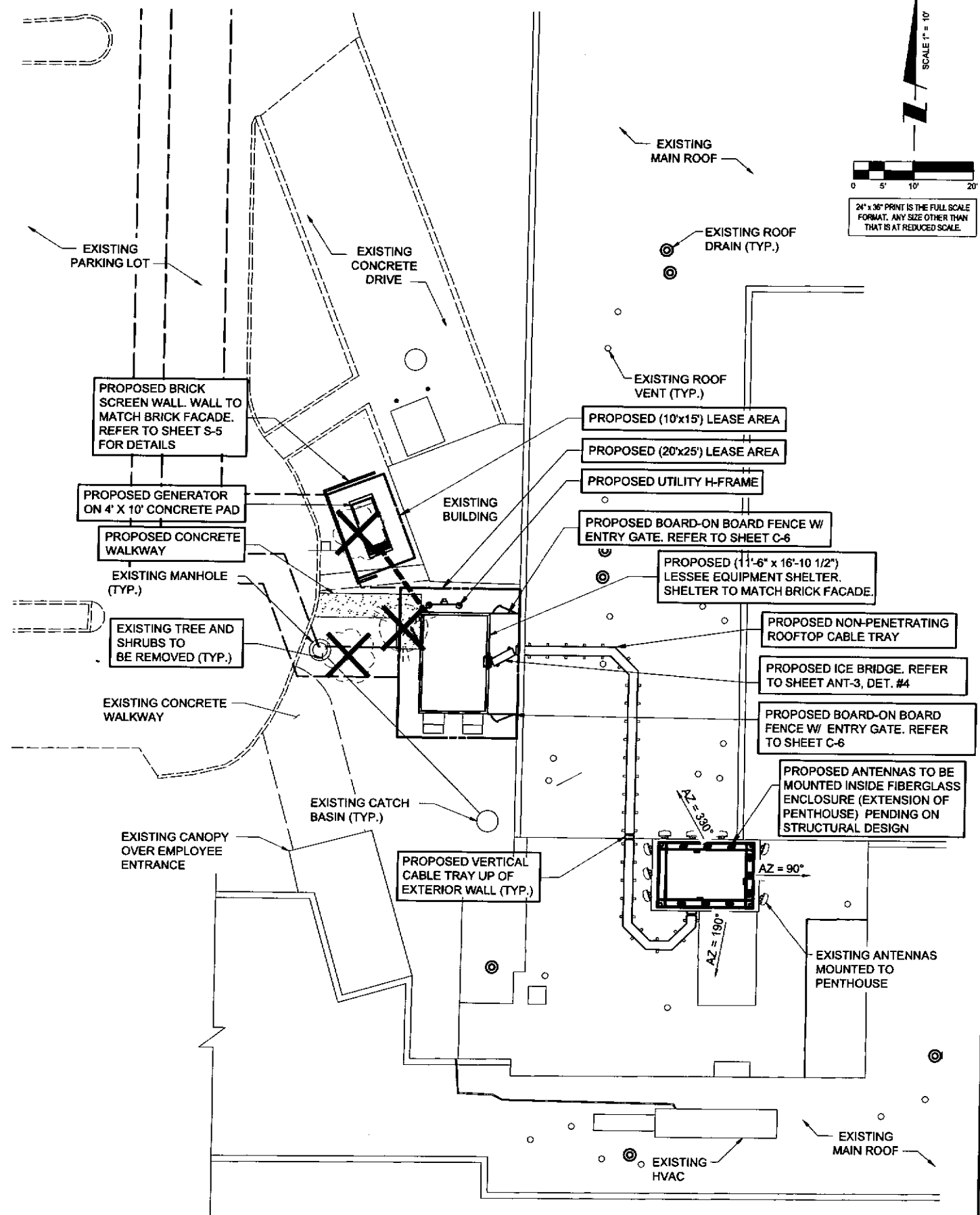
SHEET TITLE
EQUIPMENT
ENCLOSURE
ELEVATIONS

SHEET NUMBER

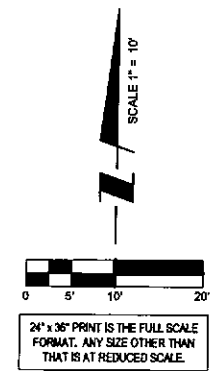
B-2



1 SITE DIMENSION PLAN
SCALE: 1" = 5'



1 ENLARGED SITE PLAN
SCALE: 1" = 10'



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SHEET TITLE
ENLARGED
SITE PLAN

