AGENDA

Special Joint Meeting
Grand Haven Charter Township Planning Commission
City of Grand Haven Planning Commission
Wednesday, February 24, 2016 – 7:00 p.m.

I. Call to Order

II. Roll Call

III. Pledge to the Flag

IV. Approval of the February 15, 2016 Meeting Minutes

V. Correspondence

VI. Public Comments/Questions on Agenda Items (Limited to 3 minutes)

VII. Items for Joint Discussion
   A. Robbins Road Corridor Plan
   B. Health Pointe Traffic Impact Study

VIII. Items for GHT Discussion
   A. Revised Health Pointe Building Elevation Drawings
   B. Revised Health Pointe Landscape Plan

IX. Public Comments/ Questions on Non-Agenda Items (Limited to 4 minutes)

X. Adjournment

Note: Persons wishing to speak on agenda items must fill out a "Speakers Form" located on the counter. Completed forms must be submitted to the Zoning Administrator prior to the meeting.

MEETING MINUTES
GRAND HAVEN CHARTER TOWNSHIP
PLANNING COMMISSION
FEBRUARY 15, 2016

I. CALL TO ORDER

LaMourie called the meeting of the Grand Haven Charter Township Planning Commission to order at 7:32 p.m.

II. ROLL CALL

Members present: LaMourie, Robertson, Kieft, Taylor, Reenders, Gignac, and Wilson
Members absent: Kantrovich, Cousins
Also present: Fedewa and Attorney Bultje

Without objection, LaMourie instructed Fedewa to record the minutes.

III. PLEDGE TO THE FLAG

IV. APPROVAL OF MINUTES

Without objection, the minutes of the January 19, 2016 meeting were approved.

V. CORRESPONDENCE – None

VI. PUBLIC COMMENTS ON AGENDA ITEMS ONLY – None

VII. PUBLIC HEARING

A. Planned Unit Development – Stonewater

Fedewa provided an overview through a memorandum dated February 11th.

Representative Dale Kraker, developer and Rick Pulaski, engineer from Nederveld were present and available to answer questions:

- Rick Pulaski, engineer from Nederveld:
  - Provided a description of the project, and an historical review of the previously approved 170 unit condominium PUD.
  - If all density bonuses were utilized the development could have up to 214 units.
  - Project is a long-term development project, and believes each phase is an appropriate addition, and one the market can absorb.

- Gave an overview of the PUD Intent and Objectives, and how it relates to the proposed project.
- Described each open space area, and any amenities it may offer.
- Indicated the proposed condominiums are very typical designs found throughout Michigan.
- Described the differences between a platted lot and condominium unit and how each area is measured.

- Dale Kraker, developer:
  - Only two lots within the platted subdivision are causing the smallest departure requests.
  - Requested clarification on the sidewalk escrow language the Township requested to be added to the Master Deed, Bylaws, and Declaration of Covenants.
  - Provided a description on the two proposed associations for the platted subdivision and condominiums.
  - Off-street parking spaces offered within the condominiums are meant to accommodate overflow parking for guests.
  - Indicated the requested setbacks are greater than what would likely be used. The request is to allow buyers the option to customize the footprint of their homes.

After the applicant's presentation LaMourie opened the public hearing at 7:55 p.m.

- Charles Schmidt – 15830 Lincoln Street:
  - Questions whether or not Lincoln Street can support the additional traffic this development will create.

- Kip Nadeau – 15600 Lincoln Street:
  - Does not understand how the land surrounding the proposed development could be master planned for Agricultural Preserve if it is only comprised of trees and lacks active farming.

LaMourie closed the public hearing at 7:58 p.m.

VIII. OLD BUSINESS

A. Planned Unit Development – Stonewater

The application was discussed by Commissioners and focused on:

- Adding more traffic to Lincoln Street is not desirable. Property owners along Lincoln Street did not anticipate the influx of new traffic that is occurring by way of new development and the M-231 Bypass.
- Utilizing national demographics of number of children per household—at capacity this development could result in enough children to require the construction of another school. Uncertain if the school district is prepared for that many additional children to enter the school system.
- Current request of 184 units is 14 more units than was previously approved in 2005.
- Requested staff explain the decision-making process behind the requirement of stub streets.
    - There are two reasons staff and the OCRC support the stub streets. First, the Tree Preservation Agreement with the State of Michigan can be voided if the signatory repays the tax benefits that were received. Second, the Township can amend the Future Land Use Map at any time.
- Questioned why Gardenton Court is proposed as a private road. Per staff, the OCRC was requiring this street to connect to Manchester Drive. By proposing the street as a private cul-de-sac the developer is no longer required to connect to Manchester Drive.
- Discussed the different methods of calculating condominium lot sizes.
- Uncertain if the proposed driveway lengths within the condominium area can accommodate two vehicles and not obstruct the sidewalk.
- Concerned about the proposed departures for lot size and setbacks within the condominium area. The requests are much greater than the Township has approved in the past. Could set a new precedence. Comparisons were made to departures approved for other developments.
    - Specifically, there is a concern if lot sizes are too small a situation similar to that in Forest Park East No. 5 and No. 6 could occur where some building envelopes were too small and unable to accommodate the required minimum floor area.

Motion by Kieft, supported by Robertson, to **table** the Stonewater PUD application, and request the applicant consider revising the plans based on the concerns surrounding the departure requests. **Which motion carried unanimously**.

B. Planned Unit Development – Speedway & North Star Commercial

Wilson recused himself due to a conflict of interest – represents North Star Commercial as the Phase II developer of the PUD application.

Fedewa provided an overview through a memorandum dated February 11th.

Representatives Michael Bergman, developer and Mandy Gauss, engineer from CESO were present and available to answer questions:

- Mandy Gauss, engineer from CESO provided an in depth review of the proposed modifications to Hayes Street, and the communication that has transpired between the Ottawa County Road Commission and the Michigan Department of Transportation.

The application was discussed by Commissioners and focused on:

- Questioned if the driveway width on Hayes Street was acceptable.
- Requested staff describe the requested screening waiver:
    - Section 20.11.5 of the Zoning Ordinance requires a screen for residentially zoned parcels adjacent to the rear or interior lot line. The Ordinance allows the Planning Commission to grant a waiver of this requirement if the setback requirement is exceeded. However, the waiver ends whenever a structure is located within the required setback.

Motion by Robertson, supported by Gignac, to recommend to the Township Board **approval with conditions** of the Speedway, North Star Commercial, and Alice Bottje Planned Unit Development. This is based on the application meeting the requirements and standards set forth by the Grand Haven Charter Township Zoning Ordinance and Master Plan. The motion is subject to, and incorporates, the following report. Approval shall be conditioned upon:

1. Approval and compliance with all requirements set forth by the DEQ, OCWRC, and OCRC. No building permits shall be issued until all permits have been obtained.
2. The legal descriptions of the PUD boundaries shall be finalized, thus, permitting the finalization of the land division application. This includes the necessary title conveyances.
3. The Declaration of Restrictions and Easements shall be reviewed, and approved by Township Attorney Bultje. The Developers shall submit a copy of the document recorded at the Ottawa County Register of Deeds. No building permits shall be issued until the condition is met.

4. The Developers shall enter into a PUD Contract with the Township. The Contract shall be reviewed and approved by the Township Board prior to the issuance of building permits.
5. The Developers shall enter into a Special Assessment Private Road Maintenance Agreement with the Township. The Agreement shall be reviewed and approved by the Township Board prior to the issuance of building permits.
6. Applicants shall supply documentation that confirms the vegetation proposed to be planted in the wetland is appropriately rated (*i.e., native vegetation suitable to thrive in a wetland environment*).
7. Exterior lighting (*noted as S4 on the photometric plan*) shall be fully recessed.
8. Luminaire Numbers 11, 12, 13, 15, and 17 (*as described on page 1 of 5 of the photometric plan*) shall include side shielding toward the property line to meet the Section 20A.8.1 Exemption 3 regulations.

REPORT

Pursuant to the provisions of the Grand Haven Charter Township (the "Township") Zoning Ordinance (the "Zoning Ordinance"), the following report of the Grand Haven Charter Township Planning Commission (the "Planning Commission") concerning an application by Speedway LLC, North Star Commercial, and Alice Bottje (the "Developers") for approval of a Planned Unit Development (the "Project" or the "PUD").

The Project will consist of two phases. The first phase including a Speedway gas station and convenience store with auto and commercial fueling canopies. The second phase will be future commercial and retail development. The Project as recommended for approval is shown on a final site plans, last revised 2/8/2016 (the "Final Site Plan"), presently on file with the Township.

The purpose of this report is to state the recommendation of the Planning Commission concerning the Project, the basis for the Planning Commission's recommendation, and the Planning Commission's recommendation that the Developers PUD be approved as outlined in the above motion. The Developers shall comply with all of the documentation submitted to the Township for this Project. In recommending the approval of the proposed PUD application, the Planning Commission makes the following findings pursuant to Section 17.04.3 of the Zoning Ordinance:

1. The Project meets the site plan review standards of Section 23.06 of the Zoning Ordinance. Specifically, pursuant to Section 23.06.7, the Planning Commission finds as follows:
    A. The uses proposed will not adversely affect the public health, safety, or welfare. Uses and structures located on the site take into account topography, size of the

property, the uses on adjoining property and the relationship and size of buildings to the site.

B. The site will be developed so as not to impede the normal and orderly development or improvement of surrounding property for uses permitted in this ordinance.

