



PLANNING COMMISSION MEETING AGENDA REGULAR MEETING

500 W. Big Beaver
Troy, MI 48084
(248) 524-3364
www.troymi.gov
planning@troymi.gov

John J. Tagle, Chair, Donald Edmunds, Vice Chair
Michael W. Hutson, Edward Kempen, Tom Krent, Philip Sanzica
Gordon Schepke, Robert Schultz and Thomas Strat

September 10, 2013

7:00 P.M.

Council Chambers

1. ROLL CALL
2. APPROVAL OF AGENDA
3. APPROVAL OF MINUTES – August 27, 2013 Special/Study Meeting
4. PUBLIC COMMENTS – For Items Not on the Current Agenda

PRELIMINARY SITE PLAN REVIEW

5. PRELIMINARY SITE PLAN REVIEW (File Number SP 979 A) – Proposed Galleria of Troy Phase II, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

OTHER BUSINESS

6. PUBLIC COMMENTS – For Items on Current Agenda
7. PLANNING COMMISSION COMMENTS

ADJOURN

NOTICE: People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at clerk@troymi.gov or by calling (248) 524-3317 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.

Chair Tagle called the Special/Study meeting of the Troy City Planning Commission to order at 7:00 p.m. on August 27, 2013 in the Council Chambers of the Troy City Hall.

1. ROLL CALL

Present:

Donald Edmunds
Michael W. Hutson
Edward Kempen
Tom Krent
Gordon Schepke
Robert Schultz
Thomas Strat
John J. Tagle

Absent:

Philip Sanzica

Also Present:

R. Brent Savidant, Planning Director
Susan Lancaster, Assistant City Attorney
Ben Carlisle, Carlisle/Wortman Associates, Inc.
Frank Boudon, Student Representative
Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

Resolution # PC-2013-08-066

Moved by: Edmunds
Seconded by: Strat

RESOLVED, To approve the Agenda as prepared.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

3. APPROVAL OF MINUTES

Resolution # PC-2013-08-067

Moved by: Kempen
Seconded by: Krent

RESOLVED, To approve the minutes of the August 13, 2013 Regular meeting as published.

Yes: All present (8)
Absent: Sanzica

MOTION CARRIED

4. PUBLIC COMMENTS – Items not on the Agenda

There was no one present who wished to speak.

5. ZONING BOARD OF APPEALS (ZBA) REPORT

No report; there was no Zoning Board of Appeals meeting this month.

6. DOWNTOWN DEVELOPMENT AUTHORITY (DDA) REPORT

No report; there was no Downtown Development Authority meeting this month.

7. PLANNING AND ZONING REPORT

Mr. Savidant reported the Brownfield Redevelopment Authority considered and approved the proposed Brownfield Redevelopment Plan #6 for 100 E. Maple Road, MJR Theatres Troy Grand Cinema 16.

POSTPONED ITEM

8. CONDITIONAL REZONING APPLICATION (File Number CR 009) – Proposed Troy Marriott Hotels, West side of Stephenson Highway, North of 14 Mile (333 Stephenson Highway), Section 35, From O (Office) District to OM (Office Mixed Use) District

Mr. Carlisle gave a brief summary of the conditional rezoning request. At the July 23, 2013 Regular meeting, the applicant offered to come back to the Planning Commission with a site plan as a condition. Mr. Carlisle identified the proposed conditions offered by the applicant and addressed the preliminary site plan with respect to site arrangement, parking, site access, landscaping, lighting and elevations. Mr. Carlisle recommended that the site planning issues identified in his report, dated August 15, 2013, are addressed prior to a recommendation of approval by the Planning Commission.

Present to represent the applicant were Victor Saroki and Jeffrey Ryntz of Victor Saroki and Associates, and Andy Wakeland of Giffels Webster. Akram Namou of A&M Hospitality was also present.

Mr. Saroki addressed the proposed mitigation of concerns voiced by the residential neighbors, site plan concerns identified by the Planning Consultant, potential to use designated loading zones for additional landscaping, hotel occupancy and staff. Mr. Saroki said they did look into orienting placement of the building so that the majority of windows would not face the residential side, and it resulted in an awkward layout with the buildings being closer to the residential property line. Mr. Saroki also addressed the building materials, building heights and lighting. Color renderings of the hotels were displayed.

Mr. Wakeland said Marriott Hotels would not agree to frosted windows as suggested at the previous meeting. He indicated Marriott Hotels gave their approval of the site plan as presented this evening. Mr. Wakeland said the applicant is happy to address the site planning issues identified in the Planning Consultant report. He continued to address setbacks, dumpster location, tree heights, bicycle parking, lighting, hotel staff, loading areas and the wall as a sound barrier.

Mr. Namou said he instructed the architectural and engineering team to take to heart the concerns of the residents. He indicated Marriott Hotels is satisfied with the strategic location of the proposed hotels and has given its approval to go forward.

There was discussion on:

- Site line profile.
- Landscaping; types, heights, growth timeline.
- Lighting; islands.
- Wall; sound barrier, height.
- Loading zones; additional landscaping, landbanked parking.
- Elevation and building facades.
- Access drive.
- Stormwater management.
- Role of Planning Commission as a recommending body.

PUBLIC HEARING OPENED

The following residents voiced opposition to the proposed rezoning:

Nick Penchoff, 302 Redwood

James Stone, 314 Redwood

Jim Kaltz, 286 Burtman

Sally Wilsher, 350 Redwood

Mary Jo Austin, 242 Redwood

Mike Landreth, 218 Redwood

Matt Morrison, 182 Redwood

Cynthia Wilsher, 369 E Maple

Randall Kriebel, 277 Redwood

Speaker did not sign in, stated address as 254 Redwood

Tom Norton, 1331 Key West (signed in at that address, City records show address as 1332 Key West, submitted photographs)

Bill Ring, 362 Redwood

Joan Devera, 157 Redwood

PUBLIC HEARING CLOSED

The Board thanked residents for attending the meeting to voice their concerns.

Resolution # PC-2013-08-068

Moved by: Hutson
 Seconded by: Edmunds

RESOLVED, To postpone the item to the October 8, 2013 Regular meeting to provide the applicant an opportunity to address issues identified in the Planning Consultant reported dated August 15, 2013.

Yes: All present (8)
 Absent: Sanzica

MOTION CARRIED

Chair Tagle called for a break at 8:59 p.m. The meeting reconvened at 9:06 p.m.

STUDY ITEM

- 9. POTENTIAL PLANNED UNIT DEVELOPMENT (PUD) – Proposed Mixed Use PUD Project, Northeast corner of Crooks Road and I-75 (5498-5500 Crooks), Section 9, Currently Zoned OM (Office Mixed Use) District

Mr. Savidant introduced the team members of the proposed development project.

Present were Remo Polselli, CEO of New California Hotel Corporation, and project architect, Jason Krieger of Krieger Klatt Architects. Collectively they introduced the proposed redevelopment plans for the Met Hotel. The plans include a 35,000 square foot retail center facing the property, a 500 seat amphitheater in the hotel courtyard and a fine dining restaurant at the former Charley’s Crab restaurant location.

Members of the Planning Commission expressed their enthusiasm for the proposed development.

OTHER BUSINESS

- 10. PUBLIC COMMENT – Items on Current Agenda

There was no one present who wished to speak.

- 11. PLANNING COMMISSION COMMENT

There were general Planning Commission comments.

The Special/Study meeting of the Planning Commission adjourned at 9:47 p.m.

Respectfully submitted,

John J. Tagle, Chair

Kathy L. Czarnecki, Recording Secretary

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DATE: September 6, 2013

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PRELIMINARY SITE PLAN REVIEW (File Number SP 979 A) – Proposed Galleria of Troy Phase II, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

The petitioner Galleria of Troy LLC submitted the above referenced Preliminary Site Plan Approval application for two hotels. This application comprises Phase II of the buildout plan for this site. Phase I, which is under construction, included two restaurants and a retail building along the Big Beaver frontage.

The property is currently zoned BB (Big Beaver) District. The Planning Commission is responsible for granting Preliminary Site Plan Approval for this item.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the project. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and the recommendations included therein.

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.

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PROPOSED RESOLUTION

PRELIMINARY SITE PLAN REVIEW (File Number SP 979 A) – Proposed Galleria of Troy Phase II, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District

Resolution # PC-2013-09-

Moved by:

Seconded by:

RESOLVED, That Preliminary Site Plan Approval for the Proposed Galleria of Troy Phase II, North side of Big Beaver between Wilshire and I-75, Section 21, Currently Zoned BB (Big Beaver) District, be postponed, for the following reason:

1. Provide the applicant an opportunity to address the issues identified in the Report and mentioned by the Planning Commission.

Yes:

No:

Absent:

MOTION CARRIED / FAILED

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GALLERIA OF TROY PHASE II

City of Troy Planning Department



Legend:

315 0 158 315 Feet

Scale 1: 1,892

Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Printed: 8/22/2013



Legend:

Form Based Zoning (Current)

- (PUD) Planned Unit Development
- (CF) Community Facilities District
- (EP) Environmental Protection District
- (BB) Big Beaver Road (Form Based)
- (MR) Maple Road (Form Based)
- (NN) Neighborhood Nodes (A-U)
- (CB) Community Business
- (GB) General Business
- (IB) Integrated Industrial Business District
- (O) Office Building District
- (OM) Office Mixed Use
- (P) Vehicular Parking District
- (R-1A) One Family Residential District
- (R-1B) One Family Residential District
- (R-1C) One Family Residential District
- (R-1D) One Family Residential District
- (R-1E) One Family Residential District
- (RT) One Family Attached Residential District
- (MF) Multi-Family Residential
- (MHP) Manufactured Housing
- (UR) Urban Residential
- (RC) Research Center District
- (PV) Planned Vehicle Sales

420 0 210 420 Feet

Scale 1: 2,523



CARLISLE/WORTMAN ASSOCIATES, INC.
Community Planners /Landscape Architects

605 S. Main, Suite 1
Ann Arbor, MI 48104
734-662-2200
fax 734-662-1935

6401 Citation Drive, Suite E
Clarkston, MI 48346
248-625-8480
fax 248-625-8455

September 4, 2013

Preliminary Site Plan Review For City of Troy, Michigan

Applicant: Group 10 Management

Project Name: Galleria of Troy – Phase II

Plan Date: August 21, 2013

Location: Northeast corner of Big Beaver Road and Wilshire

Zoning: BB, Big Beaver Form-Based District

Action Requested: Preliminary Site Plan Approval

Required Information: Deficiencies noted

PROJECT AND SITE DESCRIPTION

We received a site plan and accompanying documents for phase II of a proposed commercial development at the lot located at the northeast corner of Big Beaver and Wilshire/Troy Plaza Drive. Phase I included two restaurants (Carrabbas Italian Grill and Bonefish Grill), and a retail building.

Phase II of the development is located behind Phase I and adjacent to Wilshire Drive. The applicant is proposing a 122-room, 4-story Hampton Inn and a 114-room, 5-story Hilton Garden Inn. The Hampton Inn is set adjacent to Wilshire and the Hampton Garden Inn is set back into the site adjacent to I-75.

The property is zoned Big Beaver Form-Based District. The proposed development and mix of uses are by-right and only require Site Plan Review approval from the Planning Commission.

Galleria of Troy
September 4, 2013

Size of Subject Property:
The property is 3.488 acres for Phase II.

Location of Subject Property:
Northeast corner of Big Beaver Road and Wilshire Drive

Proposed Uses of Subject Parcel:
Two Hotels

Current Use of Subject Property:
Vacant

Current Zoning:
The property is currently zoned Big Beaver Form Based Code



Direction	Zoning	Use
North	BB, Big Beaver Form Based	Commercial
South	BB, Big Beaver Form Based	Commercial
East	I-75	I-75
West	BB, Big Beaver Form Based	Commercial

MASTER PLAN

The site was identified in the Big Beaver Corridor Study as one of five Corridor “Gateway” locations. The plan calls for:

- Building from lot line to lot line along the right-of-way rather than continuing to be a collection of isolated towers.
- Incorporation of multiple level buildings which includes vertically integrated mixed-use commercial, office and residential towers.
- The use of prominent ground floor retail, restaurants and cafes allows visual interest and activity for visitors and residents.
- Contain parking in structures that are shared by surrounding developments.
- Parking in rear and not visible from major throughfares.
- Buildings set close to the street.

Because of its high visibility and prominence, a key to site integration and cohesiveness is a consistent building design pattern as well as the treatment and interaction between the hotels and Phase I buildings. Listed below are site plan issues that the applicant should address to better meet the vision and intent of the Master Plan.

Items to be Addressed: Address site plan issues to ensure development is consistent with Master Plan.

SITE ARRANGEMENT

The applicant has oriented both hotels parallel to Wilshire Drive and I-75. The Hampton Inn is set adjacent to Wilshire and the Hampton Garden Inn is set back into the site adjacent to I-75.

As we noted in the review of the Phase I of this development, and indicated by the Planning Commission and reiterated in the Big Beaver Corridor Study, the 2008 Troy Master Plan, the Big Beaver Design Guidelines, and the Big Beaver Form-Based District zoning requirements, the City has high standards for development on Big Beaver. Though these hotels will be over 500-feet from Big Beaver, they will have a strong visible presence. Through creative site planning there is an opportunity to construct a signature development on this site. We drafted a memo to the applicant in March outlining initial recommendations regarding the future layout of this phase in relation to Phase I. Our recommendations included:

- Orient one hotel parallel to Big Beaver to create a backdrop and visual element for the Phase I buildings.
- The Hilton Garden Inn incorporates greater architectural details. Due to higher visibility from Big Beaver and Wilshire Drive place the Hilton Garden Inn along Wilshire Drive and move the Hampton Inn to the rear of the site.

- Move buildings to closer Wilshire Drive to create a presence along Wilshire Drive.
- Incorporate ground floor retail uses into the hotels.
- Create a distinctive entrance off Wilshire Drive.
- Reconfigure boulevard breaks on Wilshire Drive if necessary to allow for better site access and circulation.
- Incorporate common open space or plaza area between hotels.
- Incorporate pedestrian connections throughout site.
- Consolidate and share onsite parking.

While reviewing Phase I, the Planning Commission requested consideration of moving the hotel portion of the development closer to Big Beaver. The applicant should address if this was considered and if so, why it is not achievable.

Overall we find that the applicant has addressed some of our recommendations, including moving the Hampton Inn closer to Wilshire Drive and greater pedestrian connections. However, there are additional site alternatives that should be considered to create a more unified site.

Items to be Addressed: Respond to site alternatives

AREA, WIDTH, HEIGHT, SETBACKS

Required and Provided Dimensions:

Table 5.03.B.4 establishes the dimensional requirements for the building form D:

	Required Allowed	/ Provided	Compliance
Front (Wilshire Drive)	10 foot build-to-line. 75% of the building façade must meet the required building line, while up to 25% of the façade can be set back to allow for architectural consideration.	Minimum: 10 feet Maximum: 42 feet	Not-Compliant. The Planning Commission may adjust the required building line to a maximum of 30-feet beyond the property line for projects incorporating a permanent space for an outdoor café, public space, or a cross access drive with an adjacent parcel.
Rear	40 foot minimum	+ 40 feet	Complies
Side	0 foot	12 feet	Complies

Open Space	15 percent	Phase Calculation not provided	II Information not provided
Lot Coverage by Buildings	30 percent	27 % (Phase II)	Complies
Building Height	Minimum: 35 feet Maximum: 66 feet	Hampton: 51 feet Hilton: 60 feet	Complies
Parking	Wilshire Drive: Not located in front yard and screened	Parking is not located in front yard	Complies

The Hampton Inn is not placed parallel to Wilshire Drive, hence the skewed setback from 10-feet in one corner to 42-feet to the other. The 42-foot setback at the northwest corner of the building does not comply with the Big Beaver Road build-to-line. The Planning Commission may adjust the required build-to-line to a maximum of 30-feet beyond the front property line for projects incorporating a permanent space for an outdoor café and public space. At a minimum the applicant must move the building to within 30-feet of Wilshire Drive. The site plan shows a patio/expanded sidewalk in front of the Hampton Inn along Wilshire Drive. This area appears to lack the pedestrian amenities (benches, pedestrian lighting, landscaping) to make it an engaging and inviting space. The applicant should provide additional details for this area.

Items to be Addressed: 1). Move Hampton Inn within 30-feet of Wilshire Drive and add permanent space for an outdoor café and public space to the satisfaction of the Planning Commission; and 2). Provide open space calculation for Phase II.

SITE ACCESS AND CIRCULATION

Vehicular –

Primary site access will be shared with the Phase I access on Wilshire Drive. Secondary access is proposed off the existing Magna private drive. The applicant will need to confirm that Magna has permitted access to share this drive. If Magna has agreed to share the private road, access at this location will be reviewed by the City’s Traffic Consultant. If Magna does not agree, the applicant will need to provide an additional access point of Wilshire Drive.

Pedestrian –

The applicant proposes to install a 5-foot wide sidewalk on Wilshire Drive. If access is provided off the Magna private drive, the applicant shall also install a 5-foot wide walk along the private drive. Internally the applicant has continued the “Pedestrian Spine” from Phase I through Phase II. The applicant should install a pedestrian crossing connection from the sidewalk that runs in front of the Hampton Inn to the Pedestrian Spine both north and south of the hotel’s drop-off area.

Items to be Addressed: 1). Provide written documentation regarding Magna’s approval of sharing of private drive; 2) If Magna has agreed to share its private road, make any access changes based on the review of the City’s Traffic Consultant. If access is provided off the Magna private drive, the applicant shall install a 5-foot wide walk along the private drive. If Magna does not agree, the applicant will need to provide an additional access point of Wilshire Drive; and 3). Install a pedestrian crossing connection

from the sidewalk that runs in front of the Hampton Inn to the Pedestrian Spine both north and south of the hotel's drop-off area.

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Hotel: One (1) space for each room, plus one (1) space per one (1) employee on the largest typical shift	236 Rooms + 18 total employees = 254 spaces	254 spaces
Any additional spaces required for dining establishments	0	
Total	254 spaces	
Barrier Free		
Barrier Free	7	9
Bicycle Parking	4	4
Loading	0	0
Total	254 automobile + 2 bicycle	254 spaces + 4 bicycle

Applicant shall confirm that the hotels do not include restaurants or other uses that would draw non-hotel patrons. If the hotels do not include restaurants, parking is sufficient.

Items to be Addressed: Confirm that the hotels do not include restaurants or other uses that would draw non-hotel patrons.

FLOOR PLAN AND ELEVATIONS

The applicant has submitted floor plans and elevations for both hotels.

Hampton Inn:

- Materials details are not provided.
- The building does not meet ground story activation requirements for the rear/north elevation.
- The rear/north and side/west elevation are visible from Big Beaver and thus present an opportunity to provide a distinguishing architectural presence. Additional architectural details and features should be provided along these elevations.
- Provide additional details regarding patio/sidewalk along Wilshire Drive.
- It appears that this patio area is to be assessable from the first floor pool; however elevations do not indicate this.

Hilton Garden:

- Additional material details need to be provided.

- Rear/north and side/west elevation are visible from Big Beaver and thus present an opportunity to provide a distinguishing architectural presence. Additional architectural details and features should be provided along these elevations.