SHEET NUMBER
C-1

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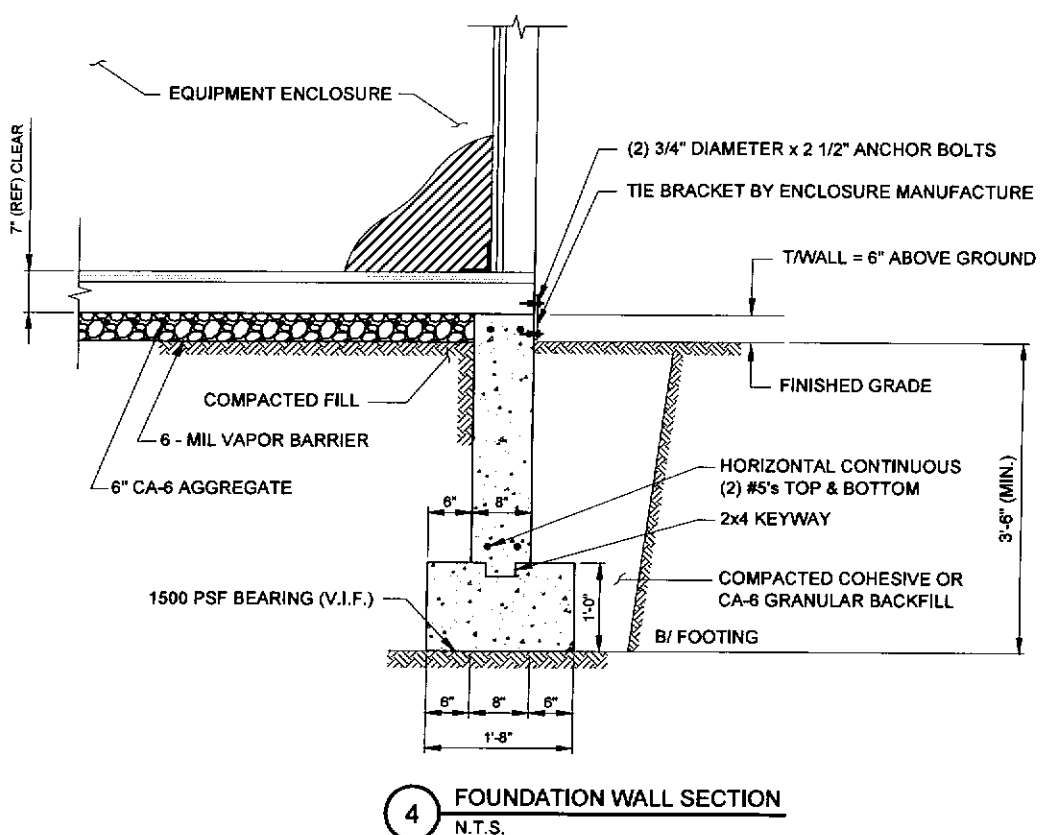
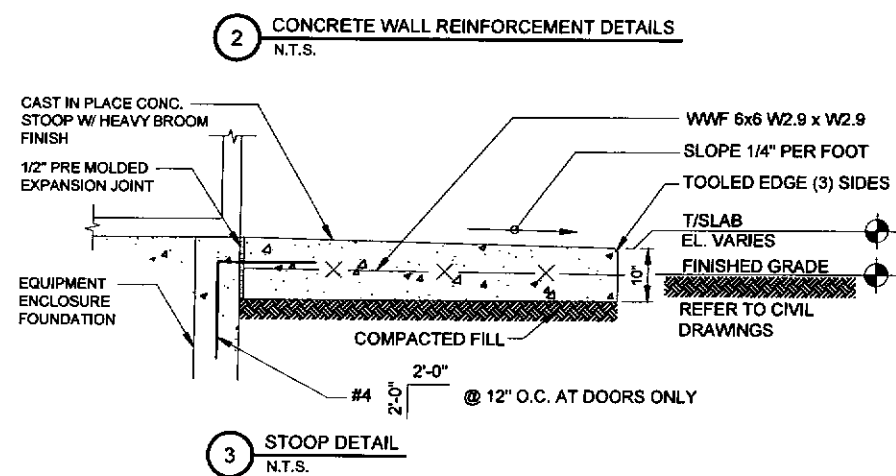
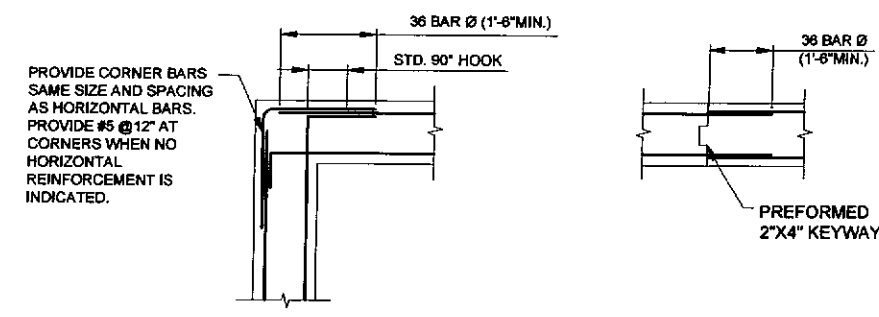
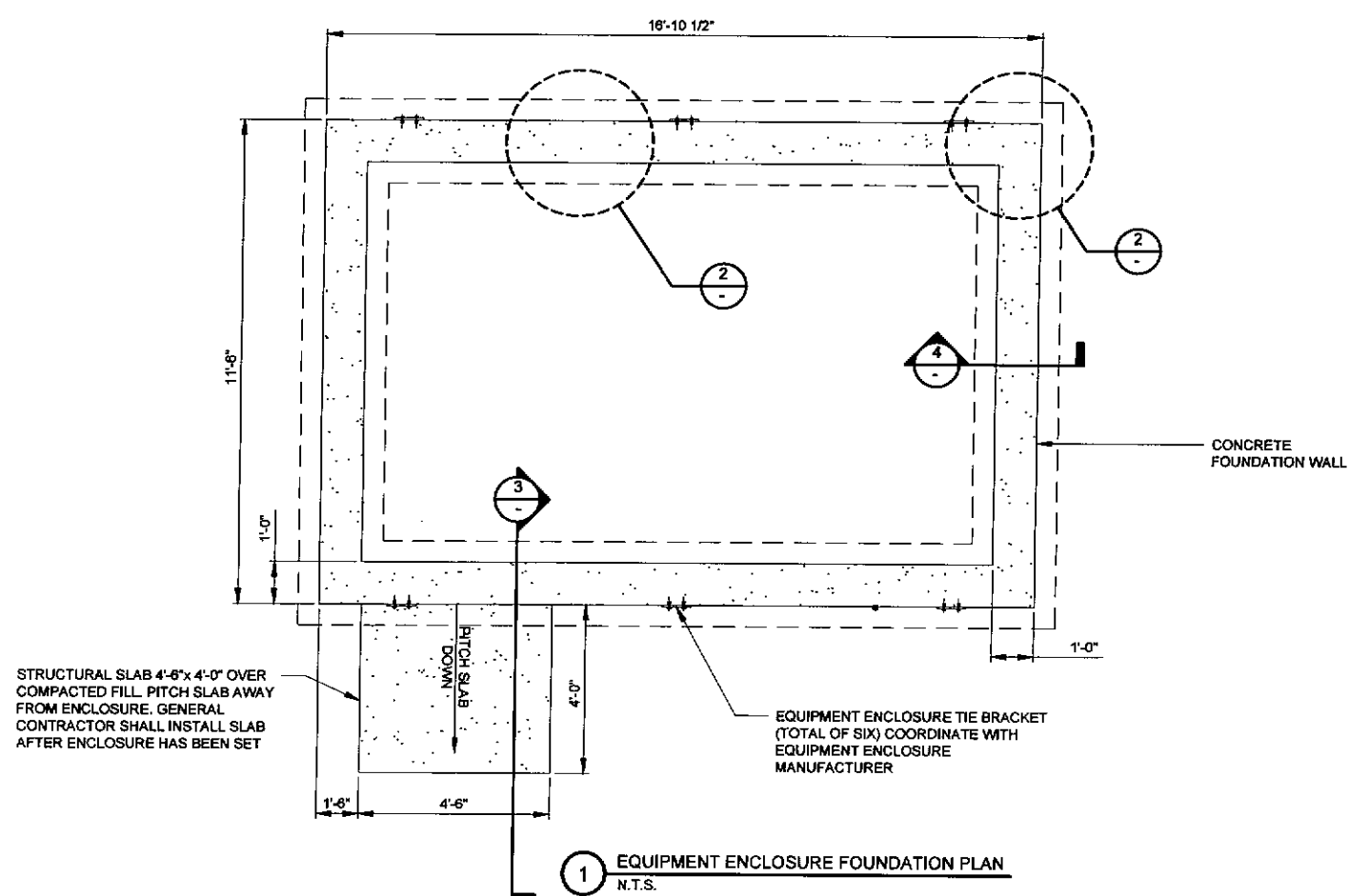
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SHEET TITLE
EQUIPMENT ENCLOSURE FOUNDATION PLAN

SHEET NUMBER

C-3



A. EQUIPMENT ENCLOSURE FOUNDATION

- REFER TO CIVIL DRAWINGS FOR ORIENTATION OF THE FOUNDATIONS.
- EQUIPMENT ENCLOSURE FOUNDATION IS DESIGNED FOR THE FOLLOWING LOADS:
ENCLOSURE DEAD LOAD: 70,000 LBS.
ROOF LIVE LOAD: 30 PSF
FLOOR LIVE LOAD: 125 PSF
- THE CONTRACTOR SHALL NOTIFY THE CLIENT'S GEOTECHNICAL ENGINEER TO COORDINATE HAVING A FIELD REPRESENTATIVE ON SITE FOR TESTING AND INSPECTION.
- FOOTINGS SHALL BEAR ON VIRGIN SOIL OR COMPACTED FILL MATERIAL CAPABLE OF SUPPORTING A MINIMUM SOIL BEARING PRESSURE OF 1500 PSF.
- SUBGRADE PREPARATION:
A. REMOVE ALL SOILS CONTAINING TOPSOIL, ORGANIC MATERIALS, AND/OR FILL MATERIALS FROM WITHIN AREA OF ENCLOSURE FOUNDATION.
B. PROOF ROLL RESULTING SUBGRADE WITH A HEAVILY LOADED SINGLE AXLE ROLLER OR SIMILAR VEHICLE. (20 TON LOAD). CONTRACTOR SHALL UNDERCUT AND REPLACE WITH ENGINEERED FILL. ALL LOOSE SOFT OR UNSTABLE AREAS REVEALED DURING PROOFROLLING AS DIRECTED BY THE TESTING AGENCY. CONTRACTOR SHALL INCLUDE ANTICIPATED UNDERCUT AND REPLACEMENT AS INDICATED IN THE GEOTECHNICAL REPORT AS PART OF THE BID.
C. BACKFILL AND COMPACT THE AREA WITHIN THE BUILDING FOUNDATION. BETWEEN RESULTANT SUBGRADE AND FOUNDATION WALL WITH APPROVED GRANULAR MATERIAL.
- FOUNDATION WALLS SHALL BE BACKFILLED EVENLY ON EACH SIDE OF THE WALL OR WALLS SHALL BE ADEQUATELY BRACED BY THE CONTRACTOR UNTIL FLOOR SLAB HAS BEEN PLACED AND CURED FOR 72 HOURS MINIMUM.
- ENCLOSURE SHALL NOT BE SET UNTIL FLOOR SLAB HAS BEEN CURED FOR 72 HOURS MINIMUM.
- CONTRACTOR TO ENSURE FOUNDATION / SLAB ARE POURED TO MEET FLATNESS LEVEL TOLERANCES AS INDICATED IN ACI 4.5.6 AND 4.5.7.

B. EQUIPMENT ENCLOSURE

THE EQUIPMENT ENCLOSURE IS A PRE-FABRICATED BUILDING MANUFACTURED BY FIBREBOND, MINDEN, LOUISIANA.
THE EQUIPMENT ENCLOSURE BUILDING SHALL BE FURNISHED AND INSTALLED BY THE OWNER UNDER SEPARATE CONTRACT PER THE OWNER AND MANUFACTURER SPECIFICATIONS.