C. Safe, convenient, uncontested, and well defined vehicular and pedestrian circulation is provided for ingress/egress points and within the site. Drives, streets and other circulation routes are designed to promote safe and efficient traffic operations within the site and at ingress/egress points.

D. The arrangement of public or private vehicular and pedestrian connections to existing or planned streets in the area are planned to provide a safe and efficient circulation system for traffic within the township.

E. Removal or alterations of significant natural features are restricted to those areas which are reasonably necessary to develop the site in accordance with the requirements of this Ordinance. The Planning Commission has required that landscaping, buffers, and/or greenbelts be preserved and/or provided to ensure that proposed uses will be adequately buffered from one another and from surrounding public and private property.

F. Areas of natural drainage such as swales, wetlands, ponds, or swamps are protected and preserved insofar as practical in their natural state to provide areas for natural habitat, preserve drainage patterns and maintain the natural characteristics of the land.

G. The site plans provide reasonable visual and sound privacy for all dwelling units located therein and adjacent thereto. Landscaping shall be used, as appropriate, to accomplish these purposes.

H. All buildings and groups of buildings are arranged so as to permit necessary emergency vehicle access as requested by the fire department.

I. All streets and driveways are developed in accordance with the Ottawa County Road Commission specifications, as appropriate.

J. Appropriate measures have been taken to ensure that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Provisions have been made to accommodate storm water, prevent erosion and the formation of dust.

K. Exterior lighting is arranged so that it is deflected away from adjacent properties and so it does not interfere with the vision of motorists along adjacent streets, and consists of sharp cut-off fixtures.

L. All loading and unloading areas and outside storage areas, including areas for the storage of trash, which face or are visible from residential districts or public streets, are screened.

M. Entrances and exits are provided at appropriate locations so as to maximize the convenience and safety for persons entering or leaving the site.

N. The site plans conform to all applicable requirements of County, State, Federal, and Township statutes and ordinances.

O. The general purposes and spirit of this Ordinance and the Master Plan of the Township are maintained.

2. The Planning Commission finds the Project meets the intent for a PUD, as described in Section 17.01.3 of the Zoning Ordinance. By approving this Project as a PUD, the Township has been able to negotiate various amenities and design characteristics as well as additional restrictions with the Developers, which the Township would not have been able to negotiate if the PUD Chapter of the Zoning Ordinance was not used. The Developers were granted the following departures from the zoning ordinance based on the defined benefits received by the Township:

   A. The Commission finds the combination of the parking study provided by the applicant, plus the possibility of disrupting the sensitive landscape if certain spaces were deferred does meet the requirements set forth in Section 15A.10.10 of the Zoning Ordinance. Therefore the Planning Commission is able to justify the requested 28 parking spaces.

   B. The Commission finds the statement of purpose for the Overlay Zone (Section 15A.01) is to, "provide architectural and site design standards that are more demanding than required elsewhere in the Township in order to promote harmonious development and complement the natural characteristics in the western sections of the Township." The spirit and emphasis of this Chapter is aesthetics, therefore, the Commission finds the corbels should be kept, which in turn justifies the request for the increased canopy height of 20'6".

   C. The Commission finds the wetland location precluded the applicant from maximizing the signage that is permitted under Section 24.13 of the Zoning Ordinance. The requested size is commensurate with a freestanding sign, the proposed location is setback farther than required, and the request exceeds the requirements of the Clear Vision Ordinance. Based on these conditions, the Commission is able to justify the requested departure.

   D. The Commission finds the request to modify the wall sign/manual message board composition and justify a second message board for the rear wall is reasonable and is able to justify the request, so long as no other wall signs are permitted. Furthermore, the proposed configuration and design is significantly less than what is permitted by Chapter 24 of the Zoning Ordinance. This justification will ensure the aesthetics gained by the US-31 Overlay Zone are sustained because the three potential wall signs will not be allowed, and therefore, the building materials will remain visible.

3. Compared to what could have been constructed by right, the Project has been designed to accomplish the following objectives from Section 17.01.4 of the Zoning Ordinance:

A. The Project will encourage the use of land in accordance with its natural character and adaptability;

B. The Project will promote the conservation of natural features and resources through the preservation of required open space;

C. The Project will promote innovation in land use planning and development;

D. The Project will promote the enhancement of housing and traffic circulation for the residents of the Township;

E. The Project will promote greater compatibility of design and better use between neighboring properties;

F. The Project will promote more economical and efficient use of the land while providing harmonious variety of housing choices; and

G. The Project will promote the preservation of open space.

4. The Project meets the following qualification requirements of Section 17.02 of the Zoning Ordinance:

   A. The Project meets the minimum size of five (5) acres of contiguous land.

   B. The Project exhibits significant natural features encompassing more than 25% of the land area, which will be preserved as a result of the PUD plan.

   C. The PUD design substantially moves forward the Intent and Objectives of Section 17.01 of the Zoning Ordinance.

5. The Planning Commission also finds the Project complies with the general PUD Design Considerations of Section 17.05 of the Zoning Ordinance:

   A. The storm water management system for the Project and the drainage facilities will properly accommodate storm water on the site, will prevent run off to adjacent properties, and are consistent with the Township's groundwater protection strategies.

   B. The Project will not interfere with or unduly burden the water supply facilities, the sewage collection and disposal systems, or other public services such as school facilities, park and recreation facilities, etc.

   C. Utility services within the Project shall be underground. This includes but is not limited to electricity, gas lines, telephone, cable television, public water and sanitary sewer.

   D. The internal road system in the Project is designed to limit destruction of existing natural vegetation and to decrease the possibility of erosion.

   E. Vehicular circulation, traffic and parking areas have been planned and located to minimize effects on occupants and users of the Project and to minimize hazards to adjacent properties and roadways.

   F. Parking requirements for each use have been determined to be in accordance with

Chapter 24 (Parking, Loading Space, and Signs).

G. Street lighting will be installed in the same manner as required under the Township's Subdivision Control Ordinance.

H. Buildings in the Project have been sited to protect natural resources. Natural features such as natural grade, trees, vegetation, water bodies and others have been incorporated into the Final Site Plan.

I. The predominant building materials have been found to be those characteristic of Grand Haven Charter Township such as brick, wood, native stone and tinted/textured concrete masonry units and/or glass products.

J. Landscaping, natural features, open space and other site amenities have been located in the Project to be convenient for occupants of, and visitors to, the PUD.

K. The Project is reasonably compatible with the natural environment of the site and the adjacent premises.

L. The Project will not unduly interfere with the provision of adequate light or air, nor will it overcrowd land or cause an unreasonably severe concentration of population.

M. Exterior lighting within the Project complies with Chapter 20A for an LZ 3 zone.

N. The Project will not have a substantially detrimental effect upon or substantially impair the value of neighborhood property, as long as all of the standards and conditions of this approval of the Project are satisfied.

O. The Project is in compliance with all applicable Federal, State, County, and local laws and regulations. Any other permits for development that may be required by other agencies shall be available to the Township Board before construction is commenced.

P. The Project meets the access provision regulations.

Q. The driveways providing access to corner lots shall gain access from the lesser traveled of the two intersecting streets.

R. The Project satisfies the minimum open space of 25% required by the Zoning Ordinance.

S. The open space in the Project is large enough and properly dimensioned to contribute to the purpose and objectives of the PUD.

T. The open space in the Project consists of contiguous land area which is restricted to non-development uses.

U. The open space shall remain under common ownership or control.

V. The open space shall be set aside by a means of conveyance approved by the Township Board, which conveyance satisfies the requirements of Section 17.05.5.G of the Zoning Ordinance.

W. The Project is consistent with the goals and objectives of the Master Land Use Plan. Specifically, it is consistent with the Master Plan designation of the property in question.

6. The Planning Commission also finds the Project complies with the US-31 and M-45 Area Overlay Zone findings and statement of purpose found in Section 15A.01 of the Zoning Ordinance:

   A. Accommodates a variety of uses permitted by the underlying zoning, but ensure such uses are designed to achieve an attractive built and natural environment.

   B. Provides architectural and site design standards that are more demanding than required elsewhere in the Township in order to promote harmonious development and complement the natural characteristics in the western sections of the Township.

   C. Promotes public safety and efficient flow of vehicular traffic by minimizing conflicts from turning movements resulting from the proliferation of unnecessary curb cuts and driveways.

   D. Ensures safe access by emergency vehicles.

   E. Encourages efficient flow of traffic by minimizing the disruption and conflicts between through traffic and turning movements.

   F. Preserve the capacity along US-31/M-45 and other roads in the Overlay Zone by limiting and controlling the number and location of driveways, and requiring alternate means of access through shared driveways, service drives, and access via cross streets.

   G. Reduces the number and severity of crashes by improving traffic operations and safety.

   H. Requires coordinated access among adjacent lands where possible.

   I. Provides landowners with reasonable access, although the access may be restricted to a shared driveway, service drive, or via a side street, or the number and location of access points may not be the arrangement most desired by the landowner or applicant.

   J. Requires demonstration that prior to approval of any land divisions, the resultant parcels is accessible through compliance with the access standards herein.

   K. Preserves woodlands, view sheds, and other natural features along the corridor.

   L. Ensures that distractions to motorists are minimized by avoiding blight and clutter while providing property owners and businesses with appropriate design flexibility and visibility.

   M. Implements the goals expressed in the US-31/M-45 Corridor Study.

   N. Establishes uniform standards to ensure fair and equal application.

O. Addresses situations where existing development within the Overlay Zone does not conform to the standards of this chapter.