Design Consistency:

Though free-standing buildings, there is an opportunity to provide a consistent design pattern for both hotel buildings as well as Phase I buildings. The applicant should indicate the use of materials and design features that provide design consistency. The applicant should provide a color rendering to ensure design interest and consistency.

Design Examples of Hilton Garden Inn and Hampton Inn that should be considered by Applicant:

The provided building design and material use appear to be the standard Hilton Garden Inn and Hampton Inn elevations. The Big Beaver Design Guidelines state that all buildings on Big Beaver should be “unique and attractive structures built of high-quality materials and should avoid being “branded” so as to allow for their adaptation to future tenants.”

Below are design examples of other Hilton Garden Inn and Hampton Inns that show greater ground story fenestration and other unique architectural features:



Galleria of Troy
September 4, 2013



Galleria of Troy
September 4, 2013





Items to be Addressed: Address architectural comments for each building

LANDSCAPING

The applicant has provided a landscape plan. The plan provides all necessary calculations regarding greenbelt, street trees, and parking lot landscaping requirements.

	<u>Required:</u>	<u>Provided:</u>	<u>Compliance:</u>
<u>Street Trees:</u> The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.	Wilshire Drive: 15	15	Compliant
<u>Site landscaping:</u> A minimum of twenty percent (20%) of the site area shall be comprised of landscape material.	20%	Exceeds 20%	Compliant
<u>Parking Lot Landscaping:</u> 1 tree for every 8 parking spaces. Trees may be located adjacent to parking lot with planning commission approval.	31 trees	31 trees	Compliant

Trash Enclosure:

The trash enclosure for the Hampton Inn is located along Wilshire Drive. The applicant should move the trash enclosure so that is adjacent to the building to provide better screening from Wilshire Drive. Relocating trash enclosure may require slight reconfiguration of the parking lot.

The trash enclosure for the Hilton Garden Inn is located adjacent the south side of the building. The

applicant should switch the location to then north side of the building, so that the building would screen dumpster area from Big Beaver Road and the Phase I parking lot.

Items to be Addressed: 1). Relocate Hampton Inn trash enclosure adjacent to the building to provide better screening from Wilshire Drive; and 2). Relocate Hilton Garden Inn trash enclosure to the north side of the building.

LIGHTING

The proposed site lighting consists of twenty-two (22) pole mounted lights. The Hampton Inn includes thirty (30) building and canopy lights. The Hilton Garden Inn includes forty-seven (47) building and canopy lights. In addition the site includes twenty-one ground lights that illuminate pedestrian areas. The pole mounted lights are night time sky compliant. The applicant shall confirm that the building lights are fully shielded. The photometrics comply with ordinance requirements.

Items to be Addressed: Confirm that all building lights are fully shielded.

DESIGN STANDARDS

The Big Beaver design standards provide the Planning Commission with direction when reviewing the proposed design features of this development.

Façade Variation.

The maximum linear length of an uninterrupted building façade facing public streets and/or parks shall be thirty (30) feet. **Through the use of material changes, projections, façade articulation and fenestration, the all buildings comply with this standard.**

Pedestrian Access / Entrance.

- a. **Primary Entrance:** The primary building entrance shall be clearly identifiable and useable and located in the front façade parallel to the street. **A primary entrance for the Hampton Inn does not front of Wilshire Drive. An enhanced entrance must be provided either on the rear/north elevation or the side/west elevation.**
- b. **Pedestrian Connection.** The pedestrian connection shall be fully paved and maintained surface not less than five (5) feet in width. **Provided the applicant addresses the pedestrian connections noted above, this requirement is met.**
- c. **Additional Entrances.** In addition to the primary façade facing front façade and/or the right-of-way, if a parking area is located in the rear or side yard, must also have a direct pedestrian access to the parking area that is of a level of materials quality and design emphasis at least equal to that of the primary entrance. **An enhanced entrance must be provided either on the rear/north elevation or the side/west elevation.**

Ground Story Activation.

The first floor of any front façade facing a right-of-way shall be no less than fifty (50) percent windows and doors, and the minimum transparency for facades facing a side street, side yard, or parking area shall be no less than 30 percent of the façade. Transparency alternatives are permitted up to 80% of the 50% total along the front of buildings, and up to 100% of the sides of buildings. The minimum transparency requirement shall apply to all sides of a building that abut an open space, including a side yard, or public right-of-way. Transparency requirements shall not apply to sides which abut an alley.

It appears that the south/rear elevation of the Hampton Inn does not meet this requirement. The applicant shall provide the necessary calculation to confirm if the ground story activation requirement is met.

In addition, the rear/north and side/west elevation are visible from Big Beaver and thus present an opportunity to provide a distinguishing architectural presence. Additional architectural details and features should be provided along these elevations.

Transitional Features

- a. *Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.*

Due to proximity of other commercial uses, the commercial development is not a more intense use which would require transitional features.

Site Access and Parking

- a. ***Required Parking.*** *Off-street parking shall be provided in accordance with the standards set forth in Article 13, Site Design Standards. **The applicant is providing the permitted parking.***
- b. ***Location.***
 - I. *When parking is located in a side yard (behind the front building line) but fronts on the required building line, no more than fifty (50) percent of the total site's linear feet along the required building line or one hundred (100) feet, whichever is less, shall be occupied by parking. **Not Applicable***
 - II. *For a corner lot, shall be no more than fifty (50) percent of the site's cumulative linear feet along the required building lines or one hundred (100) feet, whichever is less, shall be occupied by parking. The building shall be located in the corner of the lot adjacent to the intersection. **The requirement is met***
 - III. *For a double frontage lot or a lot that has frontage on three (3) streets, the cumulative total of all frontages occupied by parking shall be no more than sixty-five (65) percent of the total site's linear feet along a required building line or one hundred and twenty-five (125) feet, whichever is less. **Not Applicable***

- IV. *Where off-street parking is visible from a street, it should be screened in accordance with the standards set forth in Section 13.02.C. **The applicant has screened their parking lot in compliance with section 13.0.2.C.***

Items to be Addressed: 1). Provide a primary entrance for the Hampton Inn along Wilshire Drive; 2). Include greater transparency along rear/south elevation of Hampton Inn; and 3). Add additional architectural details and features along the south/rear and side/west elevations for both buildings.

SUMMARY OF FINDINGS

Overall we support the conceptual development of this site; however we find there are specific site planning issues and architectural details that need to be addressed to the satisfaction of the Planning Commission. These include:

- Site Planning Considerations:
 - Orient one hotel parallel to Big Beaver to create a backdrop and visual element for the Phase I buildings.
 - The Hilton Garden Inn incorporates greater architectural details. Due to higher visibility from Big Beaver and Wilshire Drive consider placing Hilton Garden Inn along Wilshire Drive and moving the Hampton Inn to the rear of the site.
 - Incorporate ground floor retail uses into the hotels.
 - Create a distinctive entrance off Wilshire Drive.
 - Reconfigure boulevard breaks on Wilshire Drive if necessary to allow for better site access and circulation.
 - Incorporate common open space or plaza area between hotels.
 - Provide a primary entrance to Hampton Inn either on the rear/north elevation or the side/west elevation.
- Architectural Considerations:
 - Materials details are not provided.
 - Hampton Inn building does not meet ground story activation requirements for the rear/north elevation.
 - Provide additional details regarding patio/sidewalk along Wilshire Drive.
 - It appears that this patio area along Wilshire is to be assessable from the Hampton Inn first floor pool; however elevations do not indicate this.
 - Provide a color rendering to ensure design interest and consistency.
 - The rear/north and side/west elevation are visible from Big Beaver and thus present an opportunity to provide a distinguishing architectural presence. Additional architectural details and features should be provided along these elevations.
 - Relocate Hampton Inn trash enclosure adjacent to the building to provide better screening from Wilshire Drive.
 - Relocate Hilton Garden Inn trash enclosure to the north side of the building.

In addition, access needs to be confirmed. The applicant needs to provide written documentation regarding Magna's approval of sharing of private drive. If Magna has agreed to share its private road, make any access changes based on the review of the City's Traffic Consultant. If access is provided off the Magna private drive, the applicant shall install a 5-foot wide walk along the private drive. If Magna does not agree, the applicant will need to provide an additional access point off Wilshire Drive.

Galleria of Troy
September 4, 2013

Benjamin R. Carlisle

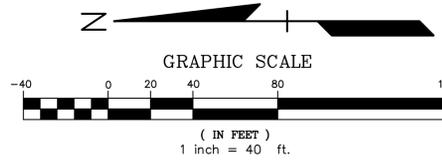
CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

LEGAL DESCRIPTION

PARCEL ID 88-20-21-326-012
(Per First American Title Insurance Company Order #57019714)

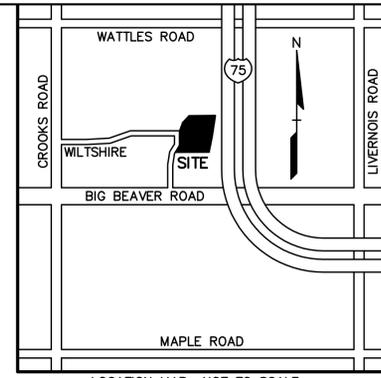
Land Situated in the City of Troy in the County of Oakland in the State of Michigan:

Real property in the City of Troy, County of Oakland, State of Michigan, described as follows: All that part of the Southeast 1/4 of the Southwest 1/4 of Section 21, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, being more particularly described as commencing at the Southwest corner of said Section 21; thence North 87°28'55" East along the South line of said Section 21, a distance of 1803.74 feet and North 02°31'05" West, 733.14 feet to the point of beginning; thence North 79°31'26" West, 370.39 feet to a point on the Easterly right-of-way line of Wilshire Drive (120' wide); thence along a curve to the left a distance of 58.28 feet (having a radius of 510.00 feet and a chord bearing and distance of North 01°45'33" East 58.22 feet); thence North 02°01'28" West, 105.29 feet; thence North 77°34'16" East, 10.70 feet; thence North 88°05'10" East, 213.71 feet; thence along a curve to the left a distance of 67.44 feet (having a radius of 50.00 feet and a chord bearing and distance of North 49°28'44" East 62.44 feet); thence North 10°48'18" East, 174.77 feet; thence along a curve to the right a distance of 67.33 feet (having a radius of 43 feet and a chord bearing and distance of North 01°45'33" East 58.22 feet); thence North 02°01'28" West, 105.29 feet; thence North 55°39'43" East, 60.66 feet; thence South 79°28'52" East, 238.80 feet to a point on the Westerly line of Interstate I-75; thence continuing along said Westerly line the following two courses: South 23°06'06" West, 258.44 feet and South 30°30'43" West, 238.41 feet to the point of beginning. Containing 3.49 Acres



TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:
PORTIONS OF THE PHASE I TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY NOWAK AND FRAUS ALTA/ACSM LAND TITLE SURVEY, JOB #3-9560-07, DATED AUG. 7, 2000
PROFESSIONAL ENGINEERING ASSOCIATES, INC. WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

BENCHMARKS (USGS DATUM)
BM #NF-100
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±525 FEET NORTH OF BIG BEAVER ROAD. ELEV. 699.50
BM #NF-200
ARROW ON HYDRANT ON THE WEST SIDE OF TROY CENTER DRIVE, ±1025 FEET NORTH OF BIG BEAVER ROAD. ELEV. 700.76



LEGEND
● IRON FOUND
⊗ IRON SET
⊗ NAIL FOUND
⊗ NAIL & CAP SET
⊗ SEC. CORNER FOUND
⊗ MONUMENT FOUND
⊗ MONUMENT SET
R RECORDED
M MEASURED
C CALCULATED

EXISTING
-OH-ELEC-W- O ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
-UG-CATV- UG UNDERGROUND CABLE TV, CATV PEDESTAL
-UG-PHONE- UG TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
-UG-ELEC- UG ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
-GAS- GAS MAIN, VALVE & GAS LINE MARKER
-WATER- WATERMAIN, H.D., GATE VALVE, TAPPING SLEEVE & VALVE
-SEWER- SANITARY SEWER, CLEANOUT & MANHOLE
-STORM- STORM SEWER, CLEANOUT & MANHOLE
-COMB- COMBINED SEWER & MANHOLE
CATCH BASIN
WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
UNIDENTIFIED STRUCTURE
SPOT ELEVATION
AS BUILT ELEVATION
CONTOUR LINE
FENCE
GUARD RAIL
STREET LIGHT
SIGN
CONC. CONCRETE
ASPH. ASPHALT

REFERENCE DRAWINGS
ELECTRIC DTE OUTSIDE SALES MAP #313-388 RECEIVED 11/08/12
TELEPHONE SBC U.G. LOCATION MAP, PEA OF MICHIGAN PLAN 86-802, DATED 10/23/86
GAS CONSUMERS ENERGY GAS DIST. MAP 02-61-21-3, DATED 02/19/05
PETROLEUM WOLVERINE PIPE CO. NO SERVICES LETTER DATED 11/08/12
CATV COMCAST SERVICE SKETCH, RECEIVED 11/08/12
FLOOD PLAN FEMA COMMUNITY PANEL #261250533F, DATED SEPTEMBER 29, 2006
OTHER NOWAK AND FRAUS, ALTA SURVEY, DATED AUG. 7, 2000, JOB #3-9560-07

FLOODPLAIN NOTE:
SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 261250533F DATED SEPTEMBER 29, 2006.

REVISIONS table with columns: NO., BY, DATE, DESCRIPTION

CAUTION!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO QUANTITIES ARE EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND FOR DETERMINING THE EXACT UTILITY DEPTHS.
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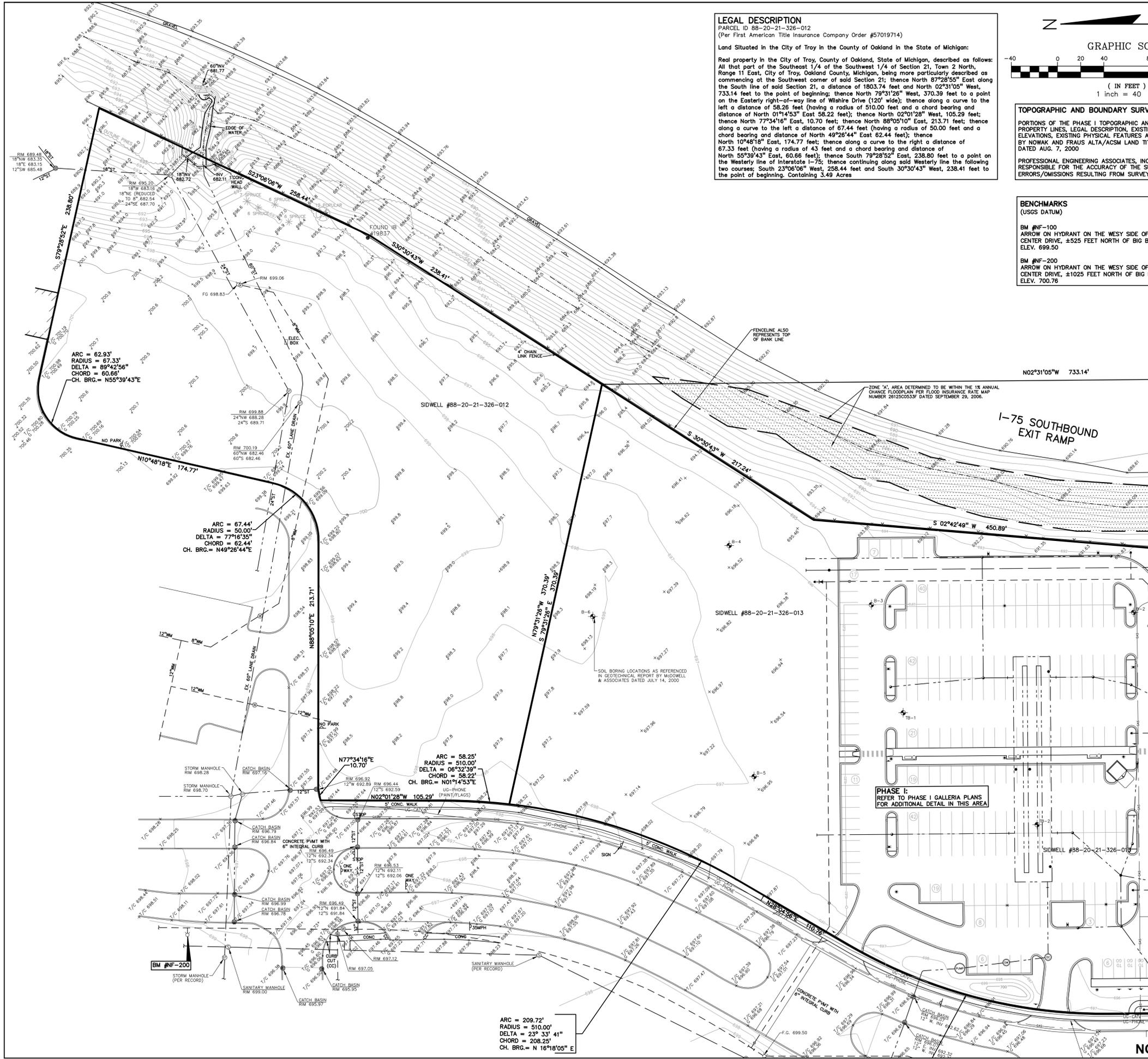
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TOPOGRAPHIC SURVEY
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DES. P.M. SUR. KTR. P.M.
DN. PB. SUR. KTR. P.M.