C. CONCRETE NOTES

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 AND ACI 301, LATEST EDITION. THESE DOCUMENTS SHALL BE AVAILABLE IN THE FIELD OFFICE.
- EXCEPT WHERE OTHERWISE INDICATED, CONCRETE SHALL BE NORMAL WEIGHT AND WITH MINIMUM 28-DAY COMPRESSIVE STRENGTHS OF $f'_c = 4000$ PSI. ALL EXTERIOR EXPOSED CONCRETE SHALL BE AIR ENTRAINED.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

NOTE:
LOCALIZED AREAS OF SOFT OR LOOSE MATERIALS MAY BE ENCOUNTERED AT THE PROPOSED BEARING ELEVATION. THE SOILS MAY REQUIRE COMPACTION USING A PLATE COMPACTOR IN THE FOOTING TRENCH IF FIELD CONDITIONS INDICATE LOOSE GRANULAR SOILS. THE SOILS MAY REQUIRE REMOVAL AND REPLACEMENT WITH AN APPROVED ENGINEERED FILL. FOUNDATION DEPTH AND OVER DIG REQUIREMENTS SHALL BE VERIFIED WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND INCLUDED IN THE BID BEFORE CONSTRUCTION. THE EVALUATION OF THE SUB GRADE AND SELECTION OF FILL MATERIALS SHALL BE MONITORED AND TESTED BY A QUALIFIED REPRESENTATIVE OF THE SOILS ENGINEER.

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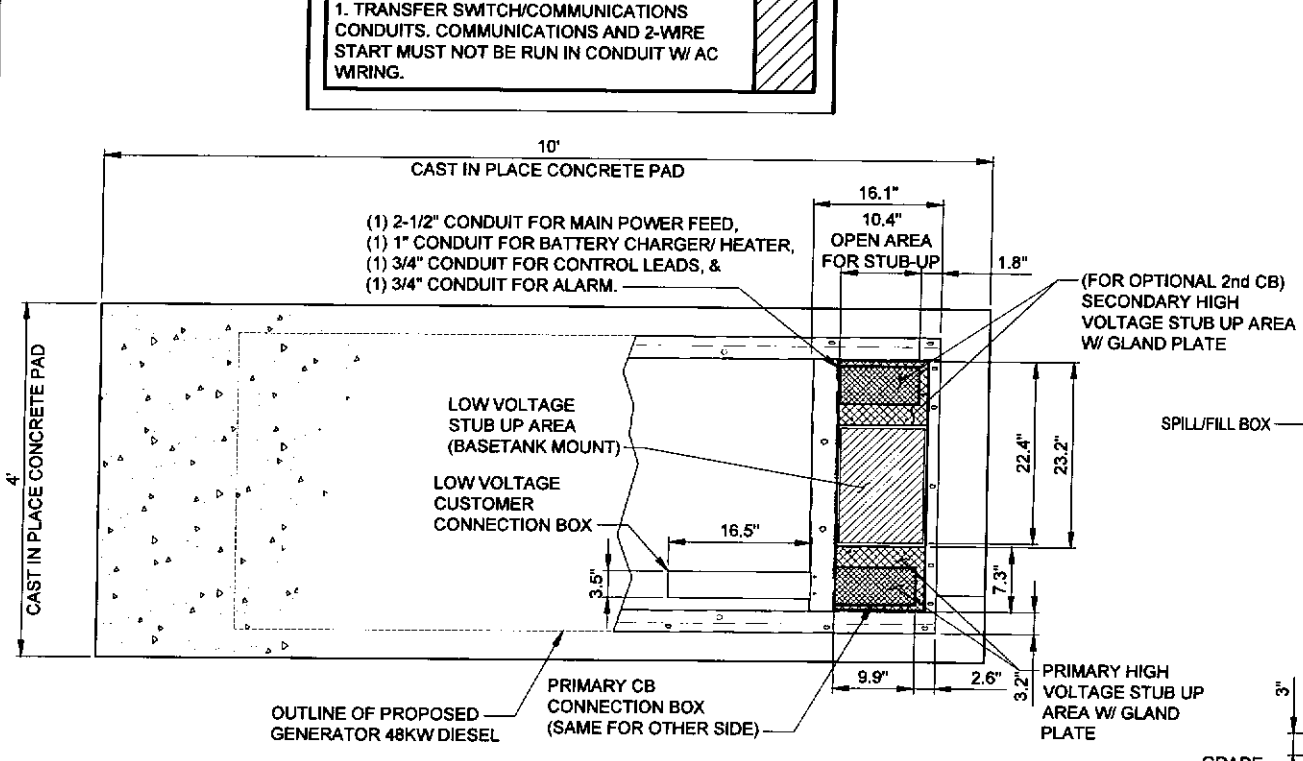
SHEET TITLE
GENERATOR DETAILS

SHEET NUMBER
C-4

RECOMMENDED ELECTRICAL STUB-UPS
(SEE DETAILED VIEW & TOP VIEW)

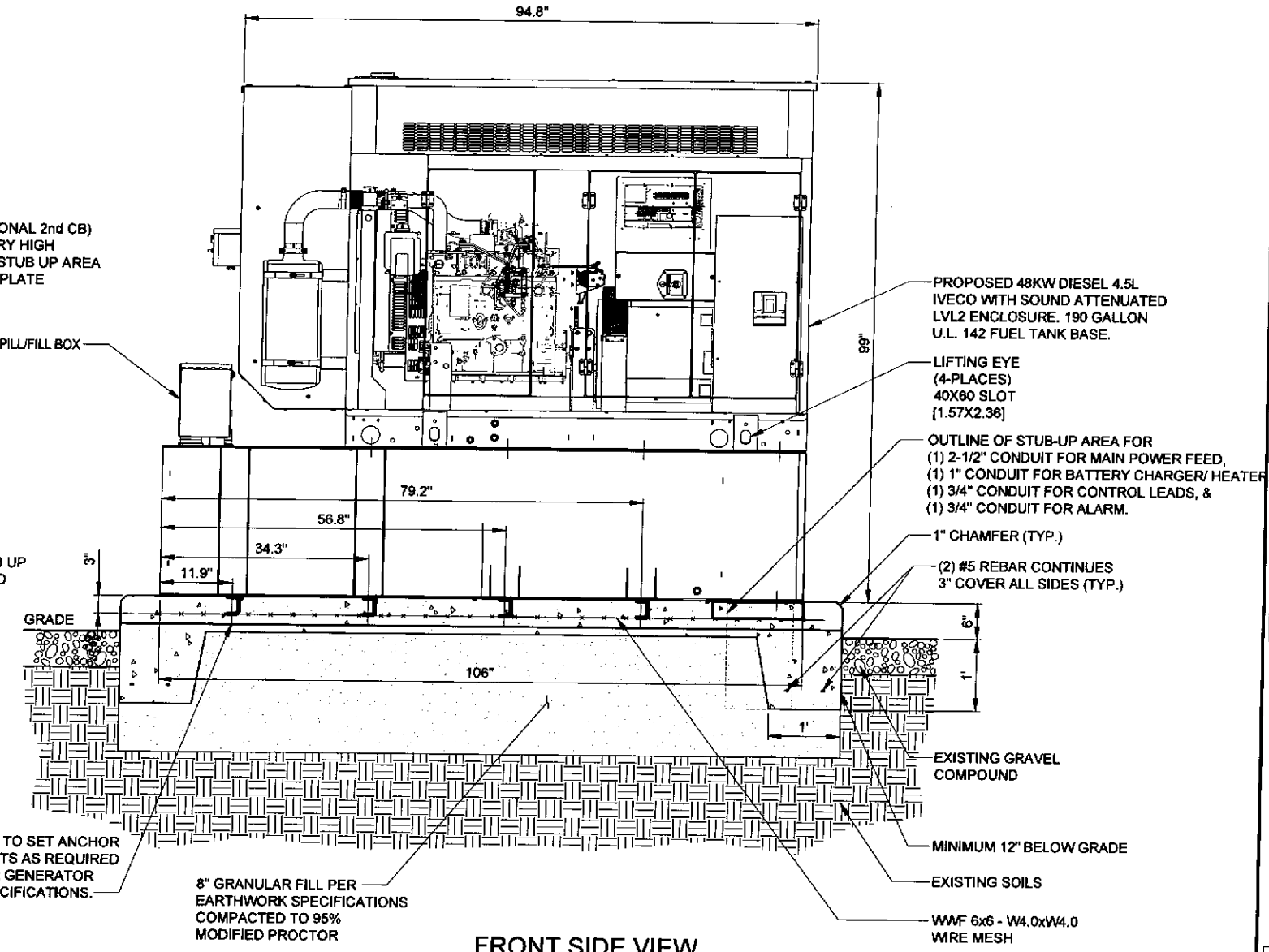
(HIGH VOLTAGE STUB UP)
1. AC LOAD LEAD CONDUIT AREA.
2. 120/240 VAC FROM UTILITY FOR OPTIONAL LOADS SUCH AS GFCI OUTLET, BLOCK HEATER, BATTERY CHARGER, AND OTHER 120/240 VAC OPTIONS. (GLAND PLATE INCLUDED)

(LOW VOLTAGE STUB UP)
1. TRANSFER SWITCH/COMMUNICATIONS CONDUITS, COMMUNICATIONS AND 2-WIRE START MUST NOT BE RUN IN CONDUIT W/ AC WIRING.