P. Promotes a more coordinated development review process with the Michigan Department of Transportation and the Ottawa County Road Commission.

C. Township Board Recommendation – Health Pointe PUD Amendment

LaMourie recused himself due to a conflict of interest. His employer is under contract to render architectural and engineering services for Spectrum Health.

Fedewa provided a review of the January 25th Township Board motion, and noted the Grand Haven Charter Township Planning Commission and City of Grand Haven Planning Commission will hold a joint meeting on February 24th to discuss the Robbins Road Sub-Area Plan and the Health Pointe Traffic Impact Study.

IX. NEW BUSINESS

A. Pre-Application Presentation – PUD Amendment – Golfview Subdivision

Fedewa provided an overview through a memorandum dated February 11th.

Representative David Stebbins from Redstone Homes was present and available to answer questions:

- Provided a brief review of the proposal.
- There is a better market for The Retreat style condominiums than single family dwellings in a platted subdivision.

The pre-application proposal was discussed by Commissioners and focused on:

- Concerned the property owners of the two improved lots in the Golfview Subdivision would object. May want to consider including them in the proposal.
- In favor of a "horse-shoe" driveway rather than four driveways on Lincoln Street.
- Recommend blending aesthetics of The Retreat Condominiums and the two existing dwellings in the Golfview Subdivision to promote cohesion.

X. REPORTS

A. Attorney Report – None

B. Staff Report

- Special Joint Meeting with City of Grand Haven Planning Commission on Feb 24th @ 7pm in the GHT Board Room.

- The Reenders Inc. development group has a purchase agreement for the Ottawa County Road Commission property, and propose a senior apartment complex and assisted living facility. Staff anticipates the developer to request an amendment to the draft Future Land Use Map from Medium Density Residential to High Density Residential. The developer is currently discussing the proposal with the Cottage Hills neighborhood in hopes of garnering support for the Map amendment and the development project.

C. Other – None

XI. EXTENDED PUBLIC COMMENTS ON NON-AGENDA ITEMS ONLY – None

XII. ADJOURNMENT

Without objection, the meeting adjourned at 9:27 p.m.

Respectfully submitted,

Stacey Fedewa
Acting Recording Secretary

GRAND HAVEN CHARTER TOWNSHIP

Community Development Memo

DATE: February 19, 2016

TO: Grand Haven Charter Township Planning Commission
City of Grand Haven Planning Commission

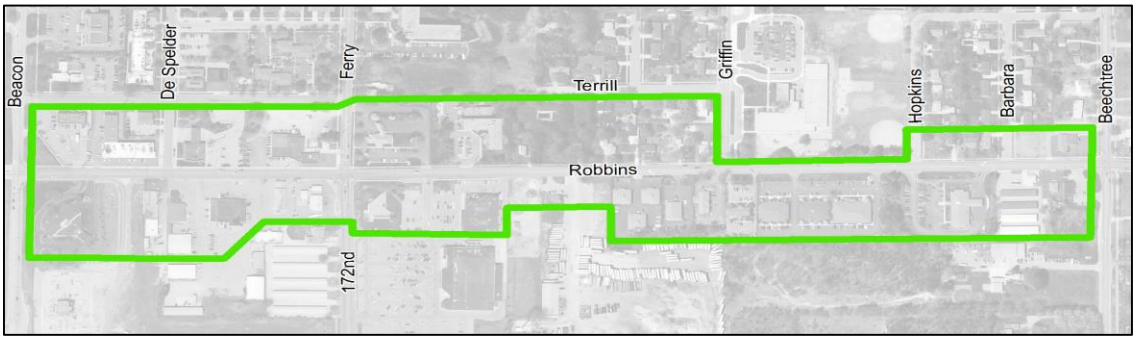
FROM: Stacey Fedewa, Planning & Zoning Official

RE: Robbins Road Corridor Plan

BACKGROUND

Beginning in 2009 the City of Grand Haven and Grand Haven Charter Township began a joint project of developing a Robbins Road Corridor Plan to address access management and design guidelines. Both local governments adopted their respective Plans in 2011.

The intent of Plan is to improve safety and traffic operations along Robbins Road between US-31/Beacon Boulevard and 168th Avenue/Beechtree Street.



The Plan states, "the intent of such a process is to ensure that the two local units of government (and if necessary, any road agencies) review site plans in a coordinated manner to implement the recommendations of this plan. The process should provide feedback loops between the local planning commissions as modifications are made to access and circulation."

It is noted, there is a 3:1 co-ownership of the Robbins Road and 172nd Avenue/Ferry Street intersection. Furthermore, the City has full ownership and control of the traffic signals.

PROPOSED IMPACT

The proposed Health Pointe PUD Amendment (the "Project") on the remaining Meijer outlots will impact Robbins Road, if approved and constructed. That said, the Project does not abut Robbins Road. Because there is no frontage on Robbins Road the Ottawa County Road Commission (OCRC), and Township Attorney have advised that while the Traffic Impact Study may increase volumes to a point that warrant improvements on Robbins Road, it is not advisable to deny the project on the basis the road infrastructure cannot support the development because of the lack of frontage.

The Project does not impact existing access points on Robbins Road. The only proposed change that will effect a public road is to relocate the northern most driveway on 172nd Avenue to the south by 75 feet.

As you know, one of the primary goals of the Plan is to realign Whittaker Way with DeSpelder Street, and to further that goal the applicant has agreed to grant the Township an easement.

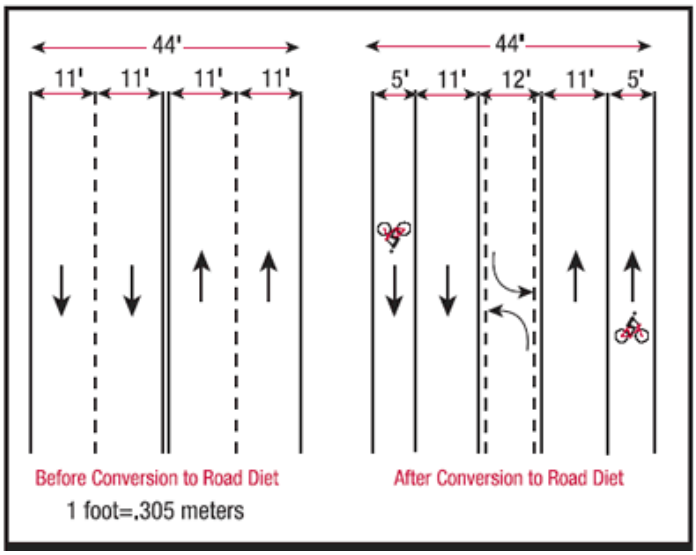
PROPOSED IMPROVEMENTS

The OCRC and City DPW Director have each reviewed the Traffic Impact Study, and provided the following comments:

- FHWA Traffic Control Devices Handbook and MDOT guidelines indicate that a left turn signal (*i.e., green arrow*) is needed if left-turn volumes exceed 90 vph and the product of opposing through hourly volume and the left-turn hourly volume exceeds 50,000 if there is one opposing through lane.
    - OCRC review determined the product of these two movements is 49,686 which essentially meets the requirement for a left-turn signal.
- Section 9.7.3 of AASHTO states, "exclusive left turn lanes should be considered where left-turn volumes exceed 100 vehicles per hour."
    - The TIS indicates the westbound left turn lanes would total 115 vehicles per hour (vph) in 2017.
    - It is the OCRC opinion the addition of east/west left turn lanes will increase traffic capacity at the intersection and provide a safer environment for left-turning vehicles (*anticipated reduction in head-on left turn, rear end – left turn, and sideswipe types of crashes*).
    - The Plan identified two alternate scenarios to improve operational and access management on Robbins Road:
        1. 4-lane scenario with dual WB lanes and a single EB lane; and
        2. 3-lane scenario with a single lane in each direction and a shared center left turn lane. This is the preferred scenario because it enhances walkability.

ROAD DIET

Per the Federal Highway Administration (FHWA):



"Road diets" are often conversions of four-lane undivided roads into three lanes (*two through lanes and a center turn lane*). The fourth lane may be converted to bicycle lanes, sidewalks, and/or on-street parking. In other words, existing space is reallocated; the overall area remains the same.

Under most average daily traffic (ADT) conditions tested, road diets have minimal effects on vehicle capacity, because left-turning vehicles are moved into a common two-way left-turn lane. However, for road diets with ADTs above approximately 20,000 vehicles, there is a greater likelihood that traffic congestion will increase to the point of diverting traffic to alternate routes.

Road diets can offer potential benefits to both vehicles and pedestrians. On a four-lane street, drivers change lanes to pass slower vehicles (*such as vehicles stopped in the left lane waiting to make a left turn*). In contrast, drivers' speeds on two-lane streets are limited by the speed of the lead vehicle. Thus, road diets may reduce vehicle speeds and vehicle interactions during lane changes, which potentially could reduce the number and severity of vehicle-to-vehicle crashes. Pedestrians may benefit because they have fewer lanes of traffic to cross, and because motor vehicles are likely to be moving more slowly. The FHWA found that pedestrian crash risk was reduced when pedestrians crossed two- and three-lane roads, compared to roads with four or more lanes.