ORIGINAL ISSUE DATE: AUG. 19, 2013
PEA JOB NO. 2012-070
SCALE: 1" = 40'
DRAWING NUMBER: **P-1.0**

NOT FOR CONSTRUCTION

KREF: L:\2012070\DWG\12070-10070.DWG
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KREF: L:\2012070\DWG\SITE PLAN-PHASE II\BLK-12070(PH2).DWG

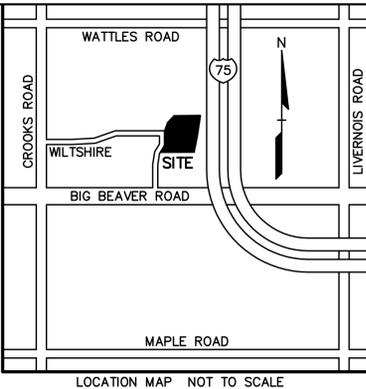
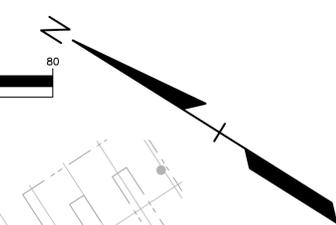
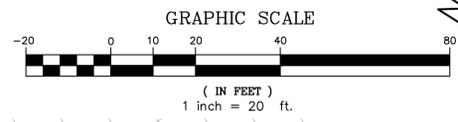
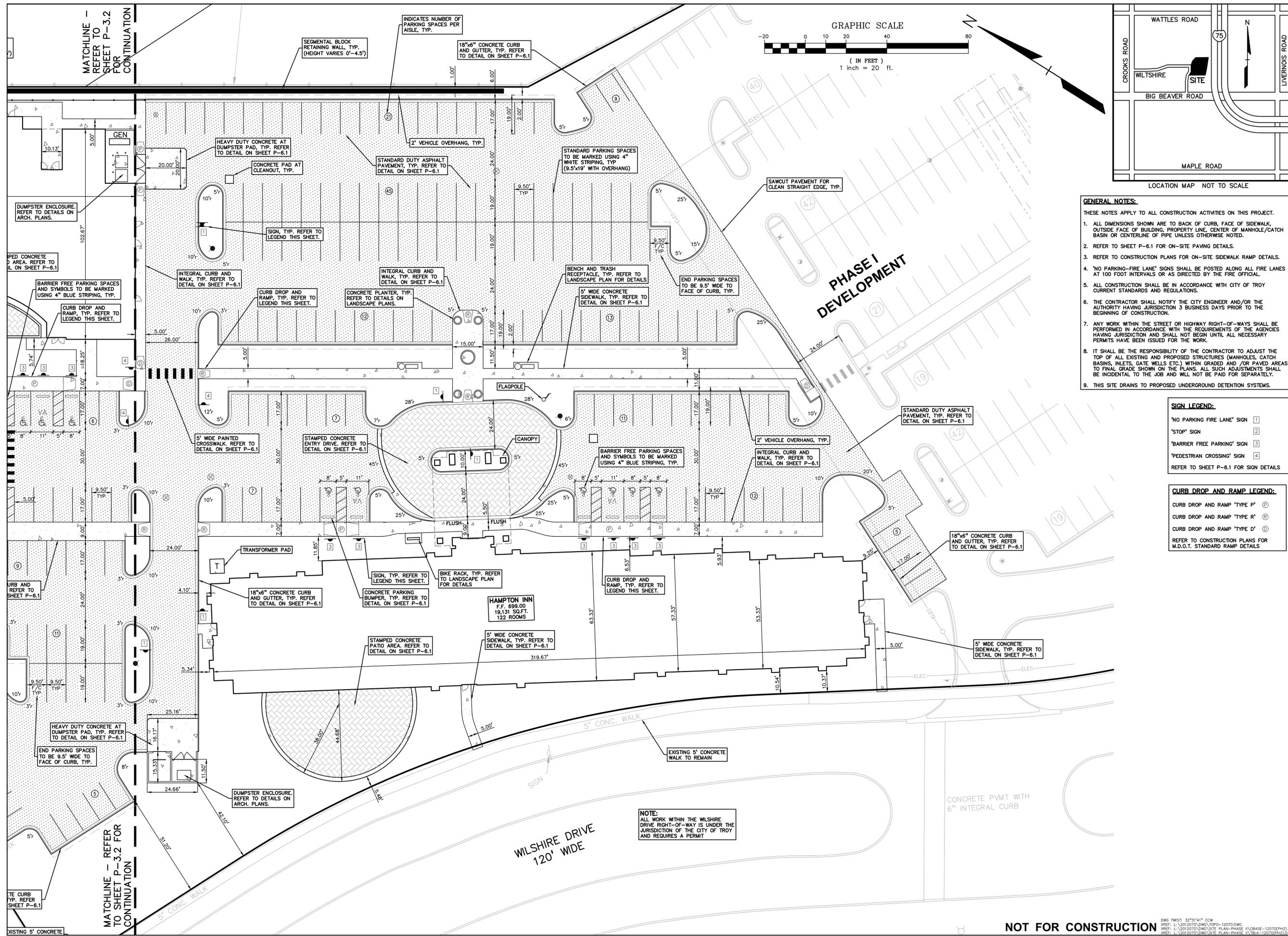


ARC = 62.93'
RADIUS = 67.33'
DELTA = 69°42'56"
CHORD = 60.66'
CH. BRG. = N55°39'43"E

ARC = 67.44'
RADIUS = 50.00'
DELTA = 77°16'35"
CHORD = 62.44'
CH. BRG. = N49°28'44"E

ARC = 58.25'
RADIUS = 510.00'
DELTA = 06°32'39"
CHORD = 58.22'
CH. BRG. = N01°45'33"E

ARC = 209.72'
RADIUS = 510.00'
DELTA = 23° 33' 41"
CHORD = 208.25'
CH. BRG. = N 16°18'05" E



- GENERAL NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
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 - REFER TO CONSTRUCTION PLANS FOR ON-SITE SIDEWALK RAMP DETAILS.
 - 'NO PARKING-FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
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 - THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
 - ANY WORK WITHIN THE STREET OR HIGHWAY RIGHT-OF-WAYS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND/OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.
 - THIS SITE DRAINS TO PROPOSED UNDERGROUND DETENTION SYSTEMS.

- SIGN LEGEND:**
- 'NO PARKING FIRE LANE' SIGN 1
 - 'STOP' SIGN 2
 - 'BARRIER FREE PARKING' SIGN 3
 - 'PEDESTRIAN CROSSING' SIGN 4
- REFER TO SHEET P-6.1 FOR SIGN DETAILS

- CURB DROP AND RAMP LEGEND:**
- CURB DROP AND RAMP 'TYPE P' P
 - CURB DROP AND RAMP 'TYPE R' R
 - CURB DROP AND RAMP 'TYPE D' D
- REFER TO CONSTRUCTION PLANS FOR M.D.O.T. STANDARD RAMP DETAILS

NO.	BY	DATE	DESCRIPTION

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GROUP 10 MANAGEMENT
30500 NORTHWESTERN HIGHWAY, SUITE #625
FARMINGTON HILLS, MICHIGAN 48334

PRELIMINARY SITE PLAN - SOUTH
THE GALLERIA OF TROY - PHASE II
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. PB DN SUR. KTR. P.M. JPB
L:\2012\201207\DWG\SITE PLAN-PHASE II\3181C-120707PH2.dwg

ORIGINAL ISSUE DATE: AUG. 19, 2013
PEA JOB NO. 2012-070
SCALE: 1" = 20'
DRAWING NUMBER: **P-3.1**

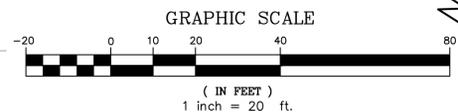
NOT FOR CONSTRUCTION

NOTE:
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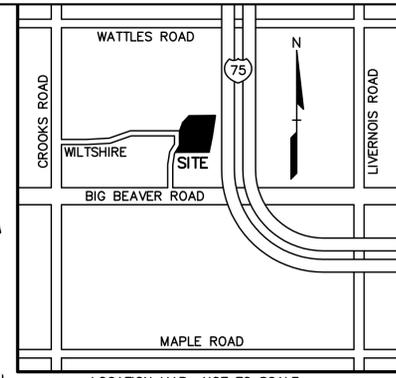
WILTSHIRE DRIVE
120' WIDE

MATCHLINE - REFER TO SHEET P-3.2 FOR CONTINUATION

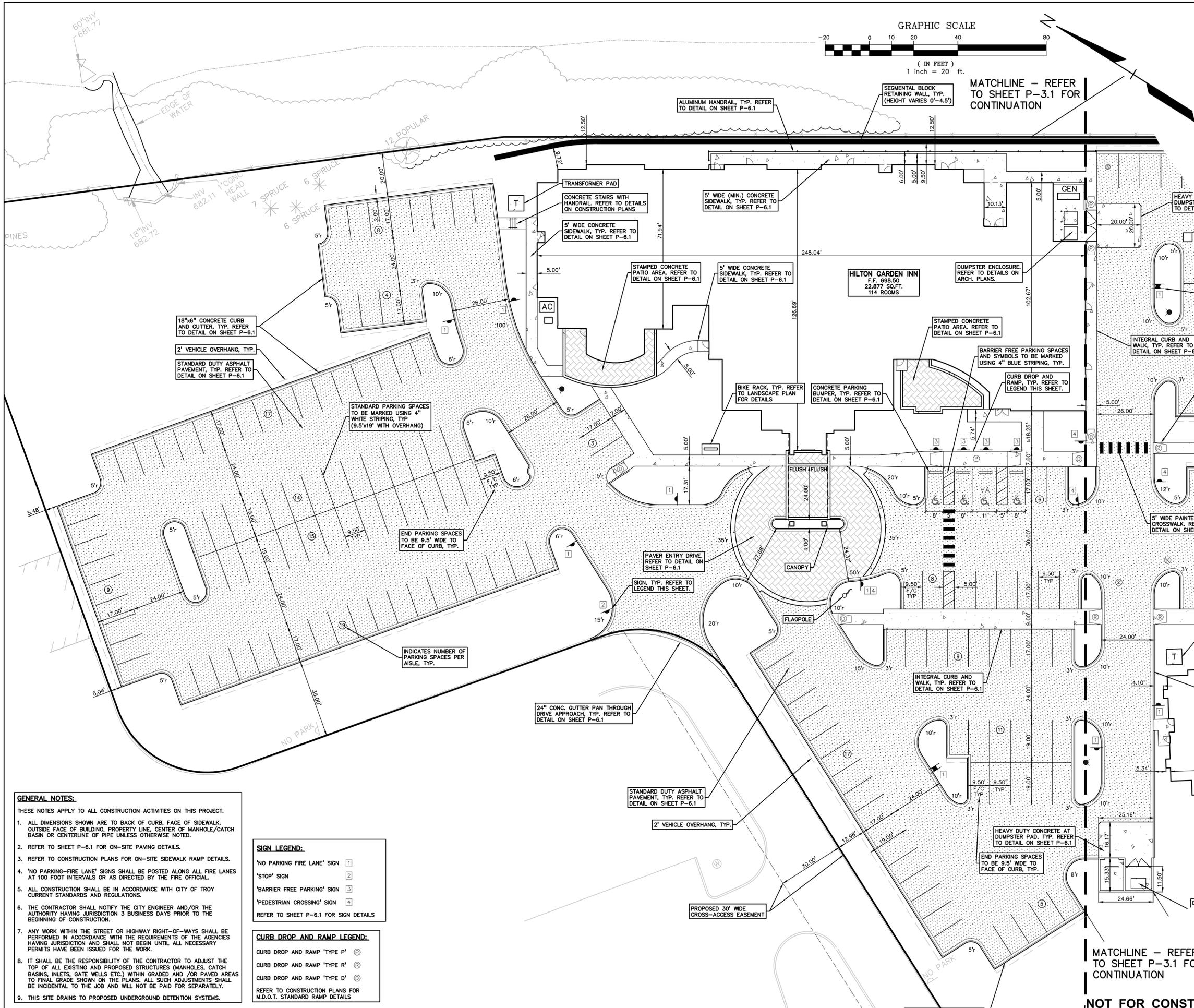
MATCHLINE - REFER TO SHEET P-3.2 FOR CONTINUATION



MATCHLINE - REFER TO SHEET P-3.1 FOR CONTINUATION



NO.	BY	DATE	DESCRIPTION



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SIGN LEGEND:

'NO PARKING-FIRE LANE' SIGN	1
'STOP' SIGN	2
'BARRIER FREE PARKING' SIGN	3
'PEDESTRIAN CROSSING' SIGN	4

REFER TO SHEET P-6.1 FOR SIGN DETAILS

CURB DROP AND RAMP LEGEND:

CURB DROP AND RAMP 'TYPE P'	P
CURB DROP AND RAMP 'TYPE R'	R
CURB DROP AND RAMP 'TYPE D'	D

REFER TO CONSTRUCTION PLANS FOR M.D.O.T. STANDARD RAMP DETAILS

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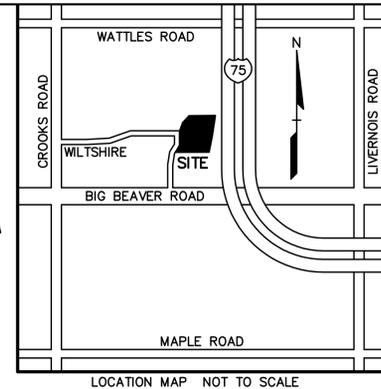
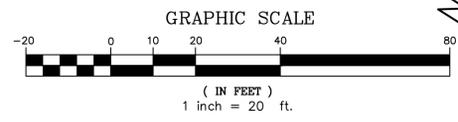
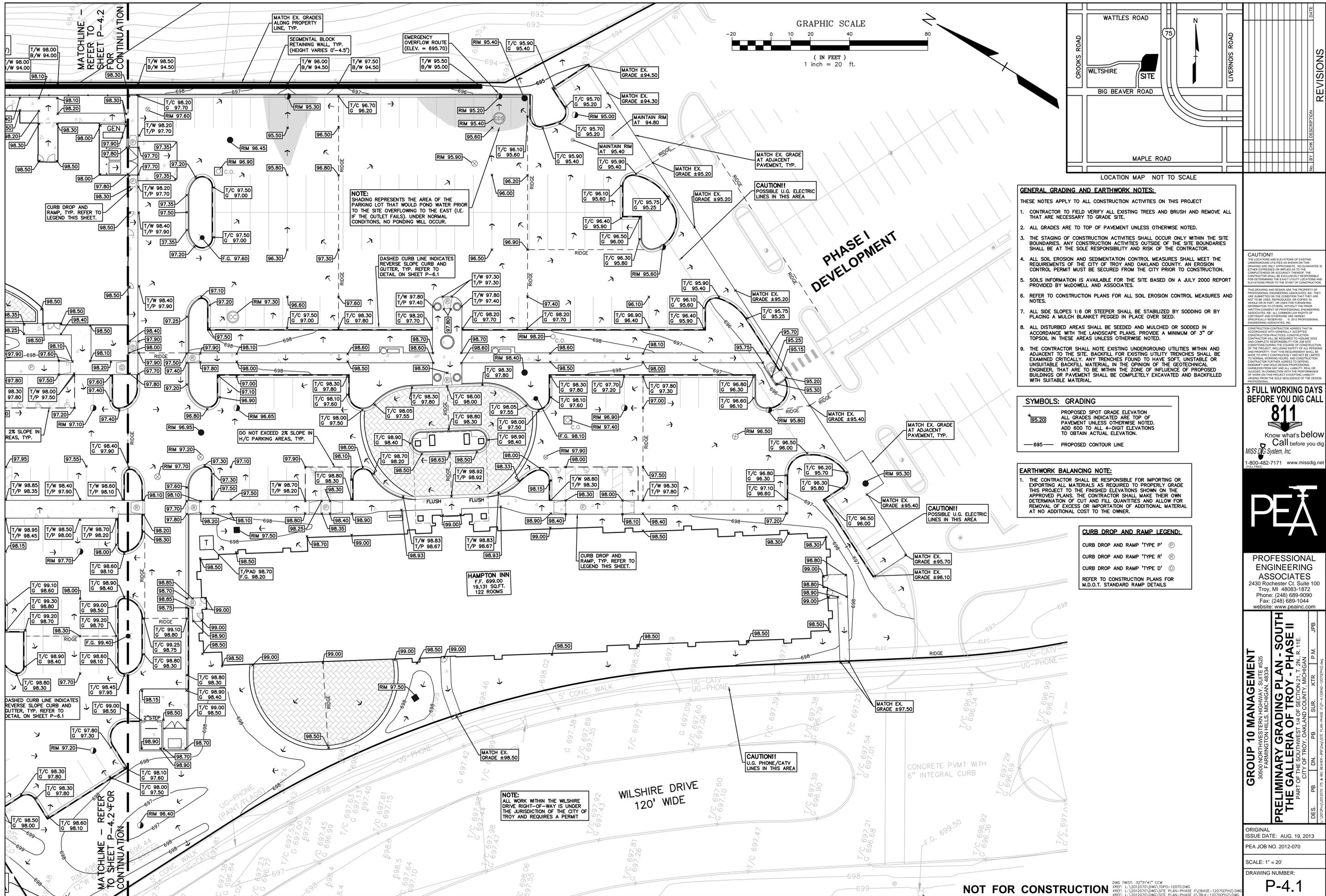
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GROUP 10 MANAGEMENT
 30500 NORTHWESTERN HIGHWAY, SUITE 4625
 FARMINGTON HILLS, MICHIGAN 48334
PRELIMINARY SITE PLAN - NORTH
THE GALLERIA OF TROY - PHASE II
 PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N., R. 11E,
 CITY OF TROY, OAKLAND COUNTY, MICHIGAN
 L:\2012\2012070 DWG\SITE PLAN-PHASE II\3-13-12\12070PH2.dwg

ORIGINAL ISSUE DATE: AUG. 19, 2013
 PEA JOB NO. 2012-070
 SCALE: 1" = 20'
 DRAWING NUMBER: **P-3.2**

NOT FOR CONSTRUCTION

DWG TWIST: 32°31'41" CCW
 XREF: L:\2012070\DWG\TPO-1-2012070.DWG
 XREF: L:\2012070\DWG\SITE PLAN-PHASE II\3-13-12\12070PH2.DWG
 XREF: L:\2012070\DWG\SITE PLAN-PHASE II\3-13-12\12070PH2.DWG



NO.	BY	CHK	DESCRIPTION	DATE

NOTE:
SHADING REPRESENTS THE AREA OF THE PARKING LOT THAT WOULD POND WATER PRIOR TO THE SITE OVERFLOWING TO THE EAST (I.E. IF THE OUTLET FAILS). UNDER NORMAL CONDITIONS, NO PONDING WILL OCCUR.

DASHED CURB LINE INDICATES REVERSE SLOPE CURB AND GUTTER, TYP. REFER TO DETAIL ON SHEET P-6.1

DO NOT EXCEED 2% SLOPE IN H/C PARKING AREAS, TYP.

NOTE:
ALL WORK WITHIN THE WILTSHIRE DRIVE RIGHT-OF-WAY IS UNDER THE JURISDICTION OF THE CITY OF TROY AND REQUIRES A PERMIT

- GENERAL GRADING AND EARTHWORK NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT
- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
 - ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
 - THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
 - ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CITY OF TROY AND OKLAHOMA COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE CITY PRIOR TO CONSTRUCTION.
 - SOILS INFORMATION IS AVAILABLE FOR THE SITE BASED ON A JULY 2000 REPORT PROVIDED BY MCDOWELL AND ASSOCIATES.
 - REFER TO CONSTRUCTION PLANS FOR ALL SOIL EROSION CONTROL MEASURES AND NOTES.
 - ALL SIDE SLOPES 1:6 OR STEEPER SHALL BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
 - ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

- SYMBOLS: GRADING**
- PROPOSED SPOT GRADE ELEVATION
 - ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. ADD 800 TO ALL 4-DIGIT ELEVATIONS TO OBTAIN ACTUAL ELEVATION.
 - PROPOSED CONTOUR LINE

- EARTHWORK BALANCING NOTE:**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

- CURB DROP AND RAMP LEGEND:**
- CURB DROP AND RAMP "TYPE P" (P)
 - CURB DROP AND RAMP "TYPE R" (R)
 - CURB DROP AND RAMP "TYPE D" (D)
- REFER TO CONSTRUCTION PLANS FOR M.D.O.T. STANDARD RAMP DETAILS

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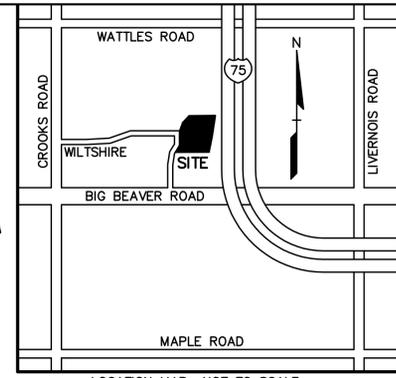
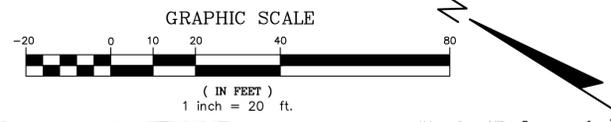
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FARMINGTON HILLS, MICHIGAN 48334

PRELIMINARY GRADING PLAN - SOUTH
THE GALLERIA OF TROY - PHASE II
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CITY OF TROY, OKLAHOMA COUNTY, MICHIGAN

DES. JPB P.M. JPB
DN. JPB SUR. JPB
PB. JPB
KTR. JPB

ORIGINAL ISSUE DATE: AUG. 19, 2013
PEA JOB NO. 2012-070
SCALE: 1" = 20'
DRAWING NUMBER: **P-4.1**

NOT FOR CONSTRUCTION



NO.	BY	DATE	DESCRIPTION

NOTE: SHADING REPRESENTS THE AREA OF THE PARKING LOT THAT WOULD POND WATER PRIOR TO THE SITE OVERFLOWING TO THE ADJACENT DETENTION BASIN (I.E. IF THE OUTLET FAILS). UNDER NORMAL CONDITIONS, NO PONDING WILL OCCUR.