PLAN VIEW

1 TYPICAL GENERAC FOUNDATION DETAIL
SCALE: 1" = 1'



FRONT SIDE VIEW

2 TYPICAL GENERAC FOUNDATION DETAIL
SCALE: 1" = 1'

- NOTES:**
- SEE GENERATOR MANUFACTURE'S DRAWINGS FOR PHYSICAL LOCATION OF FUEL LINES, CONTROL AND POWER INTERCONNECTIONS AND OTHER INTERFACES THAT ARE TO CAST INTO THE CONCRETE. THE PREFERRED METHOD IS TO BRING THE CONDUIT THROUGH THE PAD TO THE UNDERSIDE OF THE GENERATOR (MINIMIZES RODENT DAMAGE). FINISH CONNECTIONS WITH FLEXIBLE CONDUIT PER GENERATOR MANUFACTURES SPECS. RIGID CONDUITS SHALL BE SECURED TO THE EXISTING SLAB, THEN BURIED BETWEEN SLAB AND SHELTER.
 - THE GENERATOR SHALL BE LOCATED A MIN 10' AWAY FROM A COMBUSTIBLE WALL.
-THE GENERATOR SHALL BE LOCATED A MIN OF 5' AWAY FROM A NON-COMBUTIBLE WALL.



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SHEET TITLE

**SCREEN WALL
DETAIL**

SHEET NUMBER

C-5

UTILITY NOTES:

WORK INCLUDES:

THESE NOTES AND ACCOMPANYING DRAWINGS COMPLEMENT THE PROVISIONS AND INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS VERIZON WIRELESS SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. THE PROVISIONS, INSTALLATION, AND CONNECTION OF A GROUNDING ELECTRODE SYSTEM COMPLETE WITH A BUILDING AND SECONDARY GROUNDING, CELLULAR TELEPHONE COMMUNICATIONS TOWER AND CONNECTIONS TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.
2. THE PROVISION AND INSTALLATION OF AN OVERHEAD ELECTRICAL SERVICE OR UNDERGROUND ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS.
3. THE PROVISION, INSTALLATION OF CONDUIT AND CONNECTIONS FOR LOCAL TELEPHONE SERVICE.
4. THE FURNISHING AND INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS, CONDUITS, METER SOCKET, AND CONNECTIONS TO THE SERVICE EQUIPMENT WITHIN THE ENCLOSURE.
5. TWO INCH (2") AND THREE INCH (3") DIAMETER PVC CONDUITS SCHEDULE 40.
6. ALL PVC CONDUITS SHOULD BE LEFT WITH NYLON PULL CORD FOR FUTURE USE.
7. EXCAVATION, TRENCHING, AND BACKFILLING FOR CONDUIT(S), CABLE(S), AND EXTERNAL GROUNDING SYSTEM.

CODES, PERMITS, AND FEES:

1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.
2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES: STATE, LOCAL AND NATIONAL, AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING AUTHORITIES:

N.E.C.	NATIONAL ELECTRIC CODE
A.N.S.I.	AMERICAN NATIONAL STANDARDS INSTITUTE
I.E.E.E.	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
A.S.T.M.	AMERICAN SOCIETY FOR TESTING MATERIALS
N.E.M.A.	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
U.L.	UNDERWRITERS LABORATORIES, INC.
N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION

RACEWAYS AND WIRING:

1. WIRING OF EVERY KIND MUST BE INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE, OR AS APPROVED BY THE ENGINEER.
2. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE COPPER (CU) TYPE THWN, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
3. RACEWAYS SHALL BE GALVANIZED STEEL, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, UNLESS OTHERWISE NOTED. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION.
4. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE INSTALLATION OF RACEWAYS AND WIRING. PROVIDE JUNCTION AND PULLBOXES FOR CONDUIT RUNS WITH MORE THAN (360) DEGREES OF BENDS.
5. PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
6. ELECTRICAL PANELBOARD SHALL BE FURNISHED AND INSTALLED BY OTHERS. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION.
7. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

GENERAL NOTES:

SEE DETAILS AND SCHEDULES ON DRAWINGS AND SPECIFICATIONS FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, COORDINATION, AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ENGINEER BEFORE SUBMITTING BID. ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WIRE DIAGRAM AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

COORDINATION WITH UTILITY COMPANY:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE COMPLETE ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY FOR A COMPLETE OPERATIONS SYSTEM, INCLUDING TRANSFORMER CONNECTIONS, CONCRETE TRANSFORMER PADS, IF REQUIRED, METER SOCKETS, PRIMARY CABLE RACEWAY REQUIREMENTS, SECONDARY SERVICE, ETC. PRIOR TO SUBMITTING BID TO INCLUDE ALL LABOR AND MATERIALS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BID ANY OPTIONAL OR EXCESS FACILITY CHARGES ASSOCIATED WITH PROVIDING ELECTRICAL SERVICE FROM LOCAL UTILITY COMPANY. VERIFY BEFORE BIDDING TO INCLUDE ALL COSTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING BID. ADJUST A.I.C. RATINGS OF ALL OVER CURRENT PROTECTION DEVICES IN DISTRIBUTION EQUIPMENT AS REQUIRED TO COORDINATE WITH AVAILABLE FAULT CURRENT FROM LOCAL UTILITY COMPANY. ALL GROUNDING RODS PROVIDED BY THE POWER OR TELEPHONE UTILITY COMPANIES MUST BE TIED INTO THE MAIN EXTERNAL GROUND RING.

UTILITY CONTACTS:

POWER: T.B.D.

FIBER: T.B.D.

POWER PERSON
ADDRESS

FIBER PERSON
ADDRESS

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH POWER COMPANY FOR ENTRY INTO FENCED AREA BY EITHER MAILING A KEY TO A SLAVE LOCKED CHAIN AT THE FENCE GATE OR CALLING AND LEAVING A COMBINATION.

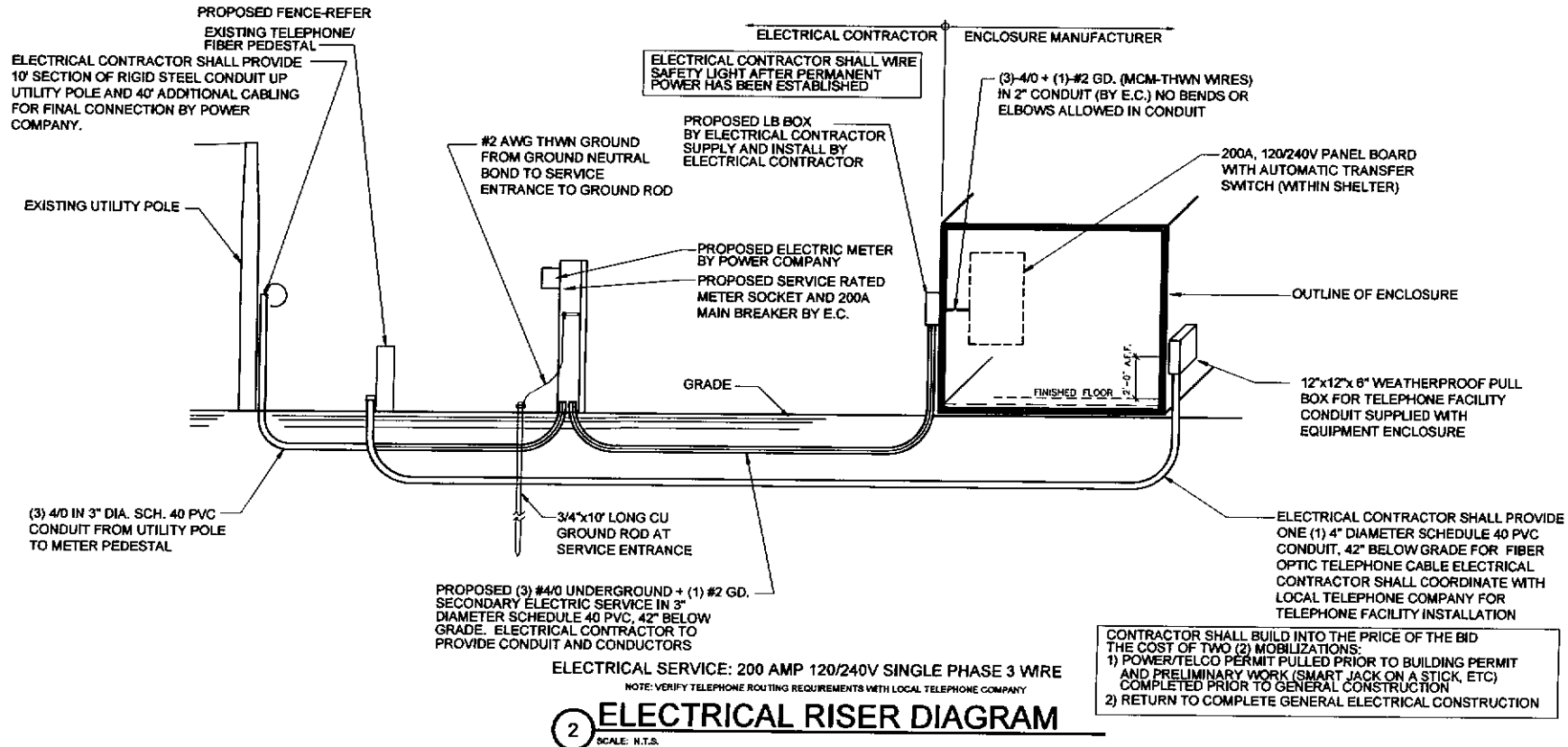
FOR CONTINUATION AND CONNECTION OF ELECTRIC AND TELEPHONE SERVICE, COORDINATE WITH ELECTRIC AND PHONE COMPANY