According to industry experts the typical road that is eligible for a road diet will see 8,500 – 24,000 vpd. According to the Health Pointe TIS the average vpd is 10,000 between US-31 and 172nd Avenue/Ferry Street. Comparatively, M-104 is also a three-lane roadway, which had a 2014 ADT of 22,000 according to MDOT. In other words, **Robbins Road is on the low-end of the eligibility scale, and the anticipated redevelopment of this corridor makes it "ripe" for a road diet to improve safety and walkability.**

COSTS OF PROPOSED IMPROVEMENTS

The City DPW Director provided cost estimates for the proposed improvements. It is noted, the current intersection is equipped with a Diagonal Span (*the signals are suspended diagonally across the intersection*), but MDOT has adopted policies strongly urging intersections be updated with a Box Span (*the signals are suspended or affixed to a pole rectilinearly*) to improve visibility and safety.

- Box Span Left-Turn Signal = $223,768
- Restriping Robbins Road = $54,350 (*scenario 2*)

Total = $278,118

A quote was also obtained for a diagonal signal, which is estimated at $180,548.

The Township anticipates the Downtown Development Authority (DDA) will contribute 25% of the cost for the Box Span signal upgrade (*or $55,942*). Additionally, the Township anticipates the Project applicant will contribute funding to improve the corridor safety for their patrons.

GOAL OF JOINT MEETING

The primary goals of this joint meeting are:

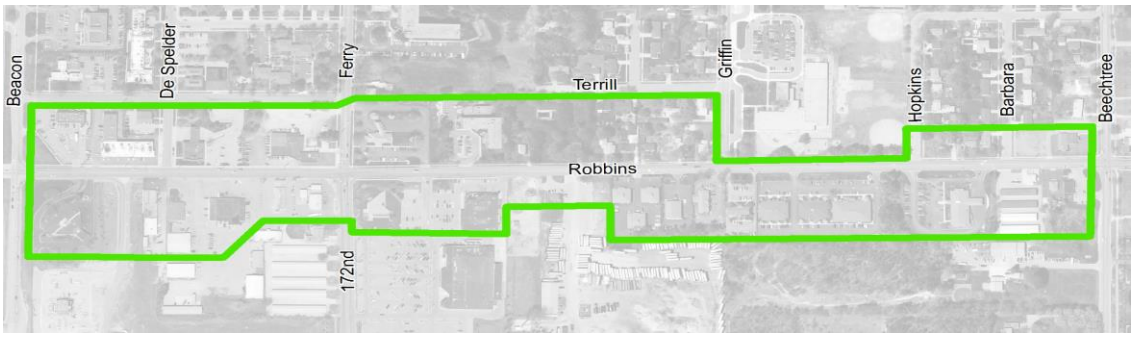
- Rekindle discussions of this Plan and how to achieve the goals.
- Agree upon one of the two alternate scenarios (4-lane or 3-lane).
- Agree upon one of the two signal designs (box or diagonal).

Please contact me prior to the meeting with questions or concerns.

Grand Haven Township
Master Plan 2009
CHAPTER EIGHT
Robbins Road Sub Area Plan

INTRODUCTION

While a Master Plan must recognize broad development patterns, it is also important to structure realistic objectives and recommendations. As such, many land use and development challenges respond effectively to area-wide solutions and approaches. However, portions of any community face unique opportunities or challenges that respond best to focused attention. This is the case for the Robbins Road corridor. Its unique circumstances are made somewhat more complex since both the City of Grand Haven and Grand Haven Township have control over the area.



The Robbins Road Sub Area extends from US-31 on the west to Beechtree/168th on the east

Recognizing that the corridor's future affects both communities and that the decisions of one will affect land uses in the other, the township and city cooperated in the development of this Sub Area plan.

GIVEN THAT BOTH COMMUNITIES WERE UPDATING THEIR MASTER PLANS SIMULTANEOUSLY, THE TOWNSHIP AND CITY COORDINATED THEIR PLANNING ACTIVITIES RECOGNIZING THAT THE DECISIONS OF ONE COMMUNITY AFFECT LAND USES IN THE OTHER.

The plan identifies corridor liabilities and assets and presents a strategy to overcome obstacles and to maximize opportunities. While the Robbins Road Sub Area is distinct, it is nevertheless important to consider its relationship to the larger community. Therefore, this Chapter provides recommendations for the Robbins Road corridor and its improvement that are consistent with the greater Township Master Plan.

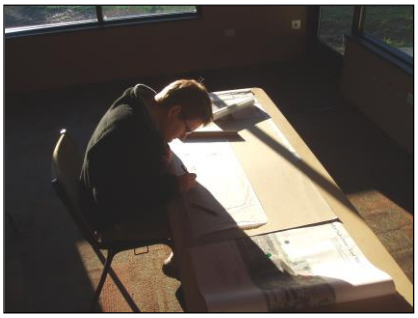
METHODOLOGY AND CITIZEN INPUT

The Robbins Road Sub Area plan began with extensive research and site visits. The consulting team walked and drove the corridor and prepared an extensive inventory of photos and noted its key features, development patterns, unique land uses, traffic patterns, as well as aesthetic and land use strengths and weaknesses. This work concluded on August 14, 2008, with a joint meeting of both the city's and township's Master Plan Steering Committees. The meeting began with a description of the planning process and initial impressions of the sub area. Participants then divided into two groups, (each included representatives of both jurisdictions) who then undertook a SWOT (Strengths/Weaknesses/Opportunities/Threats) assessment. The following table summarizes those results:

Strengths	**Weaknesses**
♦ Traffic volumes ♦ Vacant land to south ♦ Twp. desire to contain commercial growth in nodes and near City ♦ Viable commercial area ♦ Area-wide resource ♦ Deeper Lots ♦ Larger Ownership ♦ DDA West End	♦ Tight Access at Meijer (division between jurisdictions) ♦ Poor pedestrian safety ♦ People avoid light by cutting through Res. On Ferry & Despelder ♦ Lack of left turn lanes results in rear end accidents ♦ Disorganized onsite circulation ♦ Difficult lefts at 168th and Beechtree ♦ Twp. lacks control of roads ♦ 66' R.O.W. ♦ Solvent plume in ground water ♦ Shallow ground water ♦ Narrowness of properties on North Side – West End ♦ Bad past planning (need to redevelop) ♦ A lot of commercial property exists today ♦ Lack of pedestrian connections
Opportunities	**Threats**
♦ Realign Whittaker Way with Despelder ♦ Reduced curb cuts at Walgreen's ♦ Meijer out lots ♦ Brownfield Redevelopment Authority, in both City and Township ♦ DDA in Township ♦ Commitment to cooperate across boundaries ♦ US-31 Bypass, by 2012 (?) ♦ Infrastructure ♦ Expansion of public transit ♦ Corridor TIF Plan ♦ Architectural character standards ♦ Size of parcels South of road ♦ Intersection – Meijer ♦ 3 – Lane Road	♦ Possible dev. to south w/access to Robbins Road ♦ Possible lack of cooperation from stakeholders ♦ Ottawa County Rd. Commission ♦ Revenue source ♦ Economics today ♦ Amount of commercial ♦ By Pass ♦ Lack of transportation choices ♦ Nothing happens with redevelopment

Based on the preliminary research and the SWOT input, an existing features map, (using 2004 aerial photos) and a site analysis were prepared. These were assembled as "*Walking Audit Packets*", which the township and city staffs and local residents used to self-guide tours of the Sub Area. This approach helped all gain a better understanding of the Sub Area and its issues and opportunities.

To maximize public involvement, local residents and business owners were notified by mail, phone, and newspaper articles, and through the City of Grand Haven Master Plan website about the Robbins Road Sub Area planning process. They were also invited to obtain a "*Walking Audit Packet*" either at the township, city, or to download it from the project website and to participate in a planning charrette for the area. A charrette is a short-duration, intense planning and design session that directly involves the public, local stakeholders, and a consultant led planning and design team. The charrette process allows planners and designers to work in a focused manner with the immediate input from participants.



Using the input from the brainstorm sessions, alternative responses to each sub area's challenges were developed

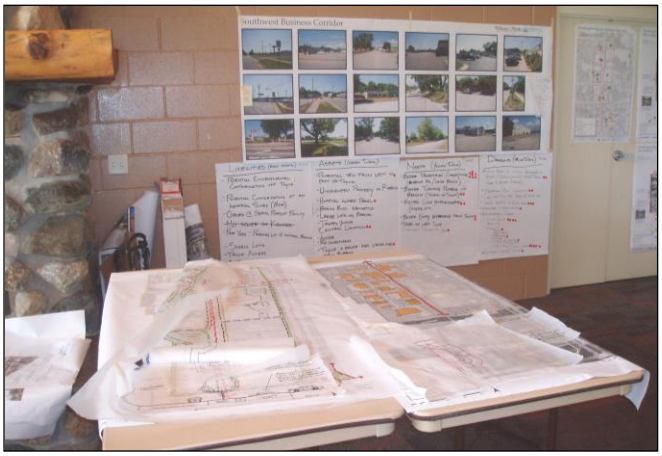
The planning charrette began on the evening of September 15, 2008, with a trolley bus tour of the corridor. Participants identified and discussed various land use and design-related issues that were addressed in greater detail during a facilitated brainstorming session later that evening. This discussion included a facilitated evaluation of liabilities, assets, needs, and desires, and helped focus input on commonly held beliefs and how the character of the Sub Area affects perceptions. Participants then voted and ranked priority issues and opportunities. Significant area-wide liabilities included a lack of:

- Sidewalks on the south side of Robbins Road
- Street trees and landscaping,
- Clearly defined internal circulation patterns
- A dedicated left-turn lane.

However, several "dreams and desires" were identified including:

- Greater corridor design consistency
- Slower traffic speeds
- Planned development south of the corridor

Participants were invited to return the next day to view progress and to offer further input. The opportunities for immediate feedback created a very dynamic atmosphere and resulted in innovation that might not otherwise have been possible. Consequently, a number of ideas were tested, re-worked, and either embraced, or rejected.