EMERGENCY OVERFLOW ROUTE (ELEV. = 697.50)

MATCH EX. GRADES ALONG PROPERTY LINE, TYP.

SEGMENTAL BLOCK RETAINING WALL, TYP. (HEIGHT VARIES 0'-4.5')

CONCRETE STAIRS WITH HANDRAIL. REFER TO DETAILS ON CONSTRUCTION PLANS.

HILTON GARDEN INN
F.F. 698.50
22,877 SQ.FT.
114 ROOMS

CURB DROP AND RAMP, TYP. REFER TO LEGEND THIS SHEET.

CURB DROP AND RAMP LEGEND:
CURB DROP AND RAMP "TYPE P" (P)
CURB DROP AND RAMP "TYPE R" (R)
CURB DROP AND RAMP "TYPE D" (D)
REFER TO CONSTRUCTION PLANS FOR M.D.O.T. STANDARD RAMP DETAILS

CAUTION! THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THIS DRAWING AND DESIGN ARE THE PROPERTY OF PROFESSIONAL ENGINEERING ASSOCIATES, INC. THEY ARE SUBMITTED TO THE CONTRACTOR THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR ANY PURPOSE OTHER THAN THAT SPECIFICALLY AUTHORIZED BY PROFESSIONAL ENGINEERING ASSOCIATES, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY RESERVED. PROFESSIONAL ENGINEERING ASSOCIATES, INC.

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GROUP 10 MANAGEMENT
30500 NORTHWESTERN HIGHWAY, SUITE 1625
FARMINGTON HILLS, MICHIGAN 48334
PRELIMINARY GRADING PLAN - NORTH
THE GALLERIA OF TROY - PHASE II
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N., R. 11E,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

ORIGINAL ISSUE DATE: AUG. 19, 2013
PEA JOB NO. 2012-070
SCALE: 1" = 20'
DRAWING NUMBER:
P-4.2

GENERAL GRADING AND EARTHWORK NOTES:
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
- ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CITY OF TROY AND OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE CITY PRIOR TO CONSTRUCTION.
- SOILS INFORMATION IS AVAILABLE FOR THE SITE BASED ON A JULY 2000 REPORT PROVIDED BY McDOWELL AND ASSOCIATES.
- REFER TO CONSTRUCTION PLANS FOR ALL SOIL EROSION CONTROL MEASURES AND NOTES.
- ALL SIDE SLOPES 1:6 OR STEEPER SHALL BE STABILIZED BY SODDING OR BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED.
- ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

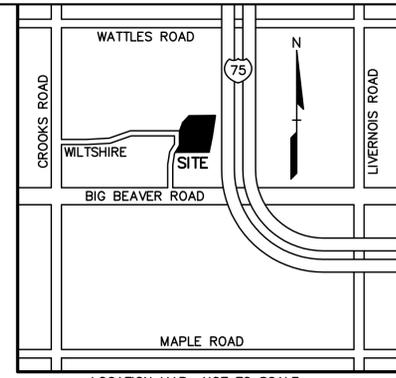
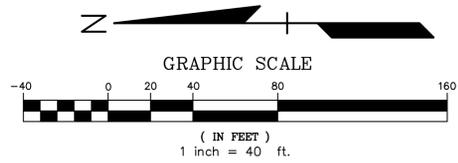
SYMBOLS: GRADING
98.20 PROPOSED SPOT GRADE ELEVATION
ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. ADD 600 TO ALL 4-DIGIT ELEVATIONS TO OBTAIN ACTUAL ELEVATION.
-695- PROPOSED CONTOUR LINE

EARTHWORK BALANCING NOTE:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

NOT FOR CONSTRUCTION

MATCHLINE - REFER TO SHEET P-4.1 FOR CONTINUATION

DWG. TWIST: 32°31'41" CCW
XREF: L:\2012070\DWG\TPO-P-4-2070.DWG
XREF: L:\2012070\DWG\SITE PLAN-PHASE II\CBASE-12070(PH2).DWG
XREF: L:\2012070\DWG\SITE PLAN-PHASE II\BLK-12070(PH2).DWG



NO.	BY	DATE	DESCRIPTION

O.C.W.R.C. DETENTION CALCULATIONS:

AREA TO BE DETAINED = 1.39 ACRES (AREA DRAINING TO NORTH SYSTEM)
 AVERAGE RUNOFF COEFFICIENT = 0.76
 ALLOWABLE DISCHARGE = 1.30 CFS (BASED ON CURRENT ALLOWABLE RATE TO EXISTING MAGNA DETENTION BASIN)
 DETENTION REQUIREMENT (OAKLAND CO. FORMULA)
 $Q_0 = \text{ALLOWABLE DISCHARGE} / \text{ACREAGE (RUNOFF COEF.)}$
 $= 1.30 \text{ C.F.S.} / (1.39 \text{ AC.} \times 0.76) = 1.231 \text{ CFS/ACRE OF IMPERVIOUSNESS}$

O.C.D.C. ORIFICE OUTLET FORMULA FOR STORAGE TIME FOR A 100 YEAR STORM DESIGN
 $T = -25 + (10312.5 / 1.231)^{0.5} = 66.53 \text{ MINUTES}$
 $V_s = 16,500T - 4000T^2 = (16500 \times 66.53) - 40 \times 1.231 \times 66.53^2$
 $= 8,877 \text{ C.F./ACRE}$
 $V_t = V_s (\text{ACREAGE}) \text{ RUNOFF COEF.}$
 $= 8,877 \text{ C.F./A} \times 1.39 \text{ AC.} \times 0.76 = 9,378 \text{ CFT}$

TOTAL 100-YEAR STORM VOLUME REQUIRED = 9,378 C.F.

DETENTION PROVIDED:

TOTAL DETENTION VOLUME PROVIDED WITHIN UNDERGROUND 60" DIAMETER STORMWATER DETENTION SYSTEM (GRAVITY OUTLET TO EX. MAGNA BASIN)
 VOLUME PROVIDED PER L.F. OF 60" PIPE = 19.63 C.F.
 REQUIRED LENGTH OF STORAGE PIPE REQUIRED = 9,378/19.63 = 478 L.F.
 60" UNDERGROUND STORAGE PIPE PROVIDED = 485 L.F.

OUTLET CONTROL STRUCTURE WILL RESTRICT OUTFLOW FROM SYSTEM TO THE ALLOWABLE OUTFLOW OF 1.30 C.F.S.

O.C.W.R.C. DETENTION CALCULATIONS:

AREA TO BE DETAINED = 2.99 ACRES (AREA DRAINING TO SOUTH SYSTEM)
 AVERAGE RUNOFF COEFFICIENT = 0.77
 ALLOWABLE DISCHARGE = 2.99 X 0.20 CFS/ACRE = 0.60 CFS.
 DETENTION REQUIREMENT (OAKLAND CO. FORMULA)
 $Q_0 = \text{ALLOWABLE DISCHARGE} / \text{ACREAGE (RUNOFF COEF.)}$
 $= 0.60 \text{ C.F.S.} / (2.99 \text{ AC.} \times 0.77) = 0.261 \text{ CFS/ACRE OF IMPERVIOUSNESS}$

O.C.D.C. ORIFICE OUTLET FORMULA FOR STORAGE TIME FOR A 100 YEAR STORM DESIGN
 $T = -25 + (10312.5 / 0.261)^{0.5} = 173.77 \text{ MINUTES}$
 $V_s = 16,500T - 4000T^2 = (16500 \times 173.77) - 40 \times 0.261 \times 173.77^2$
 $= 12,611 \text{ C.F./ACRE}$
 $V_t = V_s (\text{ACREAGE}) \text{ RUNOFF COEF.}$
 $= 12,611 \text{ C.F./A} \times 2.99 \text{ AC.} \times 0.77 = 29,034 \text{ CFT}$

TOTAL 100-YEAR STORM VOLUME REQUIRED = 29,034 C.F.

DETENTION PROVIDED:

TOTAL DETENTION VOLUME PROVIDED WITHIN UNDERGROUND 72" DIAMETER STORMWATER DETENTION SYSTEM (GRAVITY OUTLET TO LANE DRAIN)
 VOLUME PROVIDED PER L.F. OF 72" PIPE = 28.27 C.F.
 REQUIRED LENGTH OF STORAGE PIPE REQUIRED = 29,034/28.27 = 1,027 L.F.
 72" UNDERGROUND STORAGE PIPE PROVIDED = 1,035 L.F.

OUTLET CONTROL STRUCTURE WILL RESTRICT OUTFLOW FROM SYSTEM TO THE ALLOWABLE OUTFLOW OF 0.60 C.F.S.

LEGEND

● IRON FOUND	⊗ BRASS PLUG SET	⊙ SEC. CORNER FOUND
⊗ IRON SET	⊗ MONUMENT FOUND	⊙ RECORDED
⊗ NAIL FOUND	⊗ MONUMENT SET	⊙ MEASURED
⊗ NAIL & CAP SET	⊗ MONUMENT SET	⊙ CALCULATED

EXISTING

- OH-ELEC-W-O: ELEC. PHONE OR CABLE TV O.H. LINE, POLE & OUT WIRE
- UG-CATV: UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE: TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC: ELECTRIC U.G. CABLE, MANHOLE, WIRE & MANHOLE
- ⊗: GAS MAIN, VALVE & GAS LINE MARKER
- ⊗: WATERMAIN, HD., GATE VALVE, TAPPING SLEEVE & VALVE
- ⊗: SANITARY SEWER, CLEANOUT & MANHOLE
- ⊗: STORM SEWER, CLEANOUT & MANHOLE
- ⊗: COMBINED SEWER & MANHOLE

PROPOSED

- ⊗: CATCH BASIN
- ⊗: WATER VALVE BOX/HANDHOLE VALVE BOX, SERVICE SHUTOFF
- ⊗: MANHOLE, TRANSFORMER, IRRIGATION CONTROL VALVE
- ⊗: UNIDENTIFIED STRUCTURE
- ⊗: SPOT ELEVATION
- ⊗: AS BUILT ELEVATION
- ⊗: CONTOUR LINE
- ⊗: FENCE
- ⊗: GUARD RAIL
- ⊗: STREET LIGHT
- ⊗: SIGN

REFERENCE DRAWINGS

- ELECTRIC: DTE OUTSIDE SALES MAP #313-388 RECEIVED 11/08/12
- TELEPHONE: SEC. U.G. LOCATION MAP, FEA OF MICHIGAN PLAN 86-802, DATED 10/23/86
- GAS: CONSUMERS ENERGY GAS DIST. MAP 02-61-21-3, DATED 02/19/05
- PETROLEUM: WOLVERINE PIPE CO. NO SERVICES LETTER DATED 11/08/12
- CATV: COMCAST SERVICE SKETCH, RECEIVED 11/08/12
- FLOOD PLAN: FEMA COMMUNITY PANEL #261250533F, DATED SEPTEMBER 29, 2006
- OTHER: NORMAN AND FRANKS, ALTA SURVEY, DATED AUG. 7, 2000, JOB #1-9560-07

FLOODPLAIN NOTE:
 SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 261250533F DATED SEPTEMBER 29, 2006.

CAUTION!
 THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO QUANTITIES ARE EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES AND FOR DETERMINING THE EXACT UTILITY LOCATIONS AND DEPTHS PRIOR TO ANY CONSTRUCTION.

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CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE RESPONSIBILITY FOR THE DESIGN OF ALL CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE CLEARLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR CONSEQUENTIAL, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

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- GENERAL UTILITY NOTES:**
- ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE CITY OF TROY.
 - NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL ALL NEW WATER MAIN PASSES PRESSURE AND BACTERIOLOGICAL TESTS TO THE SATISFACTION OF THE CITY.
 - ALL WATER MAIN AND FITTINGS (3" DIAMETER AND LARGER) SHALL BE DUCTILE IRON, CLASS 54.
 - WATER MAIN SERVICE LEADS SHALL BE TYPE 'K' ANNEALED SEAMLESS COPPER WITH FLARED FITTINGS, UNLESS OTHERWISE NOTED.
 - ALL WATER MAIN SHALL BE PROVIDED WITH 6" OF COVER UNLESS OTHERWISE NOTED.
 - ALL FIRE HYDRANTS SHALL BE EJIW "WATERMASTER" #58R MODEL #250 PER CITY OF TROY STANDARDS.
 - ALL HYDRANTS TO BE A MINIMUM OF 5' FROM BACK OF CURB, TYP.
 - ALL SANITARY SEWER 8" OR LARGER SHALL BE P.V.C. TRUSS PIPE (ASTM D2680) AND FITTINGS, WITH ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
 - ALL SANITARY SEWER LEADS SHALL BE POLYVINYL CHLORIDE (PVC) SCHEDULE 40 PIPE AND FITTINGS. ALL JOINTS TO BE ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
 - SANITARY LEADS SHALL BE PROVIDED WITH CLEANOUTS EVERY 100 FEET AND AT EVERY BEND AS SHOWN. ALL CLEANOUTS TO BE PROVIDED WITH E.J.I.W. #1565 BOX OR EQUAL.
 - ALL STORM SEWER 12" DIAMETER OR LARGER SHALL BE REINFORCED CONCRETE PIPE (RCP C-76) CLASS IV WITH MODIFIED TONGUE AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443).
 - ALL STORM SEWER LEADS SHALL BE PVC SCHEDULE 40 WITH GLUED JOINTS UNLESS OTHERWISE NOTED.
 - PIPE LENGTHS ARE GIVEN FROM CENTER OF STRUCTURE AND TO END OF FLARED END SECTION UNLESS NOTED OTHERWISE.
 - THE CITY OF TROY STANDARD DETAIL SHEETS ARE INCORPORATED INTO AND MADE A PART OF THESE PLANS. CONTRACTOR TO REFER TO THE CITY OF TROY STANDARD DETAIL SHEETS FOR ALL STRUCTURE, PIPE MATERIALS, BEDDING, TESTING, ETC. NOTES AND DETAILS.

PROFESSIONAL ENGINEERING ASSOCIATES

2430 Rochester Ct. Suite 100
 Troy, MI 48063-1872
 Phone: (248) 689-9090
 Fax: (248) 689-1044
 website: www.peainc.com

GROUP 10 MANAGEMENT
 30500 NORTHWESTERN HIGHWAY, SUITE #625
 FARMINGTON HILLS, MICHIGAN 48334

**PRELIMINARY UTILITY PLAN
 THE GALLERIA OF TROY - PHASE II**
 PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N, R. 1E,
 CITY OF TROY, OAKLAND COUNTY, MICHIGAN

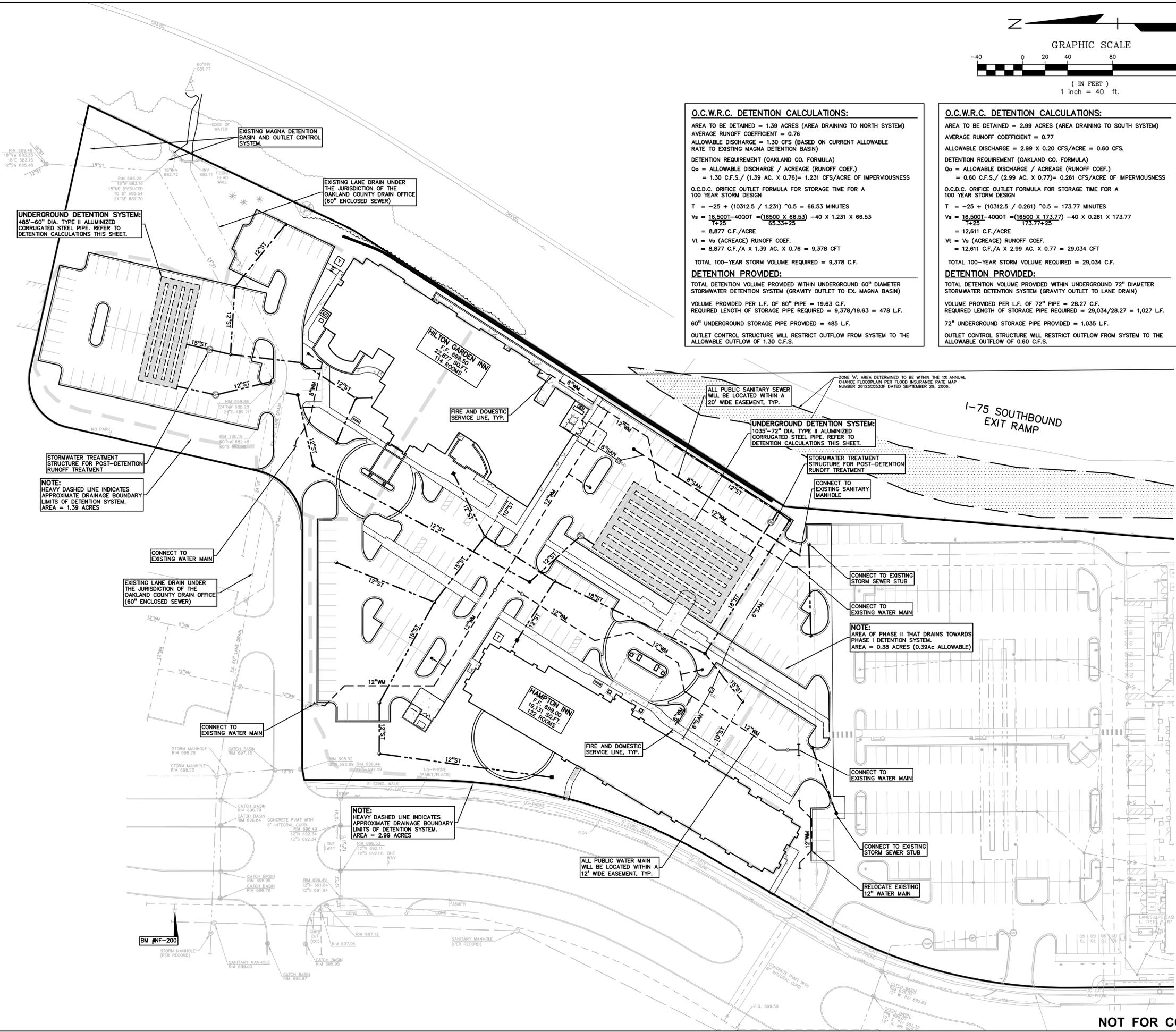
DES. PB DN. PB SUR. KTR. P.M. JPB
 U:\2012\2012070\TOP-12070\PHASE II\CBASE-12070(PH2).DWG