OPERATES 24 HOURS
A DAY 365 DAYS A YEAR

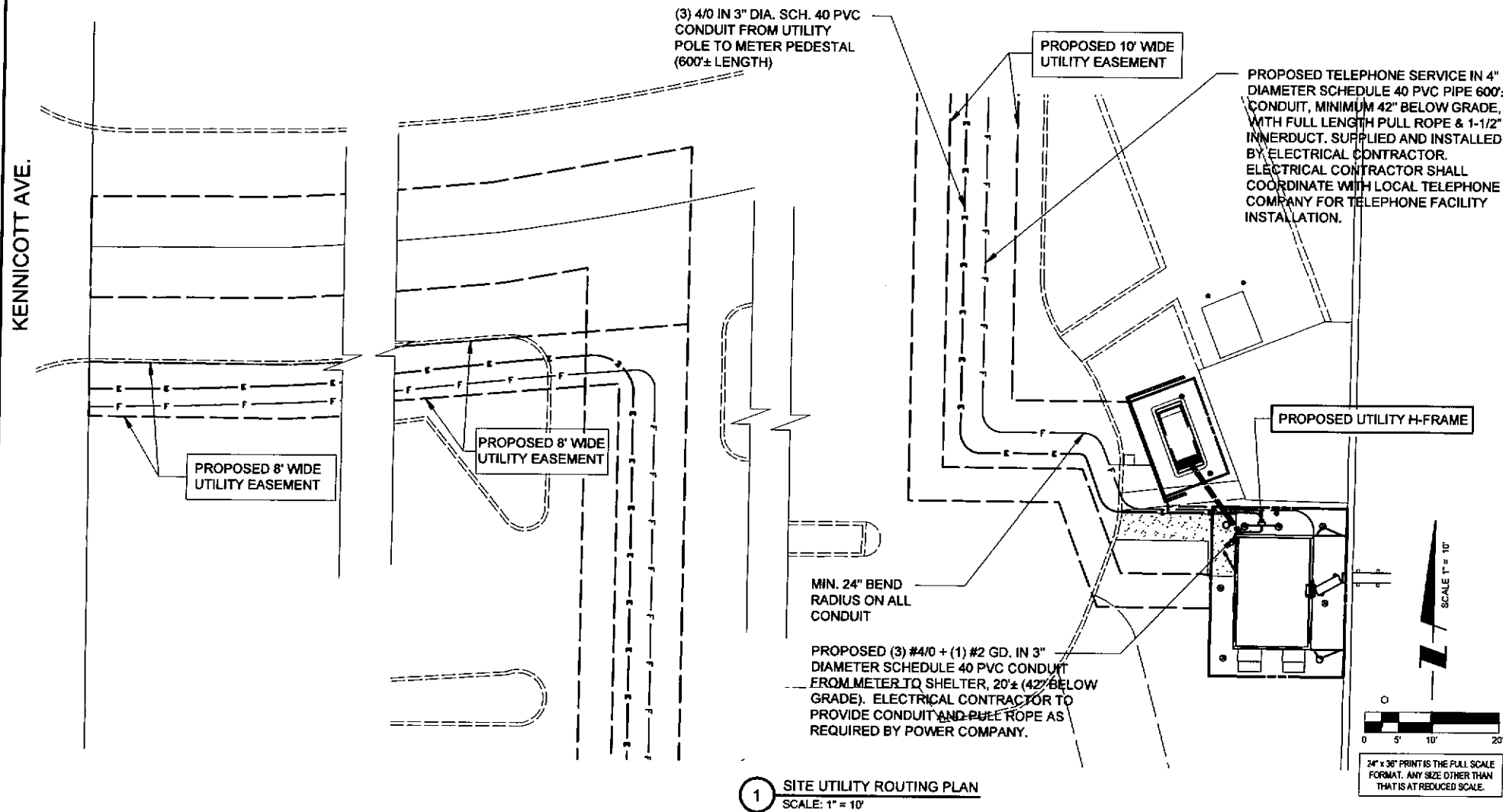


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48 HOURS BEFORE
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NOTE:
CONTRACTOR TO VERIFY ROUTES
WITH LOCAL UTILITY COMPANY
PRIOR TO INSTALLATION.



2 ELECTRICAL RISER DIAGRAM
SCALE: N.T.S.



1 SITE UTILITY ROUTING PLAN
SCALE: 1\"/>

CHICAGO SMSA
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SHEET TITLE
UTILITY ROUTING PLAN

SHEET NUMBER
E-1

E-2



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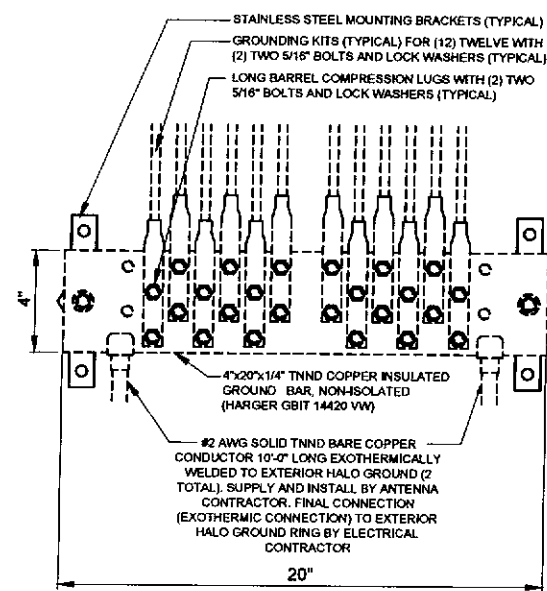
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SHEET TITLE

**ELECTRICAL AND
GROUNDING DETAILS**

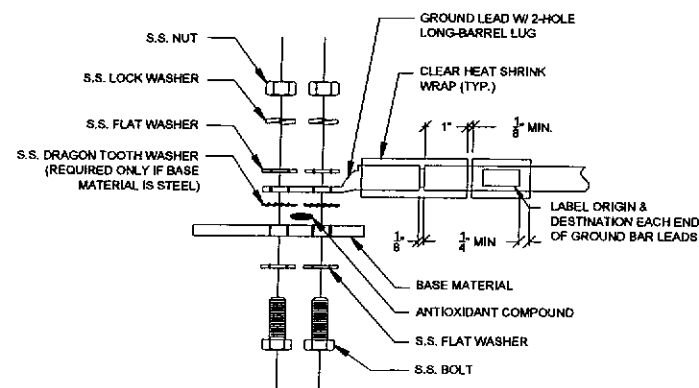
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E-3