The open house offered an opportunity for residents and business owners to see the initial outlines of the sub area plans

An open house was held at the close of the charrette process to review the draft Sub Area plan. The informal atmosphere helped further engage stakeholders and decision-makers in a dialogue about planning assumptions; it offered an opportunity for residents and business owners to see the initial outline of the Sub Area plan, and allowed a discussion about the remaining work.

The resulting joint community plan for the Robbins Road corridor was finalized and then integrated, as this chapter, into the Grand Haven Township Master Plan.

ROBBINS ROAD CORRIDOR

Robbins Road is controlled by the City of Grand Haven; however, since it is a jurisdictional boundary, properties along its north side fall within the city while properties to the south fall primarily into the township. Initially, the corridor study area extended about 250 - 300 feet north and south of Robbins Road and from US-31 to Beechtree Street/168th Avenue. The planning area was about 48 acres and included properties developed as a variety of commercial uses at the west end, but with office and residential toward the east. To gain a better understanding of land uses and development opportunities it was later broadened to approximately 100 acres, taking in more land to the south.

Much of the recent activity in and adjacent to the corridor has occurred in the township, however, more land remains there to be developed. As such, the township seeks a plan for this area that focuses development, taking advantage of existing infrastructure, committed development patterns, and targeted land uses that create a better sense of place for this key community gateway.

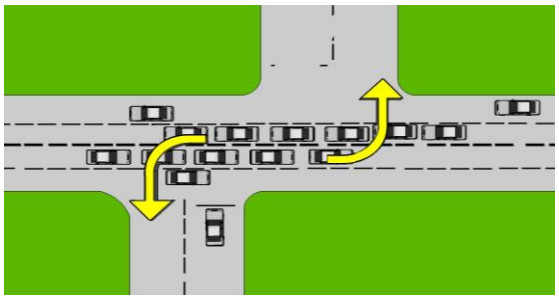
Successive layers of pavement have nearly overtopped the curb, further exacerbating access management in this area

During the planning process several challenges and assets were identified; these are more fully developed below:

Transportation. Robbins Road has four travel lanes (two in each direction) and carries upwards of 12,000 vehicle per day at its west end and about 9,800 at the east. While the US-31 and Robbins Road intersection is signalized, south bound US-31 movements require an indirect left. The Robbins Road, 172nd Avenue/Ferry Street and 168th Avenue/Beechtree Street intersections are also signal controlled.

The majority of vehicle crashes on Robbins Road (22 out of 25 reported accidents in 2008 through August) occurred between US-31 and 172nd Avenue/Ferry Street. This is where commercial activity is concentrated and multiple and poorly defined curb cuts are located. Many accidents in this vicinity are rear-end crashes, most likely due to the lack of a dedicated left turn lane and poor access management.

With forty-nine access points along Robbins Road, left-turn movements are common. As a result, the inside lanes are often encumbered with turning cars and weaving traffic as drivers change lanes to avoid vehicles and queues. Furthermore, many opposing driveways are poorly aligned, creating several potential left-turn lock-up situations. There is also a lack of uniform access to and from the roadway, although this disorganized pattern is much more prevalent west of Ferry Street/ 172nd Avenue.



Ineffectively aligned opposing intersections create the potential for "left turn lock-ups"

About 800 feet east of US-31, parking lots extend right up to the street resulting in an oppressive, asphalt-dominated environment with little room to sort out parked cars from drive aisles and to define sidewalks. Successive layers of pavement in this area have nearly overtopped the curb, further exacerbating access management.

An Entry Opportunity. The US-31/Robbins Road intersection is a major community gateway. The broad highway boulevard and indirect left turns work well to regulate traffic, but missing are elements that support aesthetics and create a memorable "arrival experience" that enhances both communities.

Parking Lot Layout. Many parking lots along Robbins Road interconnect and yet while this cross access is poorly defined, overall it likely helps reduce traffic

The lack of definition within the parking areas may lead to confusion for drivers and an unsafe environment for pedestrians

congestion. These interconnections could be enhanced and made safer by improving pavement markings and clearly channelizing internal parking lot traffic. The current situation, with poorly defined access and internal drive aisles not only leads to confusion, it also makes walking in this area unfriendly at best, and dangerous, at worst.

These challenges are also exacerbated by what may be an oversupply of parking, especially at the southeast corner of Robbins Road and 172nd Avenue. It appears that additional commercial development could be accommodated there, strengthening the vitality of the area and making more efficient use of vast parking lots without overburdening sites or roadways. Care must still be taken to carefully integrate any new uses with existing development.

The quality and safety of pedestrian areas vary significantly across the corridor

Pedestrian Access. The corridor does not accommodate pedestrians very well as sidewalks are only consistently located along the north side of Robbins Road. On the south side, immediately east of 172nd Avenue, only about 500 feet of

sidewalk exists. West of 172nd Avenue there is little, if any parkway between the road, pedestrian zones, and parking lots. Consequently, pedestrians are very exposed to fast moving traffic. Given traffic volumes and turning movements, crossing Robbins Road on foot can be a daunting experience that must be addressed by appropriately designed sidewalks, tree lined parkways and safe and clearly defined pedestrian crossings.

Site and Architectural Design. Site and building design and architectural character vary tremendously along the corridor; from outdated commercial strip development to more modern office settings. Some structures, however, may be reaching the end of their useful life. While Southtown Plaza, a 1960s strip center, is about to be replaced with a modern Walgreens pharmacy and convenience store it should not deter a continued focus on the importance of architectural design and character. In fact this new development should be viewed as a catalyst opportunity to establish a set of consistent corridor design principles for the city and township, guaranteeing consistency in theme, the location and placement of buildings and parking, building materials, signs and lighting.

An Area of Strong Potential. Despite traffic and access issues, the Robbins Road Sub Area provides vital commercial and retail services to the township and city. Immediately to the south, Meijer and Wal-Mart have expanded their retail reach attracting shoppers beyond just the surrounding area. In terms of total sales volume, the Sub Area and its environs rivals many other shopping areas in West Michigan. In addition, Pinewood Place, located on Ferry Street just north of Robbins Road, is undergoing an expansion; providing more senior housing and added employment opportunities.

Vacant and underutilized lands in the township also provide future opportunities. Several large parcels are planned and zoned for medium to high density residential and/or commercial uses, creating the potential for more traffic. Yet, if done correctly this development can lessen roadway impacts by promoting more walkable environments within the context of a mixed land use district, one with jobs, housing and shopping all within close proximity. In addition, the Meijer PUD has yet to be built out.

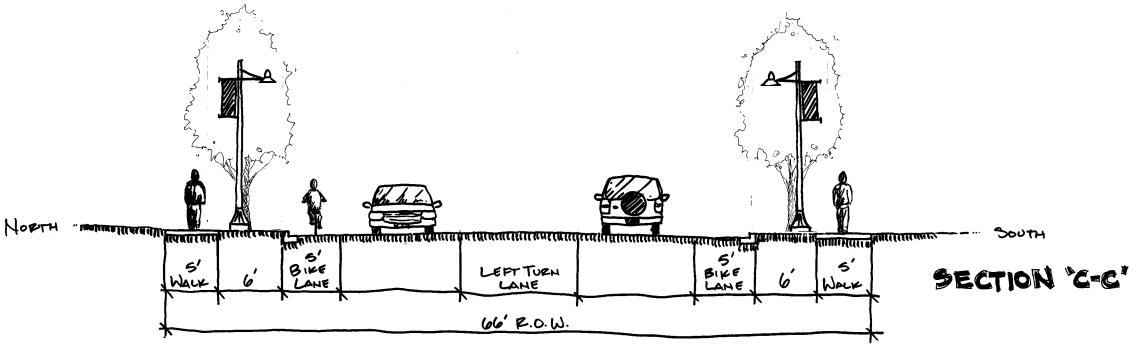
PLAN DESIGN POLICIES

Several transportation, and planning and design policy recommendations have been identified through this effort. These will help resolve issues and enhance the Robbins Road corridor so that it can continue to serve commercial and residential interests in both the township and city. They include:

1. Dedicated Left Turn Lane. Robbins Road traffic volumes vary considerably from west (with the highest levels) to the east; however, the lack of a dedicated left turn lane encumbers the entire corridor. This issue was identified and potential solutions were discussed during the process to gain citizen input.

The recommended alternative reconfigures Robbins Road to a three-lane section (possibly with right-turn lanes at appropriate high-volume locations, such as 172nd Avenue and the newly proposed Whittaker Way/DeSpelder intersections). A five-lane cross-section with a dedicated left was also considered, but ultimately rejected based on the modest traffic volumes and the relatively narrow right-of-way.

The proposed three-lane section accommodates a travel lane in each direction and a dedicated center left. This configuration better and more safely accommodates traffic flow and left turn movements than the current four lane pattern and should result in reducing crashes.