ORIGINAL
 ISSUE DATE: AUG. 19, 2013

PEA JOB NO. 2012-070

SCALE: 1" = 40'

DRAWING NUMBER:
P-5.0



NOT FOR CONSTRUCTION

GENERAL NOTES:

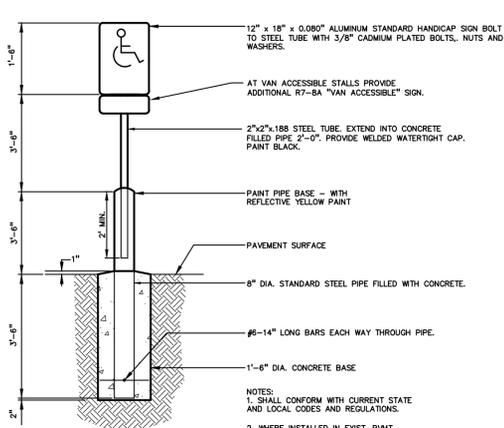
1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY.
2. ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCES ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL CITY INSPECTION FEES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING THE PERIODS OF CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO THE JOB.
4. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG (811) TO VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND SHALL NOTIFY OTHER REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK.
5. ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
6. MANHOLE, CATCH BASIN, GATE VALVES AND HYDRANT FINISH GRADES MUST BE CLOSELY CHECKED AND APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR'S WORK IS CONSIDERED COMPLETE.
7. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF-SITE ANY TREES, BRUSH, STUMPS, TRASH OR OTHER UNWANTED DEBRIS AT THE OWNER'S DIRECTION, INCLUDING OLD BUILDING FOUNDATIONS AND FLOORS. BURNING OF TRASH, STUMPS OR OTHER DEBRIS SHALL NOT BE PERMITTED.
8. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY CONTAIN TRAFFIC IN ACCORDANCE WITH "MMUTCD".
9. ALL EXCAVATIONS SHALL BE SLOPED, SHORED OR BRACED IN ACCORDANCE WITH MI-OSHA REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE AN ADEQUATELY CONSTRUCTED AND BRACED SHORING SYSTEM FOR EMPLOYEES WORKING IN AN EXCAVATION THAT MAY EXPOSE EMPLOYEES TO THE DANGER OF MOVING GROUND.
10. ALL REFERENCES TO M.D.O.T. SPECIFICATIONS ARE TO BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PAVING NOTES:

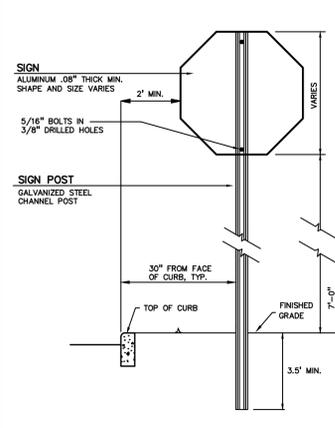
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY.
2. IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
3. SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL SECTIONS OR BELOW SUBGRADE IN CUT SECTIONS, WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
4. SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED WITH SAND OR OTHER SIMILAR APPROVED MATERIAL. BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT (PER ASTM D-1557) UNLESS OTHERWISE SPECIFIED.
5. BACKFILL UNDER PAVED AREAS SHALL BE AS SPECIFIED ON DETAILS.
6. ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.

GENERAL UTILITY NOTES:

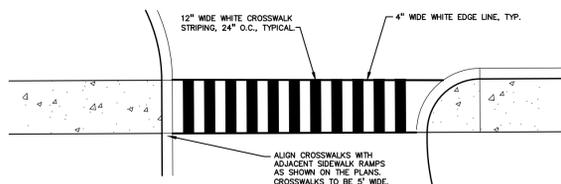
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY.
2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES, WHICH MIGHT AFFECT THIS JOB.
3. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
4. WHENEVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
5. EXACT GRADES AND DEPTHS OF UTILITIES ARE TO BE CHECKED CLOSELY WITH THE FIELD ENGINEER PRIOR TO INSTALLATION.
6. REFER TO CITY OF TROY STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.



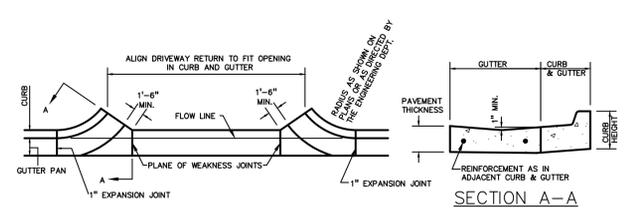
SIGN AND POST INSTALLATION IN PAVED AREAS
NOT TO SCALE



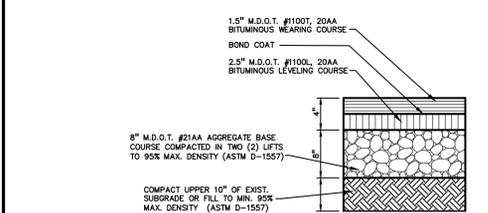
SIGN AND POST INSTALLATION IN LANDSCAPED AREAS
NOT TO SCALE



STRIPED CROSSWALK DETAIL
NOT TO SCALE



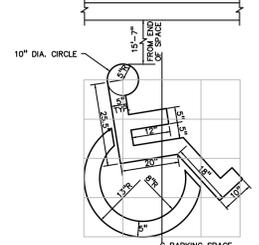
M.D.O.T. DRIVEWAY OPENING-DETAIL 'M'
NOT TO SCALE



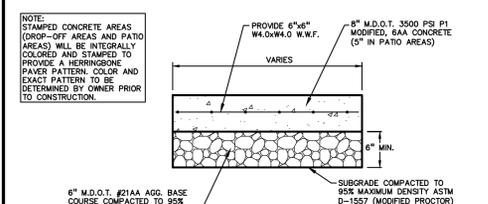
STANDARD DUTY ASPHALT DETAIL
NOT FOR USE IN THE RIGHT-OF-WAY



BARRIER FREE PARKING SIGN DETAIL
NOT TO SCALE



STANDARD "BARRIER FREE" SYMBOL FOR PARKING SPACE
NOT TO SCALE



STAMPED CONCRETE DETAIL
NOT TO SCALE



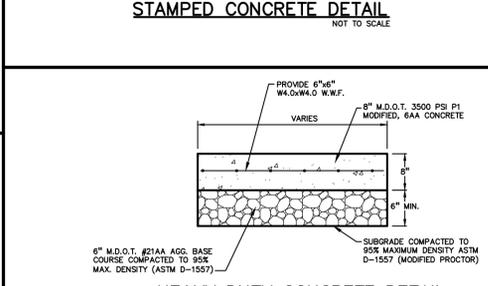
CROSSWALK SIGN DETAIL
NOT TO SCALE



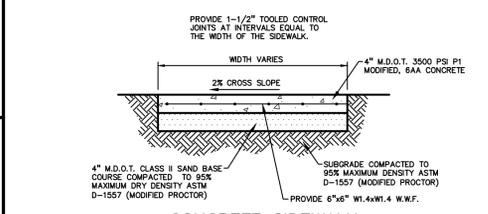
NO PARKING SIGN DETAIL
NOT TO SCALE



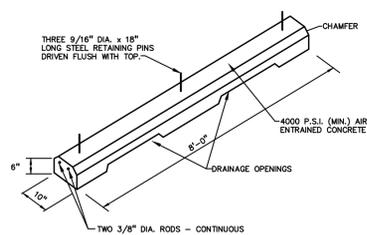
STOP SIGN DETAIL
NOT TO SCALE



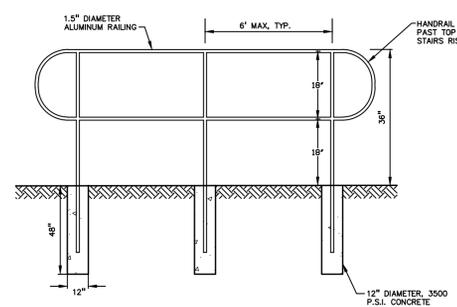
HEAVY DUTY CONCRETE DETAIL
NOT TO SCALE



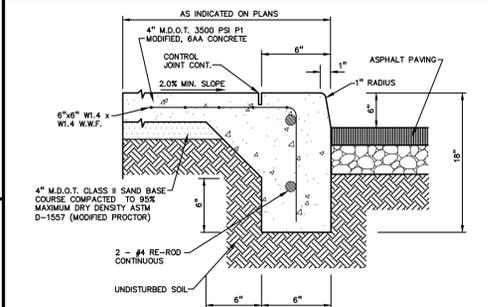
CONCRETE SIDEWALK
NOT TO SCALE



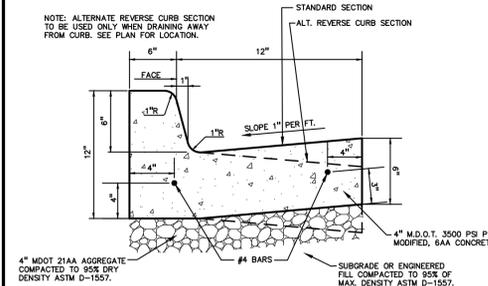
CONCRETE PARKING BUMPER
NOT TO SCALE



ALUMINUM HANDRAIL DETAIL
NOT TO SCALE



INTEGRAL CURB AND SIDEWALK
NOT TO SCALE



18"x6" STANDARD CONCRETE CURB AND GUTTER
NOT TO SCALE

NO.	BY	CHK	DESCRIPTION	DATE

CAUTION!
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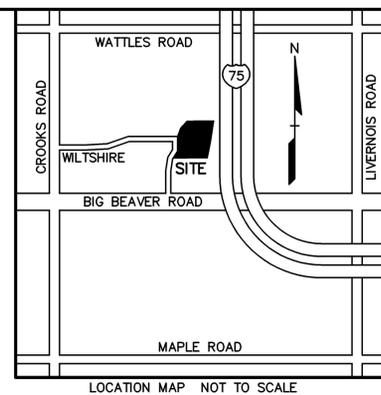
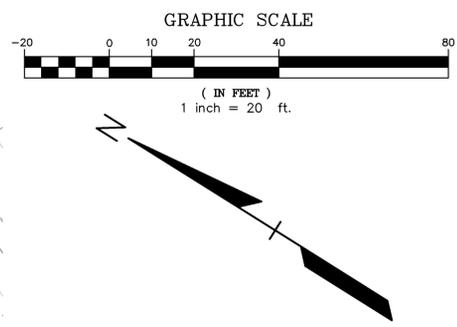
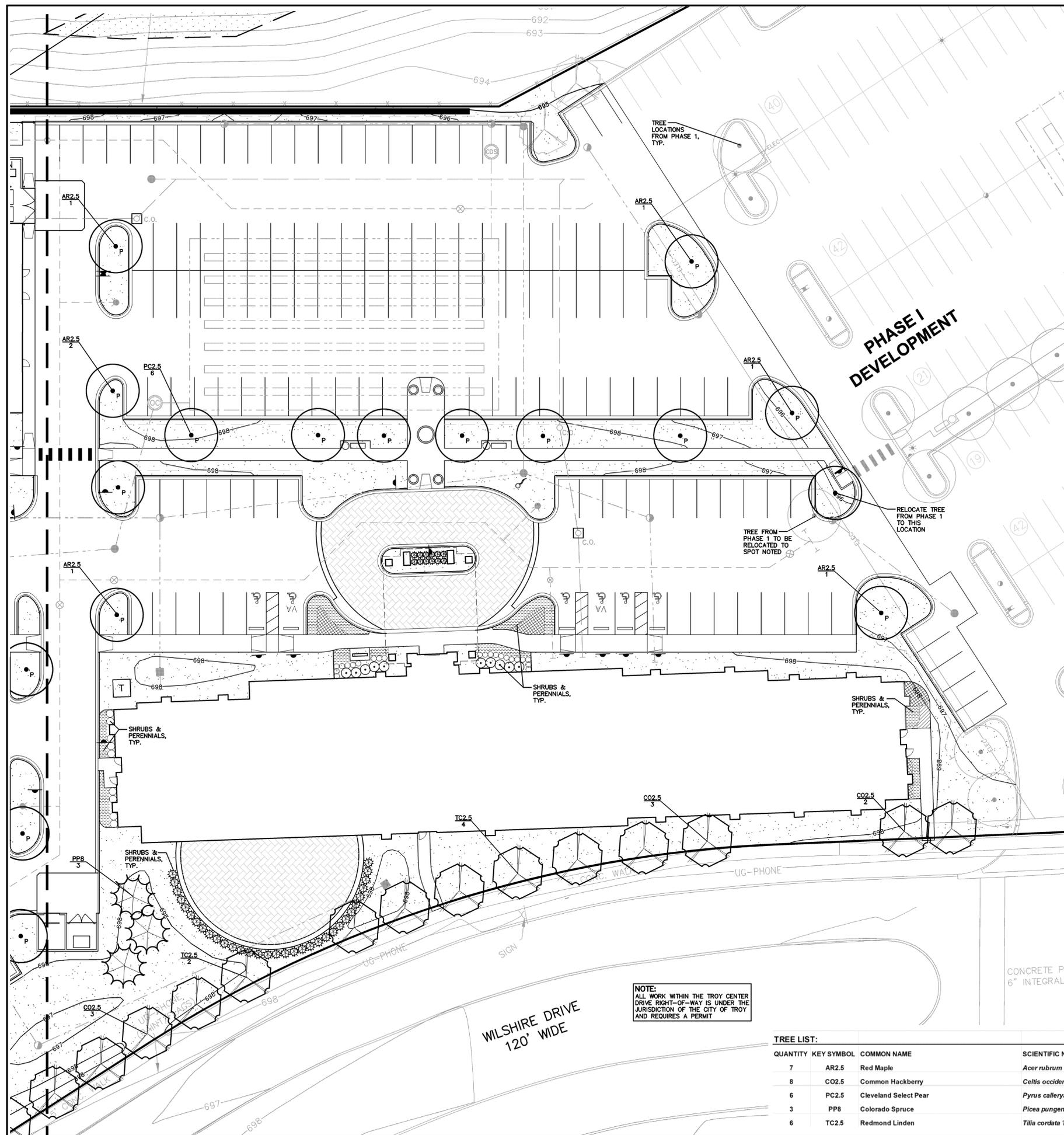
PROFESSIONAL ENGINEERING ASSOCIATES
2430 Rochester Ct. Suite 100
Troy, MI 48063-1872
Phone: (248) 689-9090
Fax: (248) 689-1044
website: www.peainc.com

GROUP 10 MANAGEMENT
30500 NORTHWESTERN HIGHWAY, SUITE #625
FARMINGTON HILLS, MICHIGAN 48334

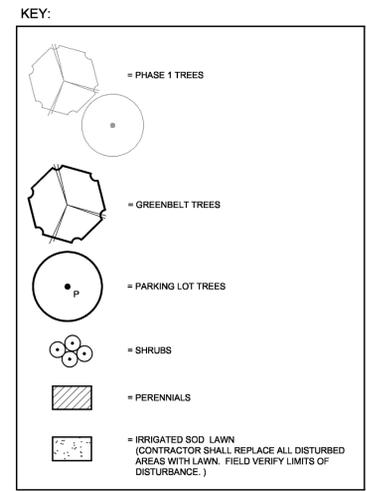
NOTES AND DETAILS
THE GALLERIA OF TROY - PHASE II
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N, R. 11E,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. PB DN SUR. KTR. P.M. JPB
CONTRACTOR: PB SUR. KTR. P.M. JPB
DATE: 10/20/2010 10:00 AM
SCALE: 1/8" = 1'-0"

ORIGINAL ISSUE DATE: AUG. 19, 2013
PEA JOB NO. 2012-070
SCALE: NONE
DRAWING NUMBER: **P-6.1**



No.	BY	CHK	DESCRIPTION	DATE



LANDSCAPE CALCULATIONS:
PER CITY OF TROY ZONING ORDINANCE

GENERAL SITE LANDSCAPE
REQUIRED: 20% OF SITE AREA SHALL BE LANDSCAPE MATERIAL

TOTAL SITE AREA = 409,328 SF
409,328 SQ FT * 20% = 81,866 SQ FT REQUIRED TOTAL

PHASE 1 AREA = 27,891 SF
81,866 SF - 27,891 SF = 53,975 SF REQ FOR PHASE 2

PROVIDED: 75,436 SQ FT OF SOFT-SCAPE (LAWN & PLANT BEDS)
(25.24% SOFT-SCAPE PROVIDED IN COMBINED PHASE 1&2)

PARKING LOT LANDSCAPE
REQUIRED: 1 TREE / 8 PARKING SPACES
3" HT BERM OR SHRUB HEDGE WHEN PARKING IS ADJACENT TO A PUBLIC ROAD

515 PARKING SPACES / 8 = 64 TREES REQUIRED TOTAL
PHASE 1 = 33 TREES PROVIDED
64 TREES - 33 TREES = 31 TREES REQ FOR PHASE 2

PROVIDED: 31 TREES

GREENBELT
REQUIRED: 1 TREE / 30 LF OF FRONTAGE

WILSHIRE DR. TOTAL FRONTAGE = 917 LF
PHASE 1 = 467 LF & 16 TREES
917 LF - 467 LF = 450 LF OR FRONTAGE
450 LF / 30 LF = 15 TREES REQ FOR PHASE 2

PROVIDED: 15 TREES

- GENERAL PLANTING NOTES:**
- Landscape contractor shall visit site, inspect existing site conditions and review proposed planting and related work. In case of discrepancy between plan and plant list, plan shall govern quantities. Contact Landscape Architect with any concerns.
 - Contractor shall verify locations of all on site utilities prior to beginning construction on his/her phase of work. Electric, gas, telephone, cable television may be located by calling MISS DIG 1-800-482-7171. Any damage or interruption of services shall be the responsibility of Contractor. Contractor shall coordinate all related activities with other trades on the job and shall report any unacceptable job conditions to Owner's Representative prior to commencing.
 - All plant material to be premium grade nursery stock and shall satisfy American Association of Nurserymen standard for Nursery Stock. All landscape material shall be Northern Grown, No. 1. Grade.
 - Contractor is responsible for verifying all quantities shown on landscape plan prior to pricing the work.
 - The owner's representative reserves the right to reject any plant material not meeting specifications.
 - All single stem shade trees to have straight trunks and symmetrical crowns.
 - All single trunk shade trees to have a central leader; trees with forked or irregular trunks will not be accepted.
 - All multi stem trees shall be heavily branched and have symmetrical crowns. One sided trees or those with thin or open crowns shall not be accepted.
 - All evergreen trees shall be heavily branched and full to the ground, symmetrical in shape and not sheared for the last five growing seasons.
 - All trees to have clay or clay loam balls, trees with sand balls Will Be Rejected.
 - No machinery is to be used within the drip line of existing trees; Hand grade all lawn areas within the drip line of existing trees.
 - All tree locations shall be staked by Landscape Contractor and are subject to the approval of the landscape Architect prior to installation of the plant material.
 - It is mandatory that positive drainage is provided away from all buildings.
 - All planting beds shall receive 4" shredded hardwood bark mulch, see specifications. Shredded pallet and died mulch will not be accepted.
 - All landscaped areas shall receive 3" compacted topsoil.
 - Maintenance: All plant material shall be maintained in good condition by mowing, watering, mulch, etc., so as to present a healthy neat and orderly appearance free from refuse and debris.