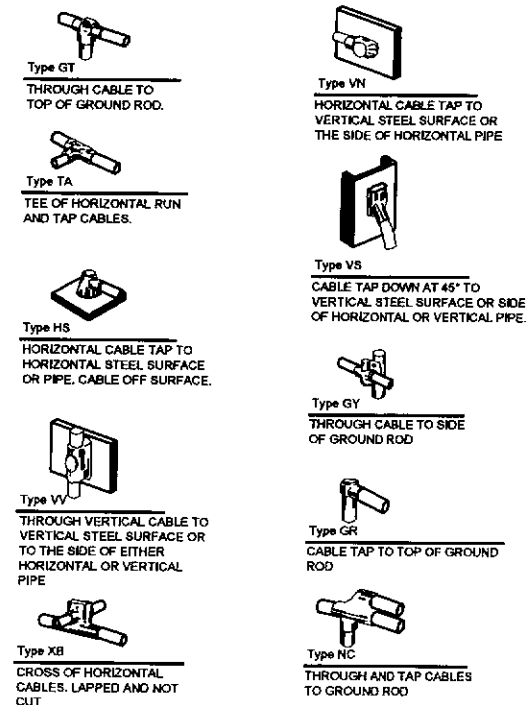


1 EXTERIOR GROUND BAR DETAIL
N.T.S.

- NOTES:
1. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
 2. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.
 3. GROUND BARS, INSTALL BOLT HEAD TOWARD WALL
 4. ENCLOSURES, INSTALL BOLT HEAD ON OUTSIDE OF ENCLOSURE

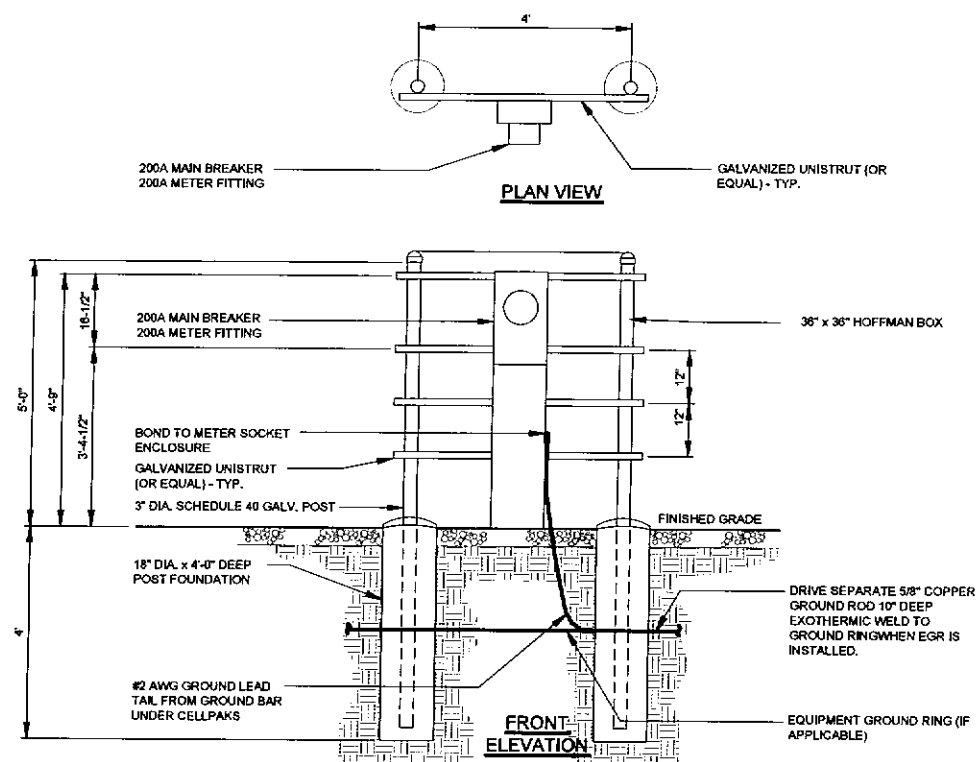


2 GROUND LIG INSTALLATION DETAIL
N.T.S.

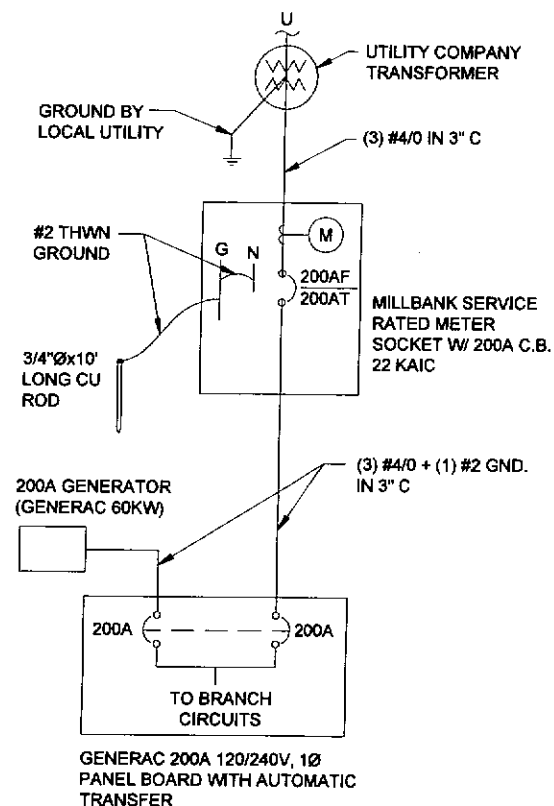


3 EXOTHERMIC WELD DETAILS
EXOTHERMIC AND HARGER ULTRAWELD OR APPROVED EQUAL

NOTE:
CONTRACTOR SHALL PROVIDE UNDERGROUND APPROVED 25 PAIR CABLE, AWS #22 INSTALLED 5' INTO JUNCTION BOX AND 10' INTO ENCLOSURE. CONTRACTOR SHALL NOT TERMINATE CABLE.



4 H-FRAME WITH METER / TELCO BOXES
N.T.S.



5 SINGLE LINE DIAGRAM
N.T.S.

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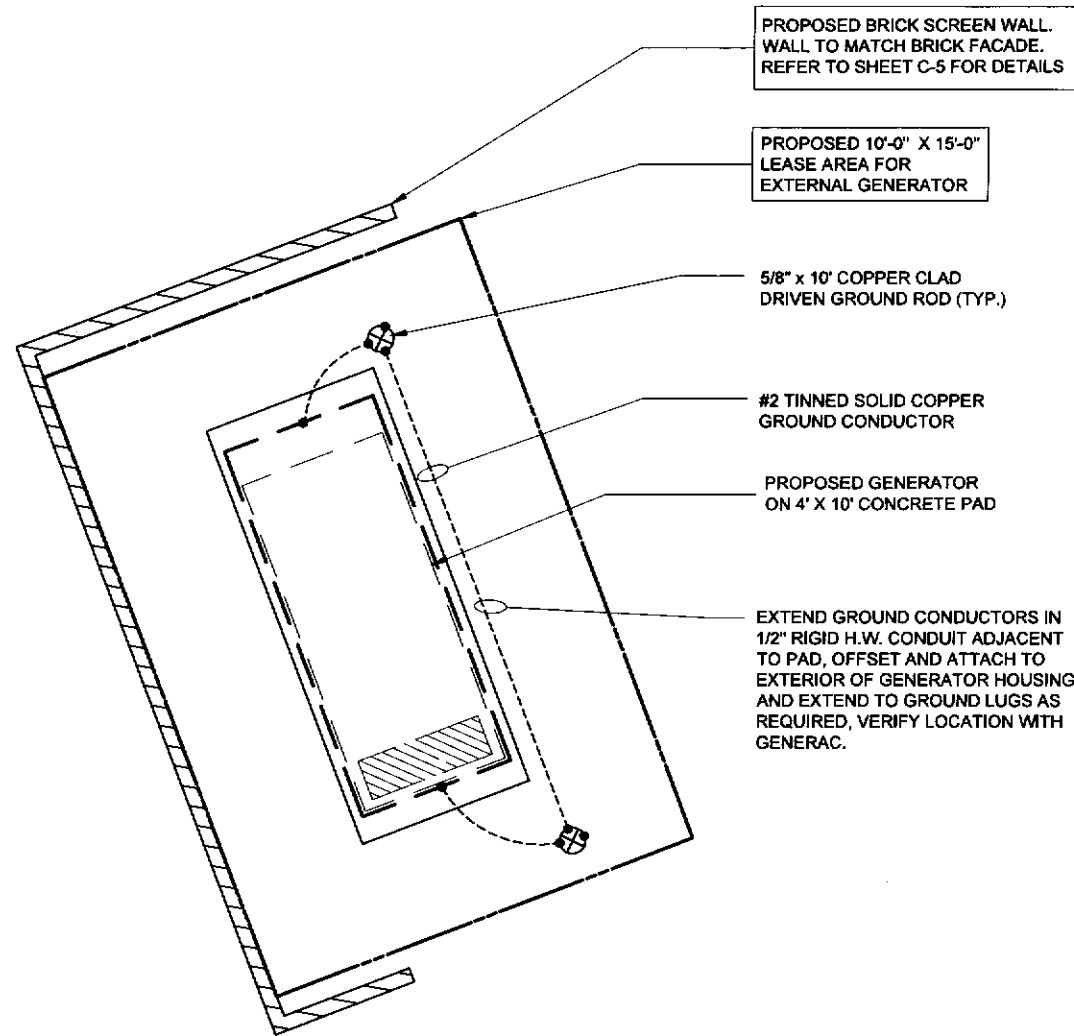
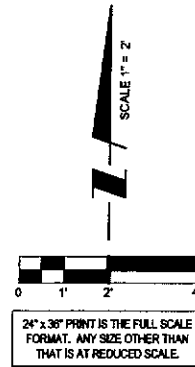
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**ELECTRICAL AND
GROUNDING DETAILS**