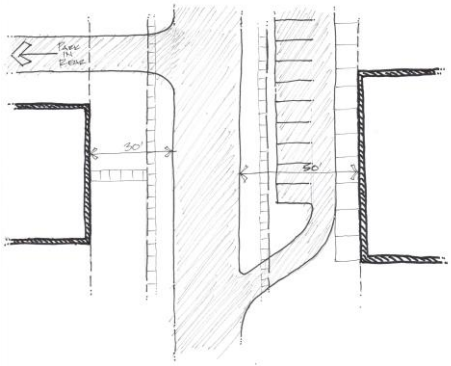
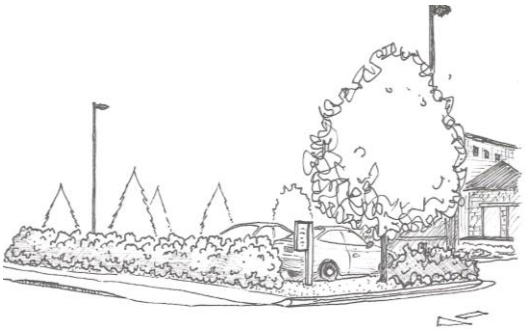
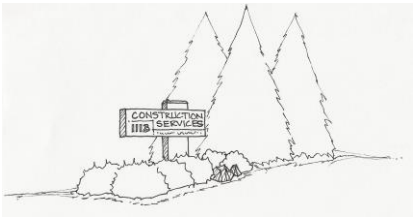
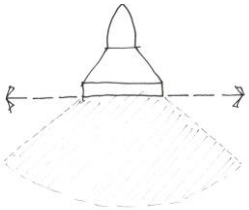
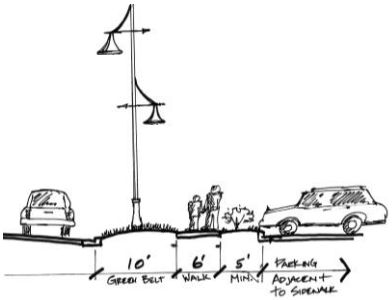
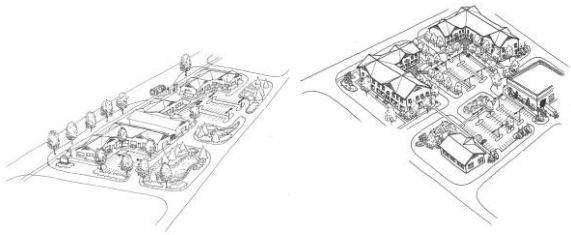
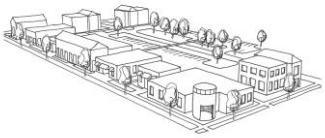


The figure above illustrates the proposed three-lane section within a 66-foot wide right-of-way. It also demonstrates sufficient area to accommodate changes to the roadway; leaving five-foot wide bicycle lanes, six-foot wide parkways to accommodate street trees and five-foot wide sidewalks on both sides of the road.

2. Uniformity and consistency of design. With some properties reaching obsolescence and others being considered for redevelopment, now is the time to improve the character and functionality of Robbins Road by applying consistent site, building, and architectural design standards that are coordinated between the city and township. In fact, citizens ranked uniform and consistent design standards as among their highest priorities. Such an approach would benefit both municipalities and assure compatible development within the corridor; of course, not all sites are poised for new development or redevelopment. Therefore, any standards must be flexible enough to address current uses while anticipating enhancements as new investment occurs. Design standards will also need to recognize that uses transition from west to east; shifting from relatively intense regional commercial on the west, to employment and residential on the east.

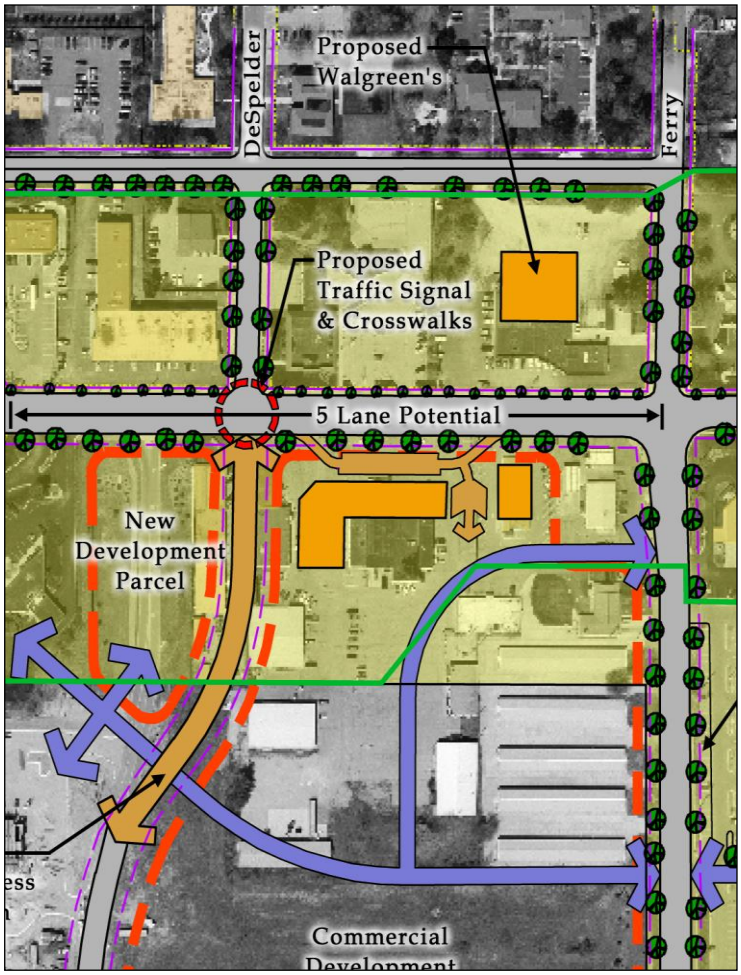
This Plan recommends the following required site development standards that at a minimum address:

Robbins Road Conceptual Uniform Design Standards

Setbacks, variables o Without front parking o With front parking (and screening) 	**Landscape Treatment** o Buffer depth along roads o Trees, size and quantities o Shrub screens for parking lots 
Signage o Size (area and height) o Illumination o Freestanding and Building 	**Lighting Standards** o Cutoff Fixture Types o Wattage Limitations 
Sidewalks o Size o Location options 	**Building Design, by type** o Height, Roofline o Minimum/Maximum footprint o Finish architecture 
Site Layout o Access management (spacing and offsets) o Shared drives, parking & Cross Access 	**Low Impact Storm Water Management** o Landscape for detention o Rain gardens

3. New Roads and Interconnections. The vacant lands to the south present an important opportunity for the township, but without carefully considered implementation strategies the wrong kind of development could trigger additional traffic issues and undermine efforts to manage growth. While some properties have direct access to Robbins Road, others will require connections to 172nd or 168th Avenues. Interestingly, charrette results ranked "*better connectors among all areas*" as one of the top implementation strategies for the Plan.

As such, the Plan recommends an expanded and interconnected system of public streets to serve future development and to better distribute traffic. Specifically, an east-west street, located about 900 feet south of Robbins Road, is proposed between 172nd and 168th Avenues. Griffin Street should also be extended south to meet the new street and a round-about explored for that intersection. Eventually, a further extension of Griffin south to Comstock Street should be considered.



Aligning Whittaker Way and Despelder would improve the efficiency of the intersection and create a new development parcel

Whittaker Way (the Meijer access drive to Robbins Road) should also be realigned to connect with DeSpelder Street. Not only would this improve traffic circulation, but it would also expand development opportunities for properties to the west. To accomplish this, however, will require demolition and redesign of existing sites; but as the area transitions, affected businesses can be relocated to new corridor development.

New roads to better serve the Meijer PUD and the larger parcels to the east are also recommended to enhance circulation and development potential. Finally, streetscape enhancements, including sidewalks, should apply to all new and existing roadways.

4. Traditional Neighborhood Development (TND) Concept. The area south of Robbins Road, between 172nd and 168th avenues, is ideally suited for a Traditional Neighborhood Development. A TND emphasizes compact, mixed-use, transit and pedestrian-oriented development and offers a blueprint based on traditional town patterns. Neighborhoods, sized for easy walking distance, would function as the basic building block. Such neighborhoods should further emphasize human-scale design, town and neighborhood centers, public spaces, civic uses and other features that foster a sense of community. TNDs are also characterized by an interconnected network of narrow streets. Narrow street widths, on-street parking, street trees and other features are intended to slow local traffic and create a safe, attractive environment for pedestrians, in addition to cars. Transit and bicycle travel are also accommodated. The grid pattern of streets includes collectors and arterials, but also provides a variety of routes for local traffic. Service alleys are also a hallmark of TNDs.

Since this area has convenient access to shopping, restaurants, employment, and schools, and is also served by the area's public transportation system, Harbor Transit, it is a natural extension of the traditional development patterns located to the north of Robbins Road in Grand Haven. TND design principles should, therefore, apply to all new development using the following criteria:

- Mixed Land Uses – Land uses should include a blend of single and multiple-family residential, office, and regional and neighborhood-serving commercial, either integrated horizontally across the Sub Area or vertically within buildings.
- Varying Densities and Unit Types – Lot sizes, densities and residential types should vary and allow a compact design form. Setbacks should be replaced with build-to lines that locate buildings in a predictable pattern near the street, without intervening parking lots. Minimum building heights should be established and allowed to exceed 2.5 stories and 35 feet.

- Interconnected Streets – Narrow, inter-connected streets, with on-street parking should be laid out in a grid pattern. New connections between Robbins Road and Comstock Street, and 172nd Avenue and 168th Avenue should be made with respective extensions of DeSpelder Street and

Timberview Drive. Streets should be lined with trees and sidewalks, and illuminated by street lights that not only serve the automobile, but pedestrians as well.