TREE LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
7	AR2.5	Red Maple	<i>Acer rubrum</i>	2.5" CAL	B&B
8	CO2.5	Common Hackberry	<i>Celtis occidentalis</i>	2.5" CAL	B&B
6	PC2.5	Cleveland Select Pear	<i>Pyrus calleryana 'Cleveland Select'</i>	2.5" CAL	B&B
3	PP8	Colorado Spruce	<i>Picea pungens</i>	8' HT.	B&B
6	TC2.5	Redmond Linden	<i>Tilia cordata 'Redmond'</i>	2.5" CAL	B&B

NOTE: IRRIGATE SOD LAWN, PERENNIAL BEDS AND RAISED PLANTERS

NOT FOR CONSTRUCTION

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THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL PRACTICES OF THE PROFESSION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.

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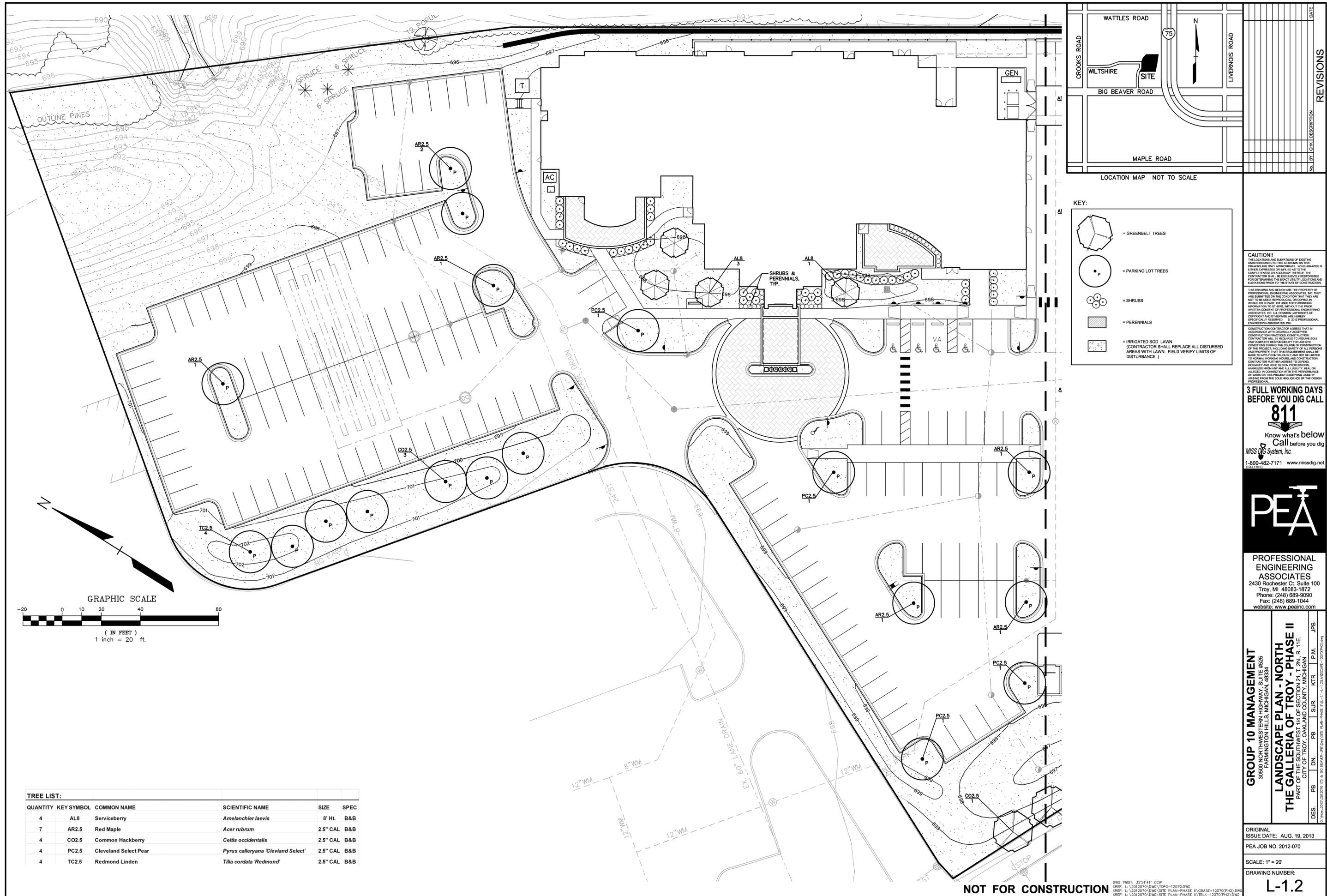
GROUP 10 MANAGEMENT
30500 NORTHWESTERN HIGHWAY, SUITE #225
PARKING LOT HILLS, MICHIGAN, 48364

LANDSCAPE PLAN - SOUTH
THE GALLERIA OF TROY - PHASE II
PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N, R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES. PB DN PB SUR. KTR. P.M. JPB
DATE: 08/14/2012

ORIGINAL ISSUE DATE: AUG. 10, 2013
PEA JOB NO. 2012-070
SCALE: 1" = 20'
DRAWING NUMBER: **L-1.1**

DWG TWIST: 32'31.41' CCW
XREF: L:\2012\070\DWG\TOP0-12070.DWG
XREF: L:\2012\070\DWG\SITE PLAN-PHASE I\CBASE-12070(PH2).DWG
XREF: L:\2012\070\DWG\SITE PLAN-PHASE I\TBLK-12070(PH2).DWG



TREE LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
4	AL8	Serviceberry	<i>Amelanchier laevis</i>	8' Ht.	B&B
7	AR2.5	Red Maple	<i>Acer rubrum</i>	2.5" CAL	B&B
4	CO2.5	Common Hackberry	<i>Celtis occidentalis</i>	2.5" CAL	B&B
4	PC2.5	Cleveland Select Pear	<i>Pyrus calleryana 'Cleveland Select'</i>	2.5" CAL	B&B
4	TC2.5	Redmond Linden	<i>Tilia cordata 'Redmond'</i>	2.5" CAL	B&B

REVISIONS

No.	BY	CHK	DESCRIPTION	DATE

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(CONTRACTOR SHALL REPLACE ALL DISTURBED AREAS WITH LAWN. FIELD VERIFY LIMITS OF DISTURBANCE.)

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 Phone: (248) 689-9090
 Fax: (248) 689-1044
 website: www.peainc.com

GROUP 10 MANAGEMENT
 30500 NORTHWESTERN HIGHWAY, SUITE #255
 PLYMOUTH HILLS, MICHIGAN, 48354

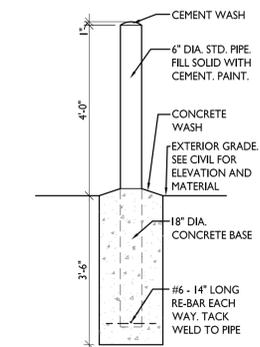
LANDSCAPE PLAN - NORTH
THE GALLERIA OF TROY - PHASE II
 PART OF THE SOUTHWEST 1/4 OF SECTION 21, T. 2N, R. 11E,
 CITY OF TROY, OKLAND COUNTY, MICHIGAN

DES. JPB DN. PB SUR. KTR P.M. JPB
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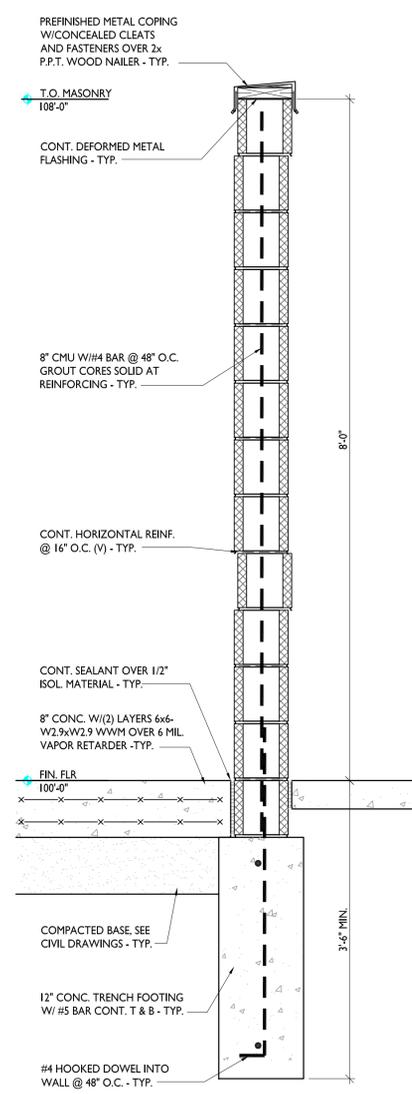
ORIGINAL ISSUE DATE: AUG. 19, 2013
 PEA JOB NO. 2012-070
 SCALE: 1" = 20'
 DRAWING NUMBER:
L-1.2

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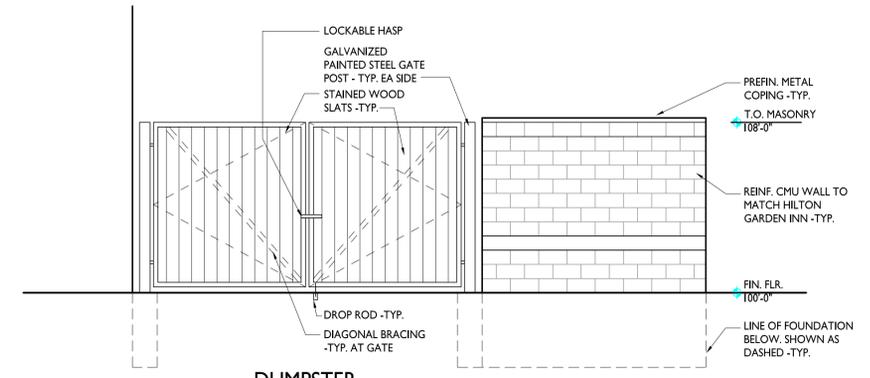
NOT FOR CONSTRUCTION



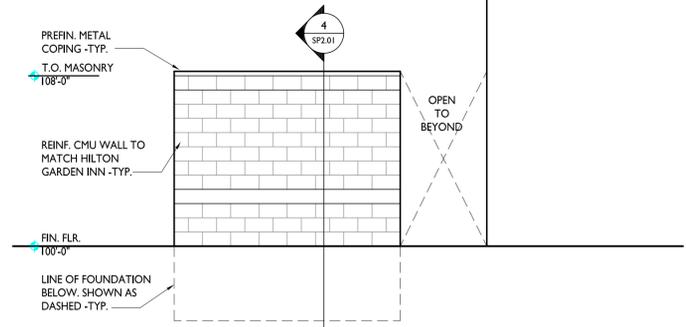
5 BOLLARD DETAIL
SCALE: 1/2" = 1'-0"



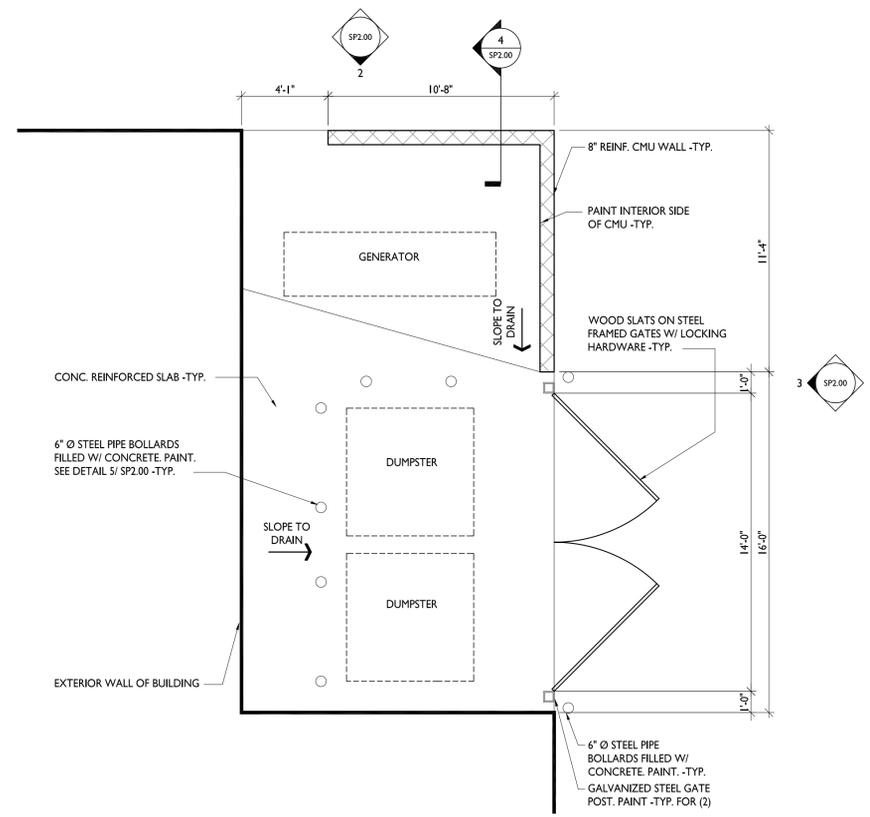
4 DUMPSTER WALL DETAIL
SCALE: 1" = 1'-0"



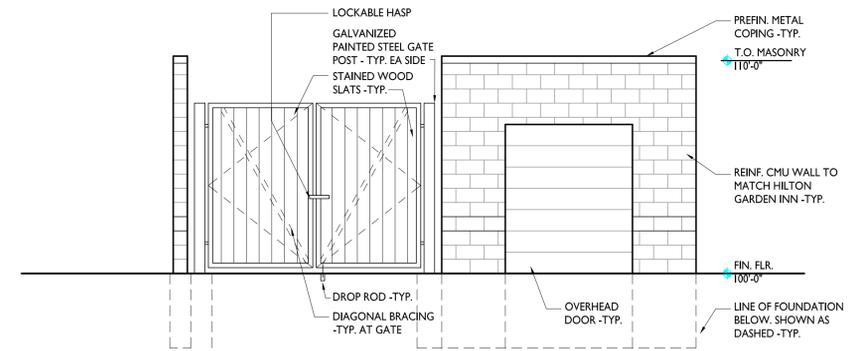
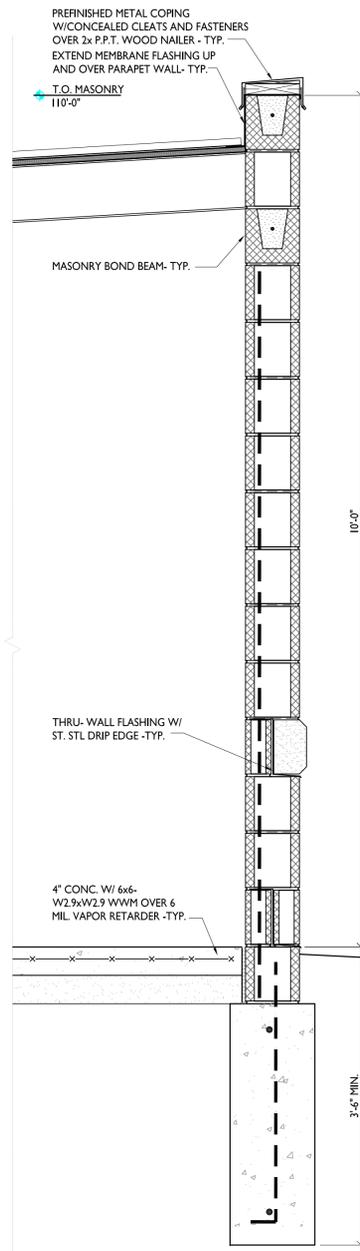
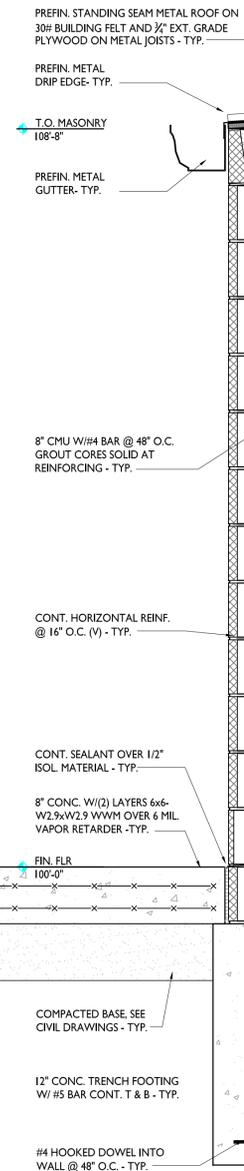
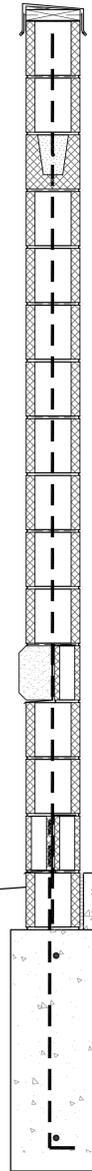
3 DUMPSTER ELEVATION
SCALE: 1/4" = 1'-0"



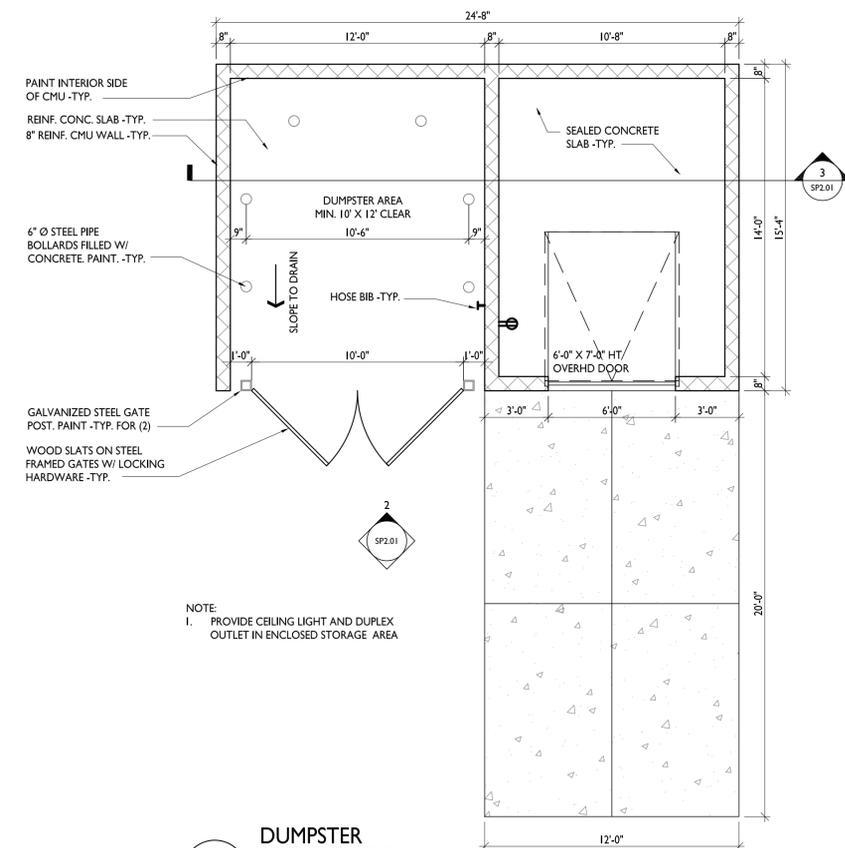
2 DUMPSTER ELEVATION
SCALE: 1/4" = 1'-0"