SHEET NUMBER
E-4



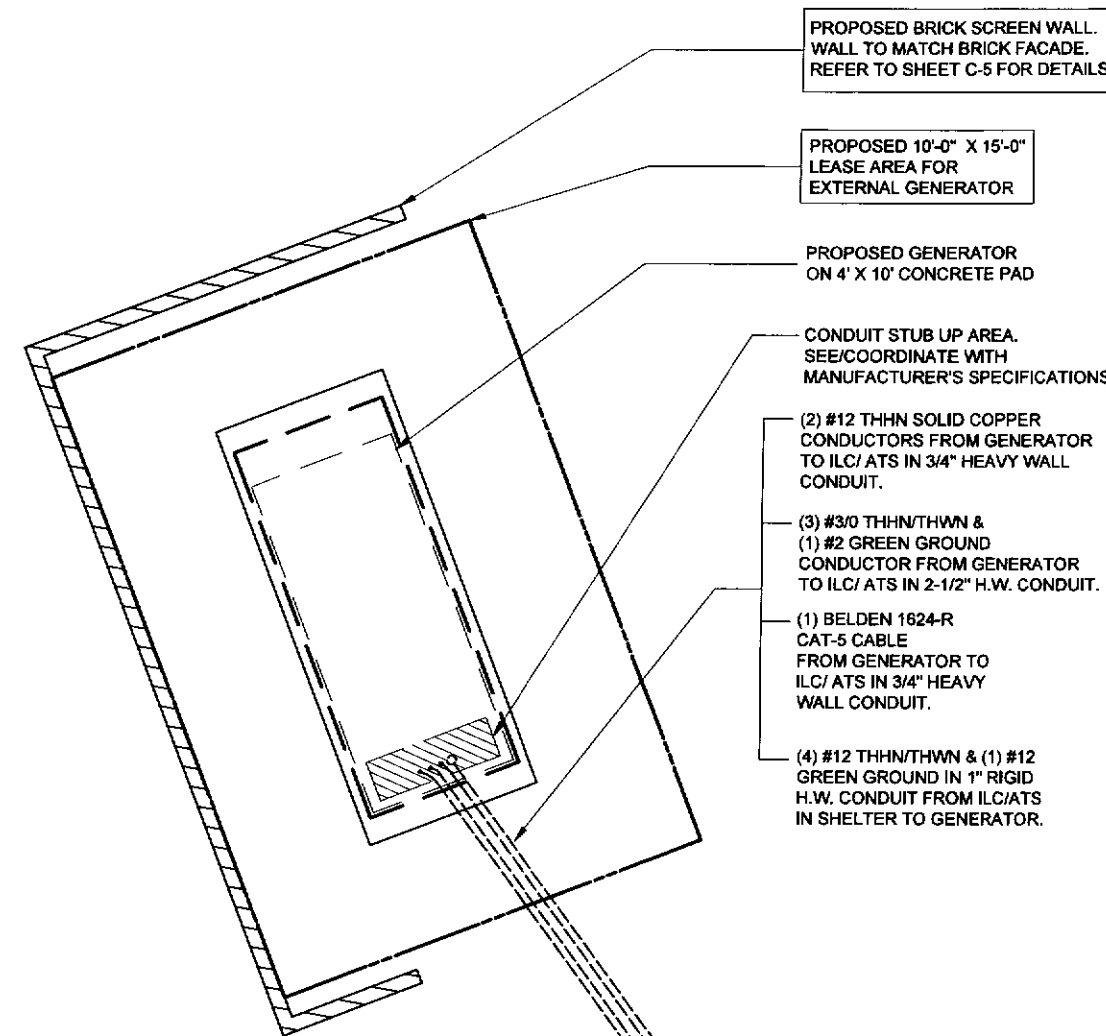
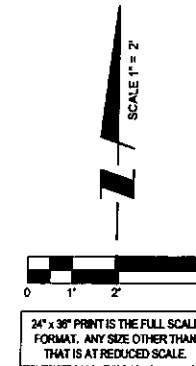
1 GENERATOR GROUNDING PLAN
SCALE: 1"=2'-0"

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SHEET TITLE
**GENERATOR
GROUNDING AND
ROUTING LINES**

SHEET NUMBER
E-5

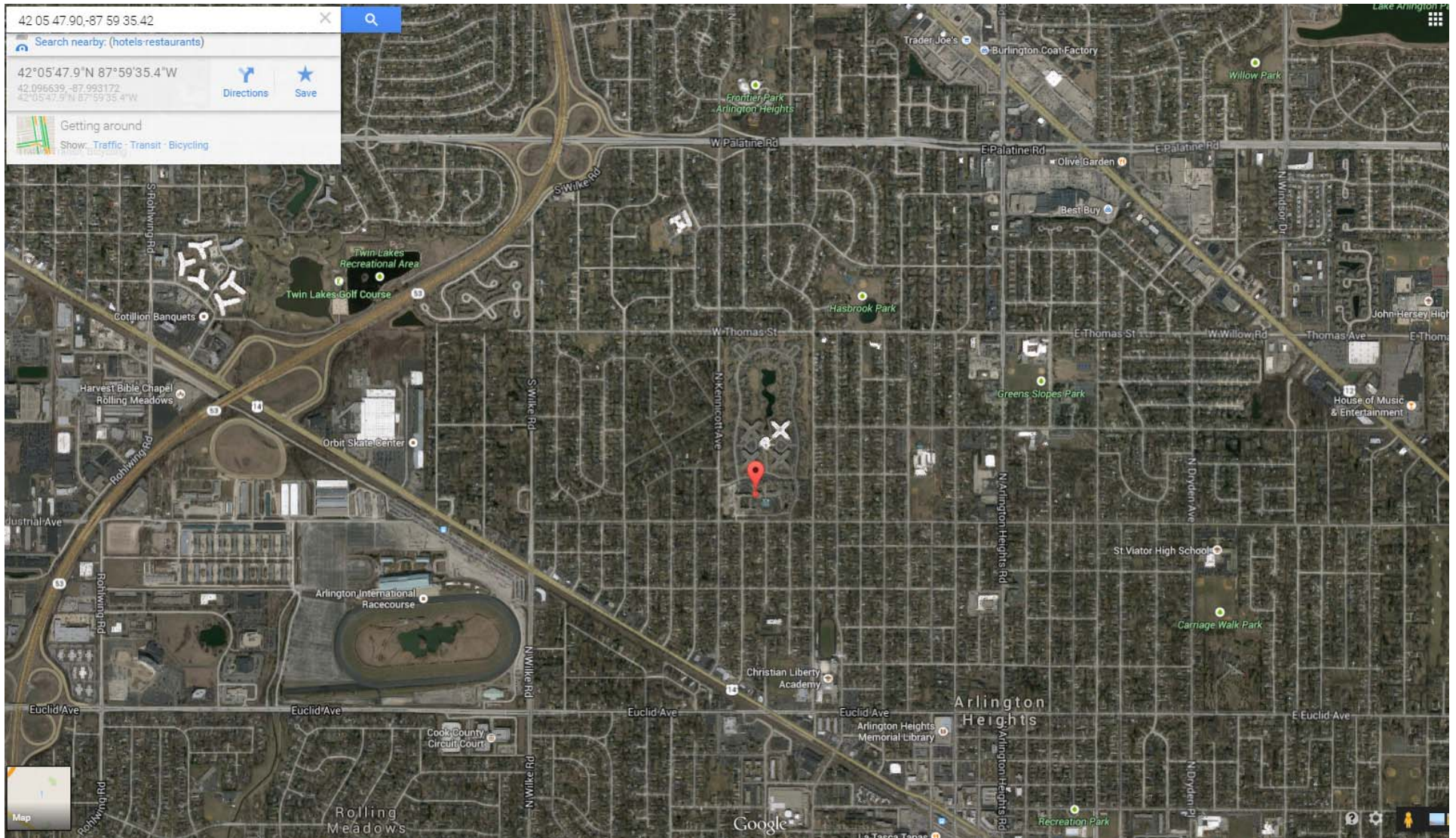
YALE & OAKTON

Area under consideration is a coverage hole known for frequent trouble tickets and customer complaints. Residences and businesses in the area have poor in-residence coverage. Neighboring cell sites currently covering this area are breaking for capacity.