- Quality Design – Buildings (including residential, commercial and office) should have a distinct architectural character that supports TND principles. These include: clearly defined front doors that face the street; ample windows that support CPTED (Crime Prevention Through Environmental Design) principles by orienting to public spaces and increasing "eyes' on the street"; pitched roofs for residences and quality building materials.
- Parking in the Rear – In TNDs automobiles are accommodated, but they are not allowed to dominate. To promote pedestrian-friendly neighborhoods, parking areas should be situated at the rear of a building and be accessed via alleys. Garages should be either set back from the front façade of a home or they should be located at the rear to avoid dominating the street scene with blank walls and parked cars. On-street parallel parking should be allowed to provide a buffer between traffic and pedestrians on the sidewalks.

5. Pedestrian Connections. Other than sidewalks along the north side of Robbins Road the corridor lacks crosswalks or crossing signals. This was ranked among the highest liabilities identified by the public. Consequently, crosswalks should be added at Robbins and Griffin, including alternative crosswalk paving to further delineate pedestrian zones.

6. Entry Feature. The US-31 and Robbins Road intersection is a recognized community entrance which offers an excellent opportunity for enhancements. One example of an entry feature enhancement is an archway that extends over US-31, welcoming visitors to Grand Haven. The historic entry archway in Frankfort Michigan and the archway at the Grand Valley State University Allendale campus entrance are both good examples of such an entry feature.

The wide boulevard intersection of US-31 and Robbins Road offers an excellent opportunity for an entry feature such as these archways at Frankfort and Grand Valley State University

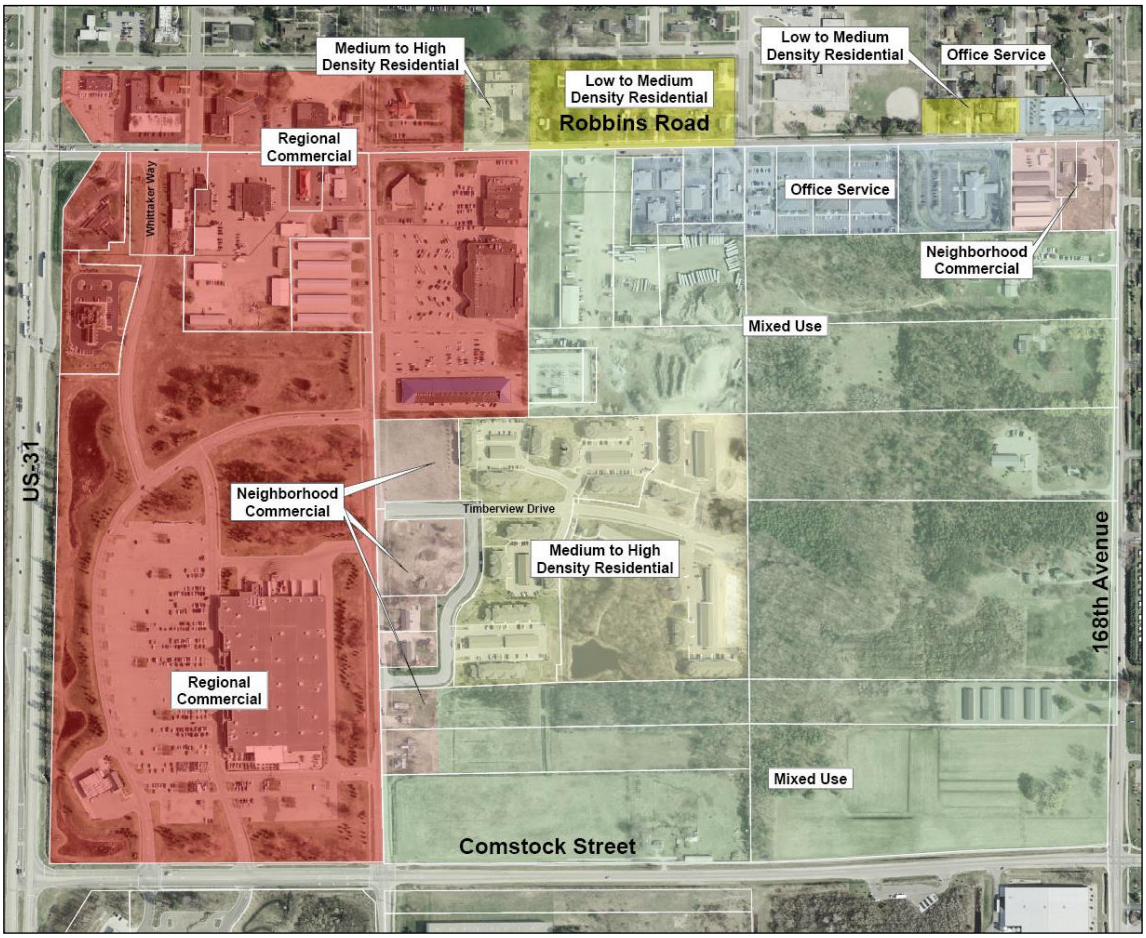
IMPLEMENTATION STRATEGIES

The following recommendations help establish an agenda for further action by the township and city, either working separately or jointly:

1. Future Land Use and Zoning Adjustments.

The township recognized the need to develop a more detailed concept for the Robbins Road Corridor, which is reflected in this plan. Recommendations include a diversity of land uses that vary by type, density, and design. Since this is a shared vision, uniform standards for design and site access must be developed and all new development must be required to meet them.

Future Land Use Concept. Future land use patterns along Robbins Road are designed to transition from commercial in the west to residential in the east; development densities should also be varied. As vacant properties develop in the township they should be interconnected with a new network of streets that link to Robbins Road, Comstock Street, and 168th 172nd Avenues. Such vacant lands should be developed with a mixture of land uses, preferably as a Traditional Neighborhood Development, as described earlier in this Chapter.



The following future land use designations are proposed for the township's portion of the Robbins Road Sub Area. The Office Service and Medium to High

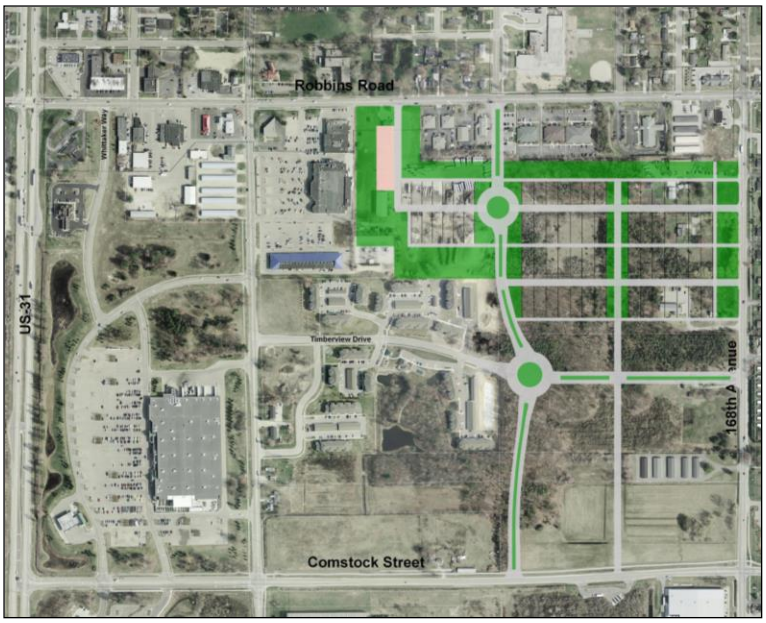
Density Residential designations are not included due to the fact that these uses are already built out and are not anticipated to change.

Regional Commercial. Land uses generally include larger single or multi-occupant structures providing products and services in an auto-oriented environment. However, future development must be designed to provide a safe and inviting place for both pedestrians and drivers. Sites should interconnect using existing and planned drives enabling patrons to access more than one use without being forced back onto a major road. Landscaping should be used to define sites, access drives, and streets, and to soften the regional scale of development.

Buildings should generally be residential in character with pitched roofs

Neighborhood Commercial. A location for small-scale retail and service facilities, these land uses primarily serve nearby residents. Buildings should generally be residential in character, with pitched roofs and sites carefully designed offering safe and inviting environments for pedestrians, bicyclists, and motorists alike. Parking should be convenient, but not configured so that nearby sidewalks and streets are dominated.

Mixed Use. This Plan recommends that the areas planned for Mixed Use are developed in accordance with the TND principles outlined earlier in this Chapter Appropriate land uses include a mixture of single- and multi-family residential, commercial and office that are compactly integrated at varying densities and are located in buildings of varying scale and design.



The area should be developed around a grid-form street network that branches off two main street extensions; an extension of Griffin Street south to Comstock Street, and an extension of Timberview Drive east to 168th Avenue. All streets

should include sidewalks, landscaping and decorative lighting to promote a safe and comfortable pedestrian environment. The graphic on the previous page provides an illustrative concept of a TND plan for the Robbins Road Sub Area.

Zoning. Areas in the township are regulated under the C-1 (Commercial) and SP (Service Professional) zones, while four zoning districts apply in the city. These are Commercial, Multiple-family Residential, Single-Family Residential and Office Service. West of Ferry/172nd zoning is consistent – "C" in the city and "C-1" in the township and permitted and special land uses are comparable in both codes. The township's C-1 district requires a minimum lot size of 35,000 sq. ft. with a minimum width of 110 feet. However, the city's code relies on setback and lot coverage standards to regulate parcel dimensions. A front setback in the township is 50 feet while it is 25 feet in the city.