1 DUMPSTER ENCLOSURE PLAN
SCALE: 1/4" = 1'-0"

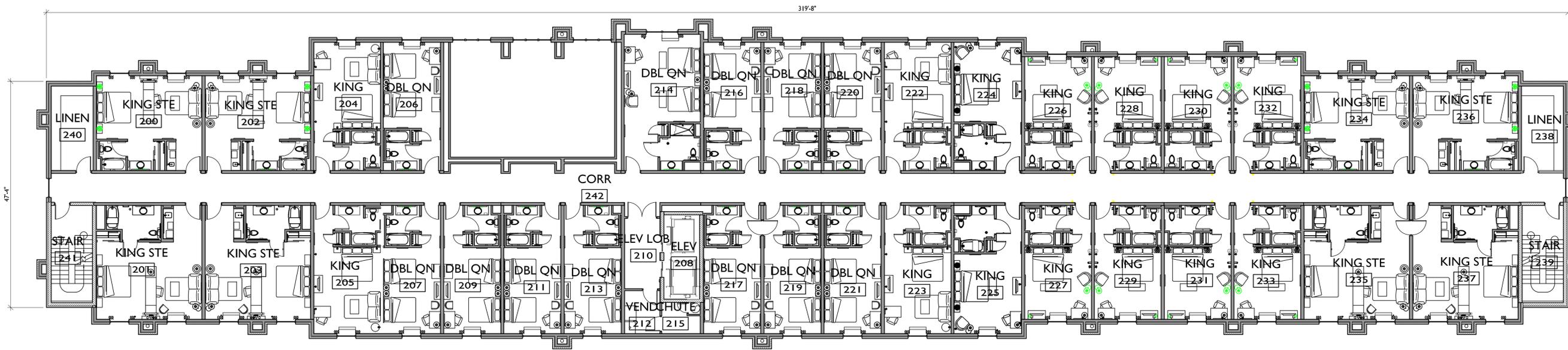


2
 DUMPSTER ELEVATION
 SCALE: 1/4" = 1'-0"

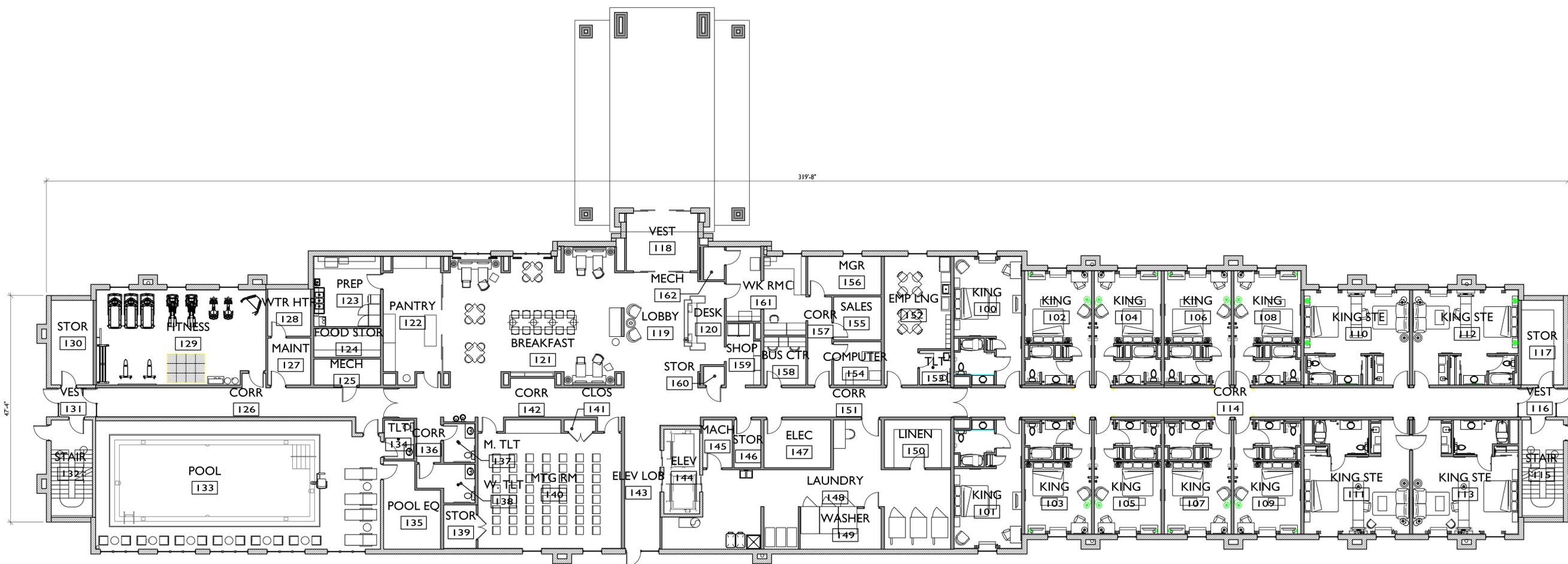


1
 DUMPSTER ENCLOSURE PLAN
 SCALE: 1/4" = 1'-0"

3
 DUMPSTER ENCLOSURE PLAN
 SCALE: 1" = 1'-0"

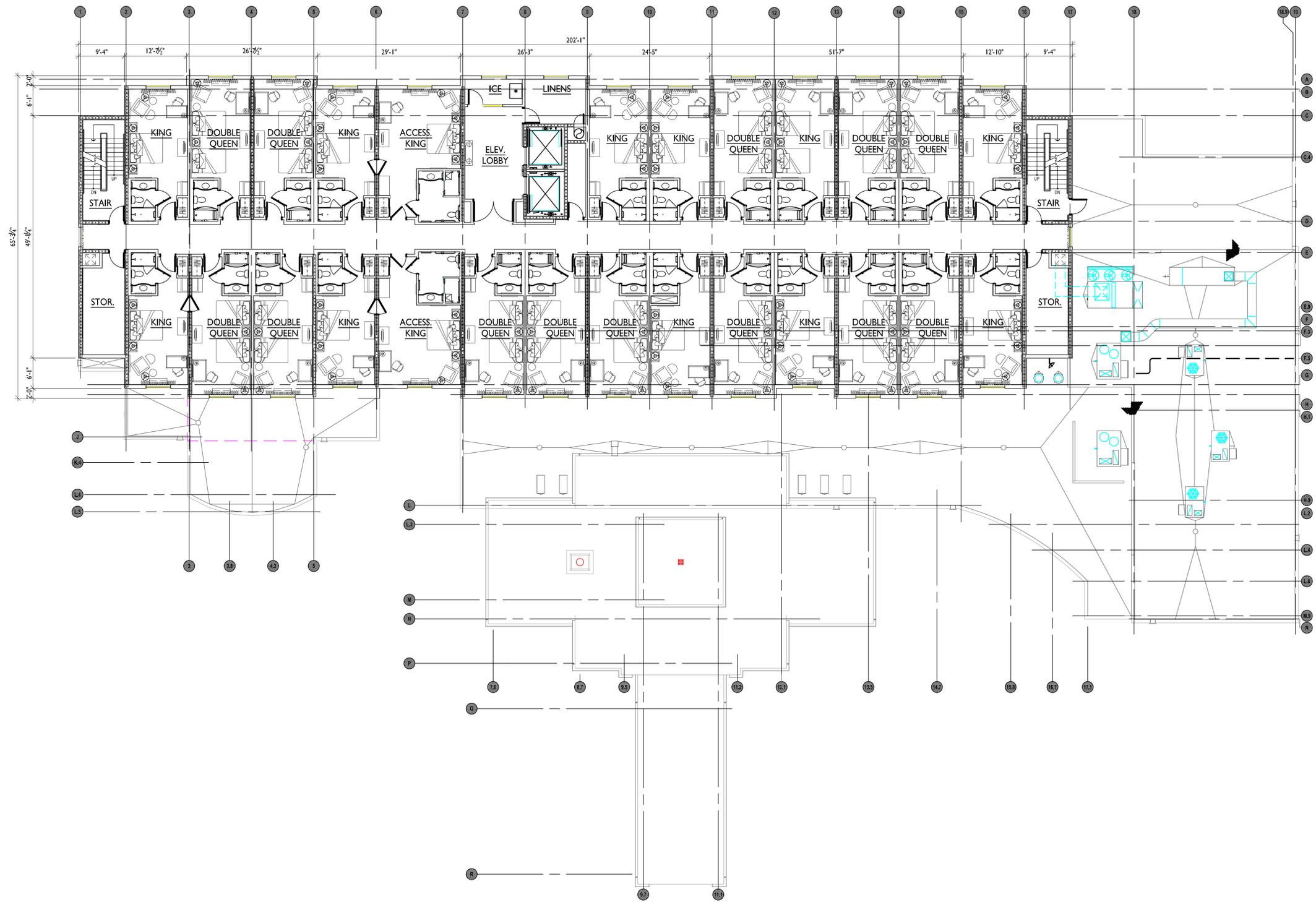


OVERALL SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

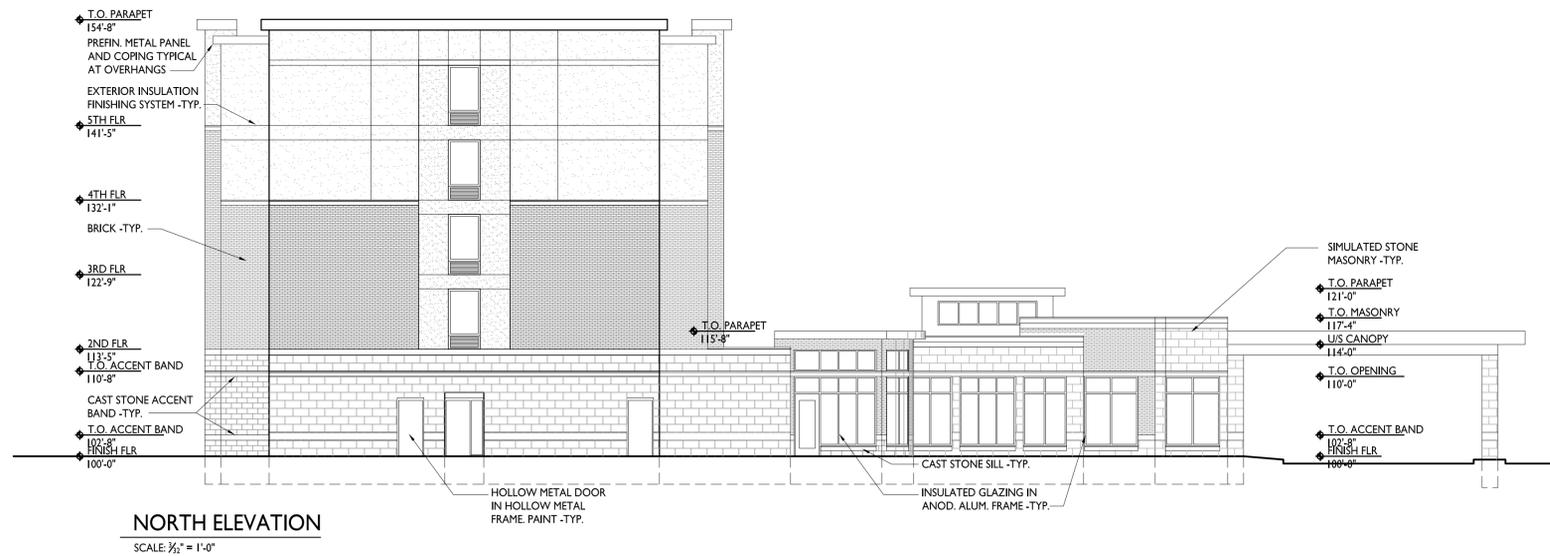


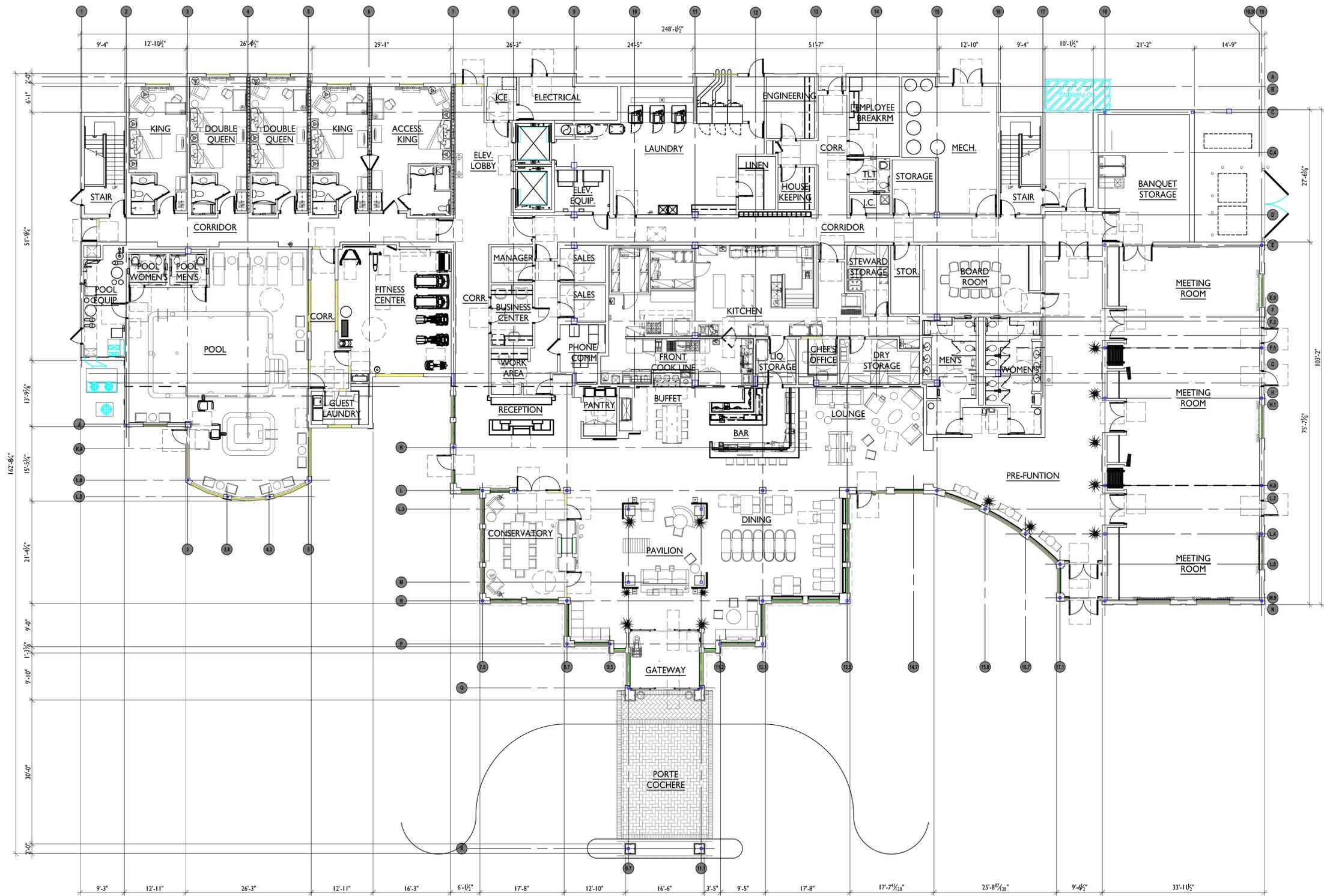
OVERALL FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



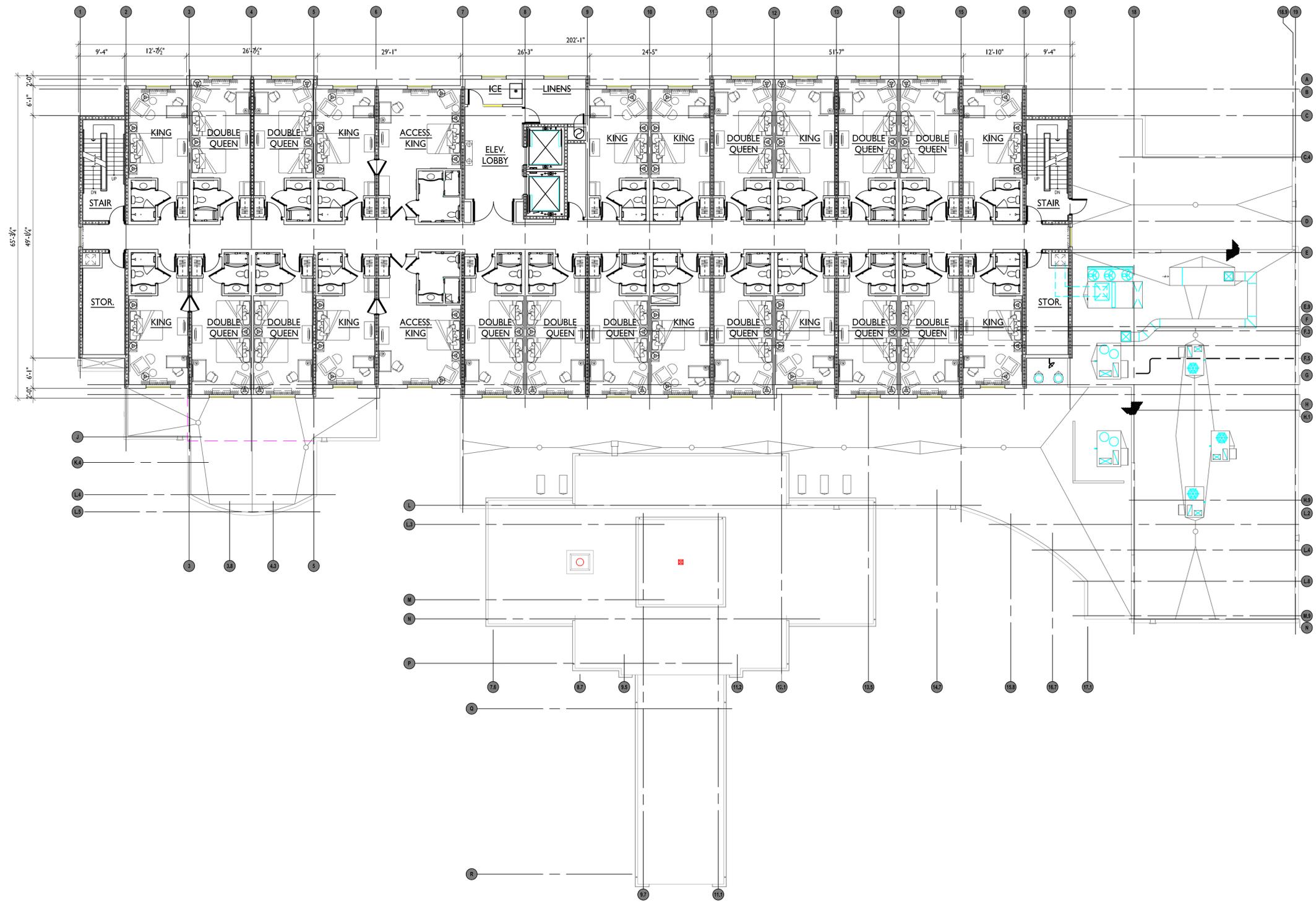


UPPER FLOOR PLAN
SCALE: 1/8" = 1'-0"