The primary objective of this site is to provide.

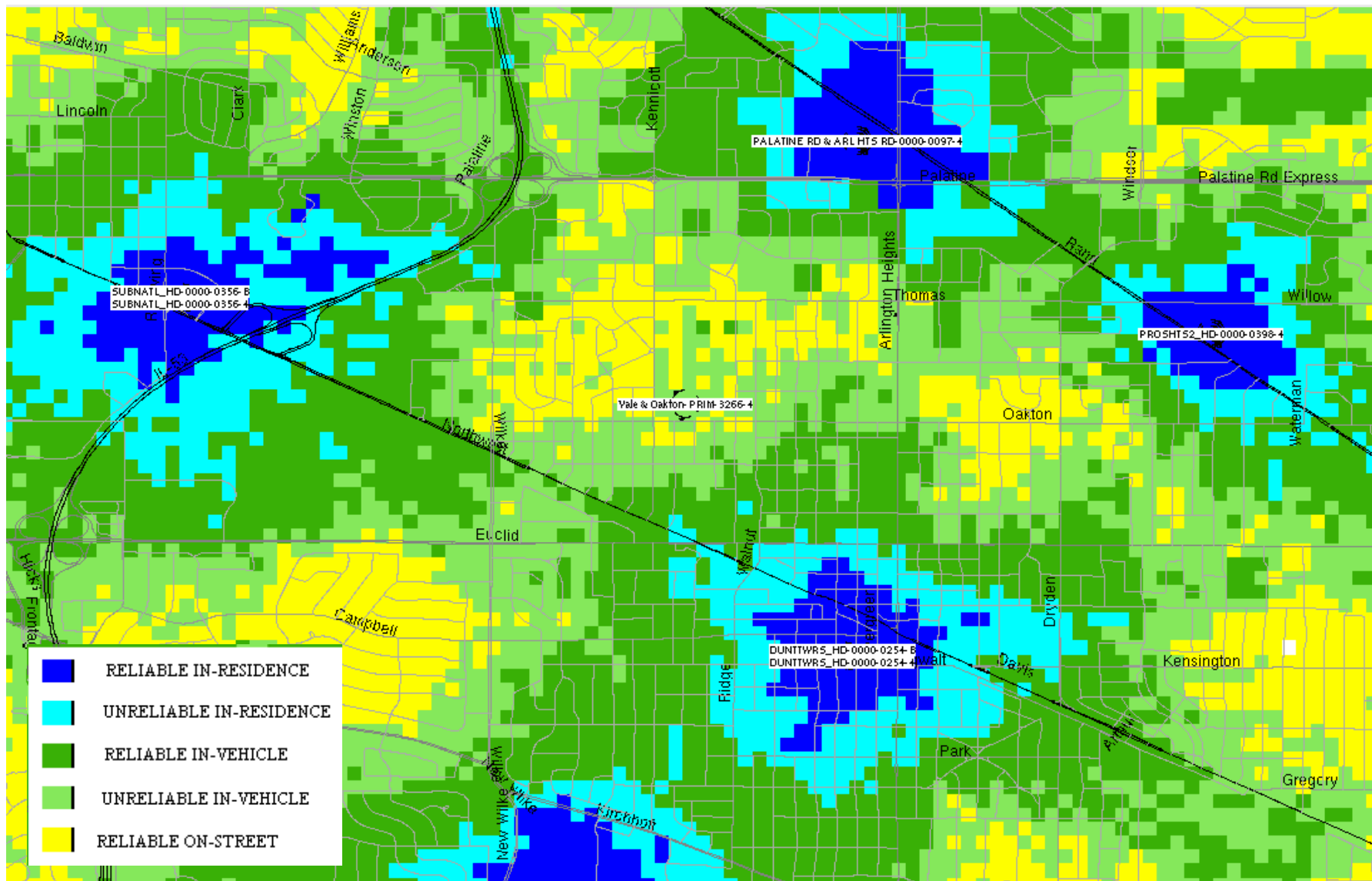
1. Reliable In-residence coverage in the area.
2. Capacity offload to the neighboring sectors serving the area.
3. Reliable coverage for E-911 calls.

YALE & OAKTON - AERIAL



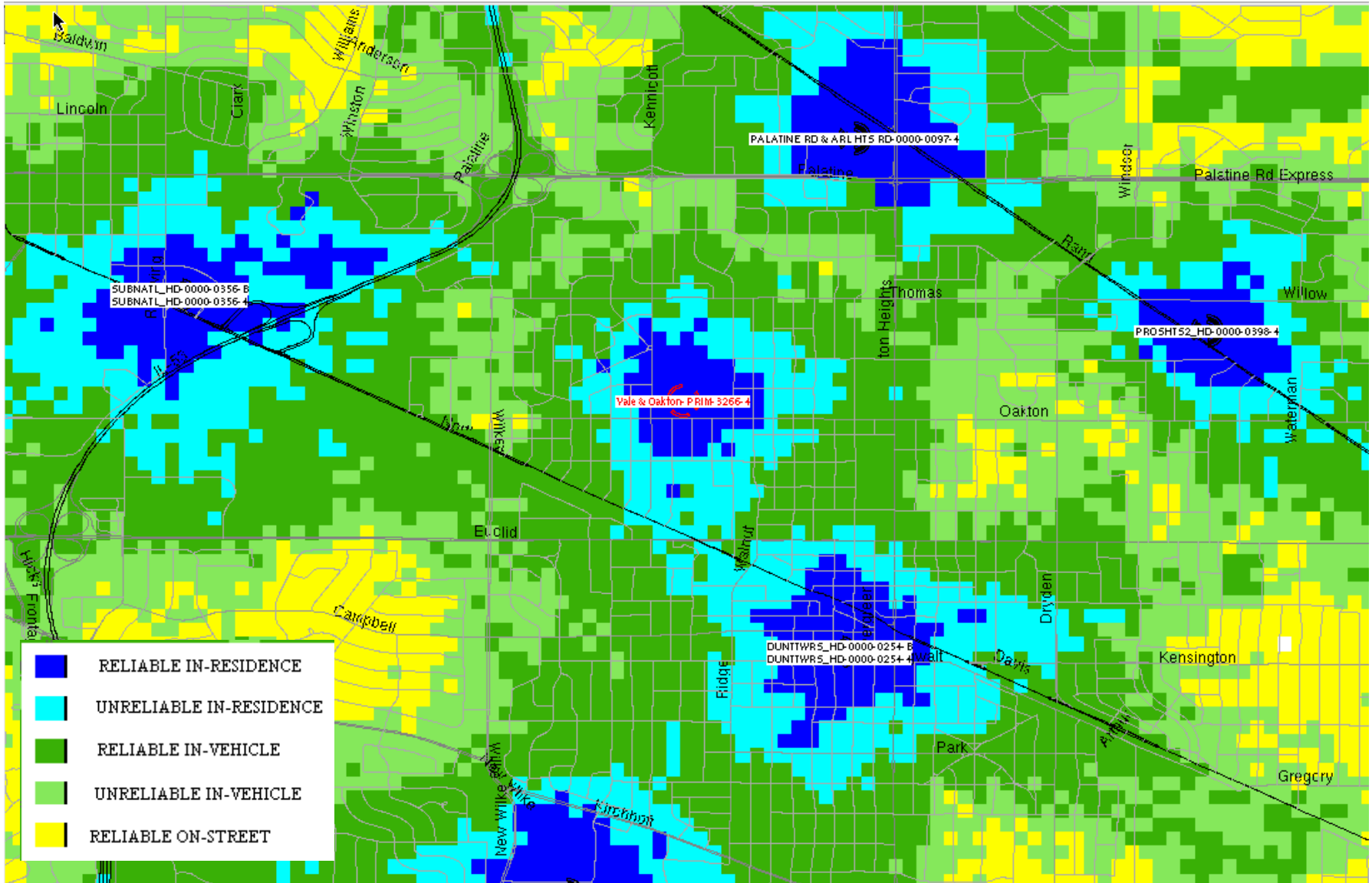
Verizon Wireless proprietary information

YALE & OAKTON- Existing Coverage



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YALE & OAKTON – PROPOSED COVERAGE



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Verizon Rooftop Antenna at Lutheran Home
800 W. Oakton
Prepared by: The Village of Arlington Heights
Department of Planning & Community Development
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