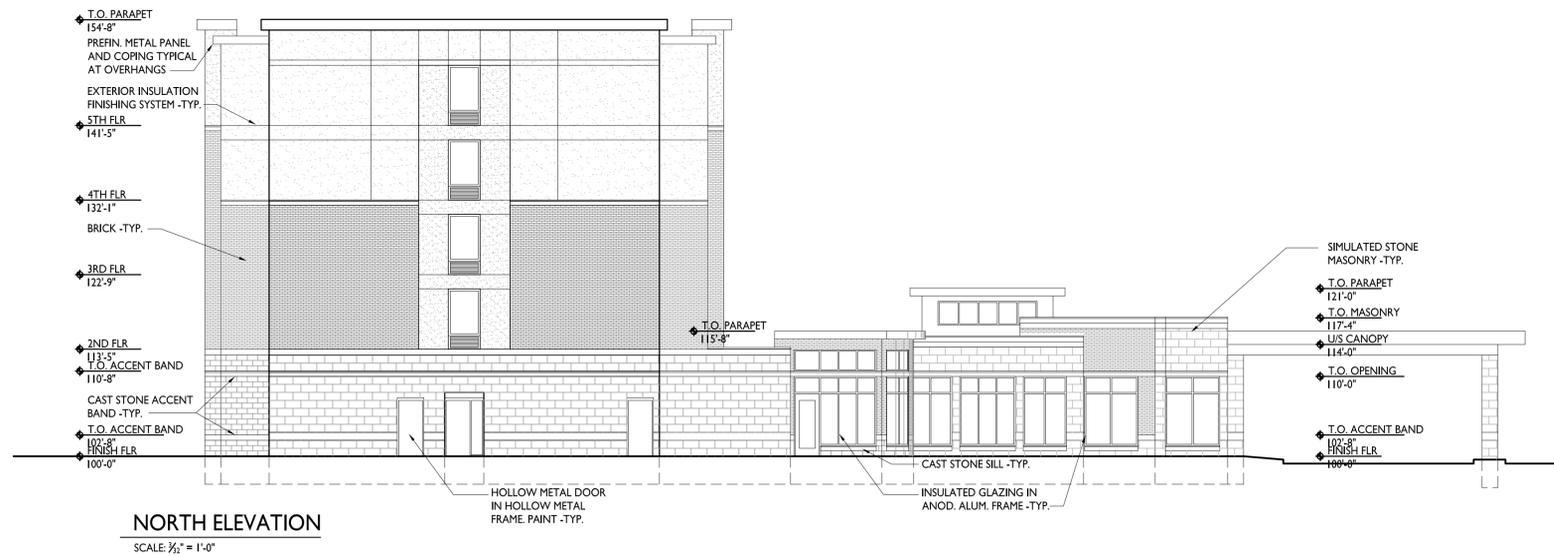


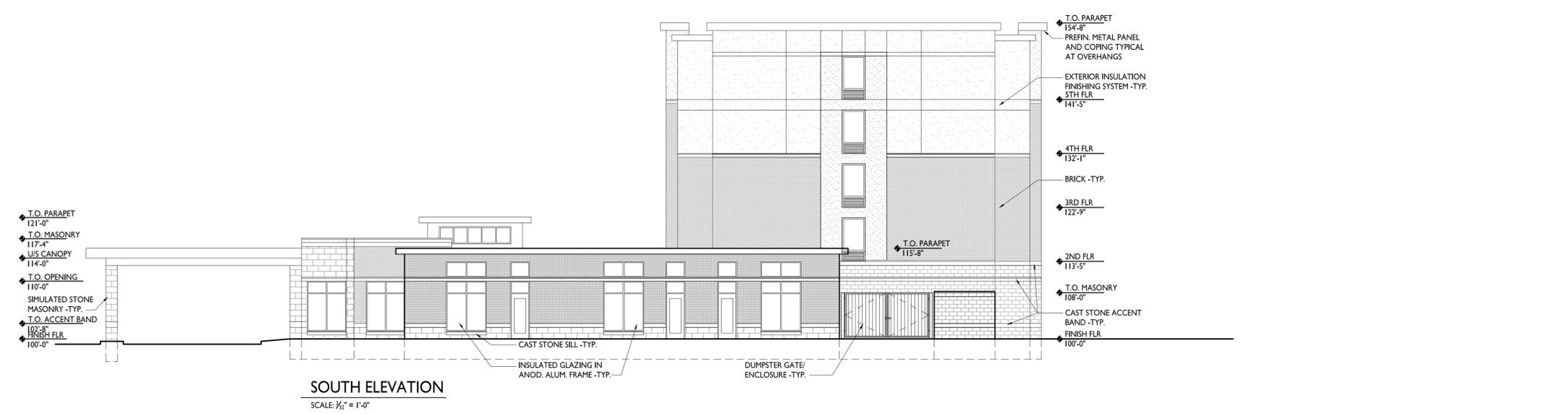


FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



UPPER FLOOR PLAN
SCALE: 1/8" = 1'-0"

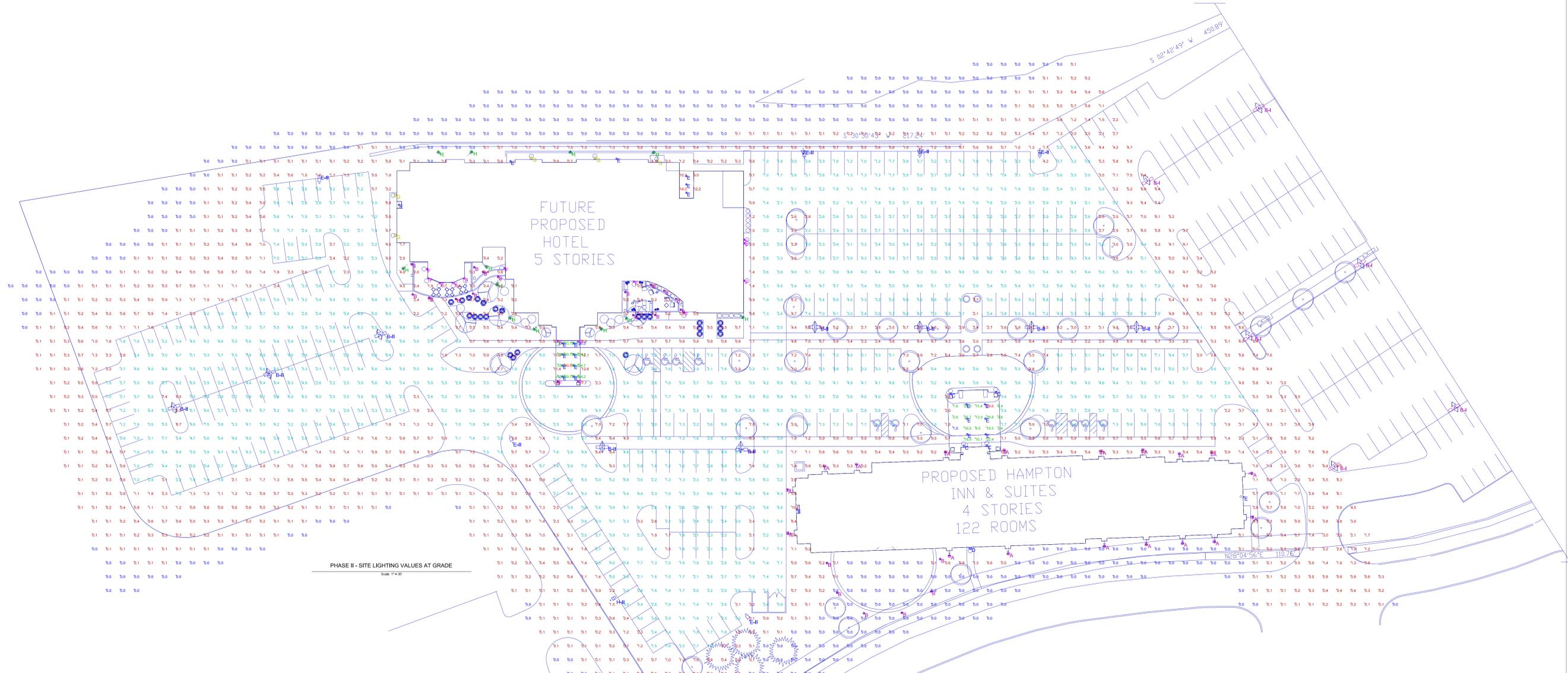




SOUTH ELEVATION
 SCALE: 3/32" = 1'-0"



EAST ELEVATION
 SCALE: 3/32" = 1'-0"



PHASE II - SITE LIGHTING VALUES AT GRADE
Scale: 1"=30'

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
[Symbol]	B-I	6	LITHONIA #KSF2 400M R3 (TWIN - 25 MTD HTG) (PHASE I WORK) (OPTICS ROTATED 90 DEGREES)	Specification Area Luminaire: 400W Metal Halide, R3 Reflector, Full Cutoff MEETS THE "NIGHTTIME FRIENDLY" CRITERIA	TWO 400 WATT CLEAR EDOS PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_R 3.les	38000	0.72	912
[Symbol]	B-II	9	LITHONIA #KSF2 400M R3 (TWIN - 25 MTD HTG) (PHASE II WORK) (OPTICS ROTATED 90 DEGREES)	Specification Area Luminaire: 400W Metal Halide, R3 Reflector, Full Cutoff MEETS THE "NIGHTTIME FRIENDLY" CRITERIA	TWO 400 WATT CLEAR EDOS PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_R 3.les	38000	0.72	912
[Symbol]	E-II	6	LITHONIA #KSF2 400M R3S (SINGLE - 25 MTD HTG) (PHASE II)	Specification Area Luminaire: 400W Metal Halide, R3S Reflector, Full Cutoff MEETS THE "NIGHTTIME FRIENDLY" CRITERIA	ONE 400 WATT CLEAR EDOS PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_R 4S.les	38000	0.72	456
[Symbol]	H-II	1	LITHONIA #KSF2 400M R3 HS (SINGLE - 25 MTD HTG) (PHASE II)	Specification Area Luminaire: 400W Metal Halide, R3 Reflector with housings shield, Full Cutoff MEETS THE "NIGHTTIME FRIENDLY" CRITERIA	ONE 400 WATT CLEAR EDOS PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_R 3_HS.les	38000	0.72	456
[Symbol]	A	18	LITHONIA - AERIS SERIES #ASF1 150M VFN	AERIS FLOOD LUMINAIRE, 150-WATT METAL HALIDE, NARROW FLOOD	ONE 150-WATT CLEAR ED17 METAL HALIDE, HORIZONTAL POSITION	L14918P.les	11700	0.75	209
[Symbol]	B	21	HYDREL IN-GRADE LUMINAIRE	IN-GRADE LUMINAIRE	ONE 150-WATT PAR-38 FLOOD INCANDESCENT, VERTICAL BASE-UP POSITION.	8405311E.les	2000	0.90	150
[Symbol]	C	4	VISA - HAMPTON SERIES #OW1044	FORMED WHITE ACRYLIC DRIVER ENCLOSED IN FORMED FRAMEWORK, DIFFUSE WHITE PAINTED INTERIOR BACK PANEL.	TWO 13-WATT COMPACT FLUORESCENT, EACH RATED 900 LUMENS	OW1044-20F13.ES	900	0.75	28
[Symbol]	D	1	LITHONIA #MRW LED 110A7000K SR2 MVOLT	MRW LED WITH 1 MODULE, 10 LED's, 700mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 2 LENS	LED LUMINAIRE WITH OUTPUT: 1994 Lms.	MRW_LED_1_10A700_40K_SR2_MVOLT.les	Absolute	0.92	24.1
[Symbol]	E	22	GOTHAM NEVO 3529.8AR LS 120	6" LED DOWNLIGHT, 3500K, 2900 LUMENS, STANDARD DISTRIBUTION WITH CLEAR SPECULAR REFLECTOR	LED	EVO_35_29_8_AR_LS_120.les	Absolute	0.80	48.6
[Symbol]	F	15	KENALL - MILENIUM WALL SCIENCE SERIES	16.5" WALL SCIENCE WITH WHITE 39K-CURVED LENS	LED	MAS813-PAN-OLWS-1-14L40K-SCC-120.les	54	0.90	27
[Symbol]	G	5	LITHONIA #MRW LED 110A7000K SR2 MVOLT	MRW LED WITH 1 MODULE, 10 LED's, 700mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 2 LENS	LED LUMINAIRE WITH OUTPUT: 1994 Lms.	MRW_LED_1_10A700_40K_SR2_MVOLT.les	Absolute	0.92	24.1
[Symbol]	H	12	LITHONIA - AERIS SERIES #ASF1 150M VFN	AERIS FLOOD LUMINAIRE, 150-WATT METAL HALIDE, NARROW FLOOD	ONE 150-WATT CLEAR ED17 METAL HALIDE, HORIZONTAL POSITION	L14918P.les	11700	0.75	209

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
HOTEL CANOPY VALUES AT GRADE	X	30.8 fc	40.5 fc	20.5 fc	2.0:1	1.5:1
HOTEL CANOPY VALUES AT GRADE	X	14.0 fc	28.6 fc	1.5 fc	19.1:1	9.3:1
PHASE II PARKING & DRIVE VALUES AT GRADE	X	3.3 fc	8.8 fc	0.7 fc	12.6:1	4.7:1

NOTES

- SEE MH COLUMN OF LUMINAIRE LOCATIONS FOR MOUNTING HEIGHTS.
- SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTORS.
- CALCULATIONS ARE SHOWN IN FOOTCANDLES AT GRADE SURFACE.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

No.	Label	X	Y	MH
1	B-I	257.1	194.2	25.0
2	B-I	336.5	246.8	25.0
3	B-I	499.0	134.7	25.0
4	B-I	329.5	81.3	25.0
5	B-I	390.6	-12.1	25.0
6	B-I	476.2	30.2	25.0
7	B-II	249.0	88.7	25.0
8	B-II	173.9	88.7	25.0
9	B-II	94.7	88.7	25.0
10	B-II	19.0	88.7	25.0
11	E-II	11.6	216.0	25.0
12	E-II	94.1	216.8	25.0
13	E-II	180.0	216.5	25.0
14	B-II	-133.0	2.1	25.0
15	B-II	-33.1	0.2	25.0
16	B-II	-439.1	30.9	25.0
17	B-II	-370.7	56.5	25.0
18	B-II	-291.4	83.3	25.0
19	E-II	-335.5	198.0	25.0
20	E	-161.4	77.1	10.0
21	E	-161.4	69.0	10.0
22	E	-161.4	61.1	10.0
23	E	-161.4	53.0	10.0
24	E	-153.4	77.1	10.0
25	E	-153.4	69.0	10.0
26	E	-153.4	61.1	10.0
27	E	-153.4	53.0	10.0
28	E	14.1	11.4	10.0
29	E	141.1	22.6	10.0
30	E	149.8	32.9	10.0
31	E	6.4	-42.9	8.0
32	E	325.9	-33.9	8.0
33	E	-186.5	206.5	8.0
34	E	-122.6	210.3	8.0
35	E	-72.7	197.8	8.0
36	E	-72.7	191.8	8.0
37	E	-72.7	185.8	8.0
38	E	-278.2	177.0	8.0
39	E-II	-196.8	5.2	25.0
40	H-II	-127.0	-108.6	25.0

No.	Label	X	Y	MH
41	E-II	-27.4	-123.0	25.0
42	E	128.2	11.4	10.0
43	E	127.8	22.6	10.0
44	E	127.5	32.9	10.0
45	H	-155.8	215.0	0.5
46	H	-96.2	214.7	0.5
47	H	-226.4	215.2	0.5
48	H	-250.0	215.0	0.5
49	H	-32.4	95.8	0.5
50	B	-116.4	114.0	0.3
51	B	-97.9	119.3	0.3
52	B	-88.5	115.1	0.3
53	B	-80.1	109.1	0.3
54	B	-76.7	101.3	0.3
55	B	-65.0	97.5	0.3
56	B	-110.6	97.3	0.3
57	H	-115.6	95.0	0.5
58	H	-133.5	87.5	0.5
59	H	-161.6	87.3	0.5
60	H	-198.7	95.4	0.5
61	H	-208.2	119.7	0.5
62	H	-215.6	132.2	0.5
63	H	-275.1	131.1	0.5
64	B	-207.3	125.2	0.3
65	B	-218.2	128.5	0.3
66	B	-224.4	132.0	0.3
67	B	-225.2	112.9	0.3
68	B	-237.6	109.0	0.3
69	B	-256.6	109.9	0.3
70	B	-269.2	134.3	0.3
71	B	-268.4	112.3	0.3
72	B	-278.8	-81.7	0.3
73	B	35.1	-103.0	0.3
74	B	54.3	-118.0	0.3
75	B	81.5	-117.6	0.3
76	B	102.2	-102.2	0.3
77	B	108.7	-78.8	0.3
78	D	130.3	-71.0	6.0
79	A	332.1	-48.6	0.5
80	A	394.7	-66.2	0.5

No.	Label	X	Y	MH
81	A	282.1	-67.3	0.5
82	A	256.2	-68.2	0.5
83	A	226.3	-69.4	0.5
84	A	157.5	-74.9	0.5
85	A	115.4	-76.5	0.5
86	A	-0.1	-80.1	0.5
87	A	-0.4	-88.9	0.5
88	A	26.2	-118.0	0.5
89	A	49.0	-10.6	0.5
90	A	112.6	-1.6	0.5
91	A	154.5	-0.2	0.5
92	A	224.0	-0.9	0.5
93	A	253.7	-0.1	0.5
94	A	279.8	-2.8	0.5
95	A	303.0	-2.0	0.5
96	A	331.5	-16.9	0.5
97	C	116.3	40.5	7.0
98	C	148.7	41.6	7.0
99	C	125.8	2.8	7.0
100	C	142.2	3.2	7.0
101	F	-164.5	78.6	7.0
102	F	-150.2	78.5	7.0
103	F	-110.2	121.5	7.0
104	F	-74.3	99.3	7.0
105	F	-31.3	151.8	7.0
106	F	-31.3	149.3	7.0
107	F	-31.3	122.2	7.0
108	F	-202.5	131.3	7.0
109	F	-231.7	123.7	7.0
110	F	-238.2	120.6	7.0
111	F	-248.9	120.5	7.0
112	F	-257.2	123.6	7.0
113	F	-258.2	130.6	7.0
114	G	-280.8	184.2	9.0
115	G	-280.8	155.1	9.0
116	G	-183.8	210.8	9.0
117	G	-138.0	210.7	9.0
118	G	-93.7	208.6	9.0
119	F	-164.5	49.7	7.0
120	F	-150.2	49.8	7.0

THE GALLERIA OF TROY - TROY, MI
PHASE II - SITE LIGHTING VALUES AT GRADE
PREPARED FOR: BOWER + ASSOCIATES
GASSER BUSH ASSOCIATES

Designer
LBB/JAB
Date
AUG 19 2013
Scale
AS NOTED
Drawing No.
#13-17201-V2