These differences point out the need for uniformity and consistency; therefore, adjustments to both the city's and township's ordinance standards will be necessary to implement plan goals. However, since the defined zoning districts may apply elsewhere in either jurisdiction, care must be taken to avoid unintended conflicts. Therefore, a mixed use zoning district, if considered in the township, must be tailored specifically to the objectives of this plan. In addition, the township's PUD provisions (if those district regulations are used to implement recommendations) should be evaluated so that they reflect the land use objectives of this Plan. Alternative approaches, including adopting a uniform set of design standards as an overlay applying to both jurisdictions, should be explored. Other approaches include a form-based code or a pattern book used as a development guide. While either approach would provide uniform standards, mandatory requirements will only guarantee positive change.

Implementation of the portion of this Plan relating to the TND concept is dependent on the township's prior adoption of specific zoning district regulations that will allow for (1) additional flexibility in site design (flexibility, that is, beyond what is afforded under the current PUD Ordinance), (2) the intended quality and variety of building characteristics, (3) the compatible integration of mixed land uses, and (4) such other regulations as are deemed necessary to implement the township's goals of promoting high quality development, based on the TND principles outlined earlier in this Chapter. **Therefore, no TND proposals will be considered or approved by the township until such time the township has formulated and adopted the necessary zoning regulations to effectively regulate such a development concept.**

2. Road Reconstruction. A redesign of Robbins Road is recommended to better manage traffic, including left-turns and since it falls under the city's jurisdiction, Grand Haven is in a position to take leadership role for improvements. But it will be important to involve adjoining property owners; and the city and township should collaborate bringing the Ottawa County Road Commission and MDOT together to achieve consensus on its ultimate design, roadway landscaping, the configuration of intersections and, ultimately, the potential redesign of the US-31 intersection. A combination of funding sources will certainly be necessary to

accomplish this, but the initial step would be to move from the concepts outlined in this plan to testing their feasibility and preliminary design.

3. Planned New Roads. The Plan contemplates an expanded and interconnected network of streets to better channel traffic, to reduce pressure on a limited number of key intersections, and to permit efficient use of the lands adjoining the corridor. While part of this area may be outside the current planning boundaries, attention must still be paid to the implications of anticipated growth that could impact Robbins Road. The township should, therefore, work with the affected property owners to evaluate roadway options, curb cuts, and access management. As new development proposals occur in this area, the Planning Commission should use the Master Plan to guide the type and location of changes to its transportation system.

Shift the Whittaker Way, Robbins, Despelder intersection for better alignment

4. Realigned Whittaker Way and Despelder Intersection. An adjustment to the Meijer PUD is recommended that would result in shifting Whittaker Way (its northerly access road) to the east about 150 feet to align with Despelder Street. This change, together with the proposed Robbins Road three-lane cross section, will significantly enhance access and the market potential of surrounding properties. It will also make possible a signalized intersection and designated crosswalks to improve pedestrian access. Additional stacking and left-turn movements may also be enhanced. Of course, this alignment will require property acquisition and the demolition and relocation of some existing buildings and businesses. But, it also creates an expanded development area to the west that currently lacks visibility and exposure.

5. Consider a Corridor Improvement Authority. Act 280 of 2005 authorizes municipalities to establish a tax increment financing authority to plan and implement improvements along a defined commercial corridor. This statute uniquely contemplates cooperation between jurisdictions to address the challenges of boundary roads. Two such entities would need to be established individually by the township and city, but they could work jointly on a development and financing plan. The act allows tax increment financing as a funding source for improvements. These could include some or all of the costs of road reconstruction, streetscape improvements, land acquisition, site redevelopment, and others. The tax increment captured by the authority would include township and city levies, as well as the levies of other taxing jurisdictions that agree to participate.

6. Work with MDOT and the City of Grand Haven on Entry Feature in Intersection. Given that US-31 is a state highway, and Beacon Boulevard and Robbins Road are both city-controlled roadways, coordination with MDOT and the City of Grand Haven is critical to the development of an entry feature at the US-31 and Robbins Road intersection.

Robbins Road Corridor Sub Area - West Site Analysis

- Robbins Road Corridor Sub Area
- City Limits
- Building Footprint
- Right-of-Way
- Parcel Boundary
- Sensitive Area
- Floodplain (approx)

N

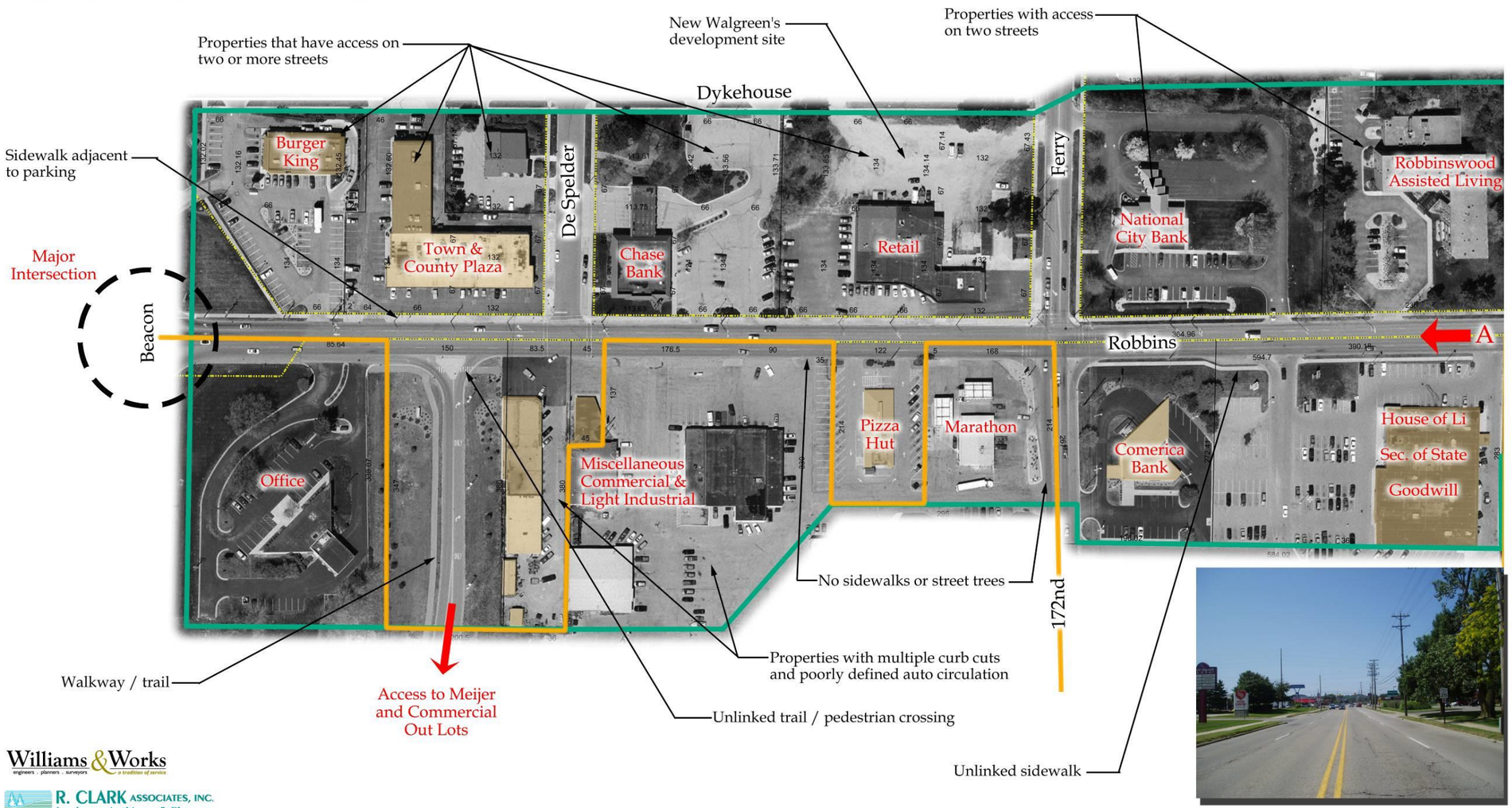
0 60 120 240 360 480 Feet

Inventory Notes:

- Power lines are located primarily on the north side of Robbins Rd.
-Continuous sidewalk on the north side of Robbins Rd. only. The south side of Robbins Rd. has two unconnected sections of sidewalk

Analysis Notes:

-Mixture of land uses throughout the corridor
-Large variety of building scales and setbacks
-High volume traffic flows (4 lanes) - no left turn lane
-Large variety of sign sizes



A - Road Profile

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3335 W. South Airport Rd. Suite 9B, Traverse City, MI 49684
(231)941-8505 Fax (231)947-2748 rca@charterinternet.com

A - Road Profile

Robbins Road Corridor Sub Area - East Site Analysis

Inventory Notes:

-Power lines are located primarily on the north side of Robbins Rd.
-Continuous sidewalk on the north side of Robbins Rd. only.
-No crosswalks provided on Robbins Rd.

Analysis Notes:

-Parcels on the south side of Robbins Rd. are typically larger and deeper than the lots on the north side of the street
-Corridor provides services for a large area (city and township)

Office buildings with parking in front and various greenbelt widths. No sidewalk on south side of road.

Potential Future Pedestrian Access?

Future Multiple Family P.U.D. Developments (Apartments)

- Robbins Road Corridor Sub Area
- City Limits
- Building Footprint
- Right-of-Way
- Parcel Boundary
- Sensitive Area
- Floodplain (approx)

N

0 60 120 240 360 480 Feet

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Robbins Road Corridor Sub Area Plan

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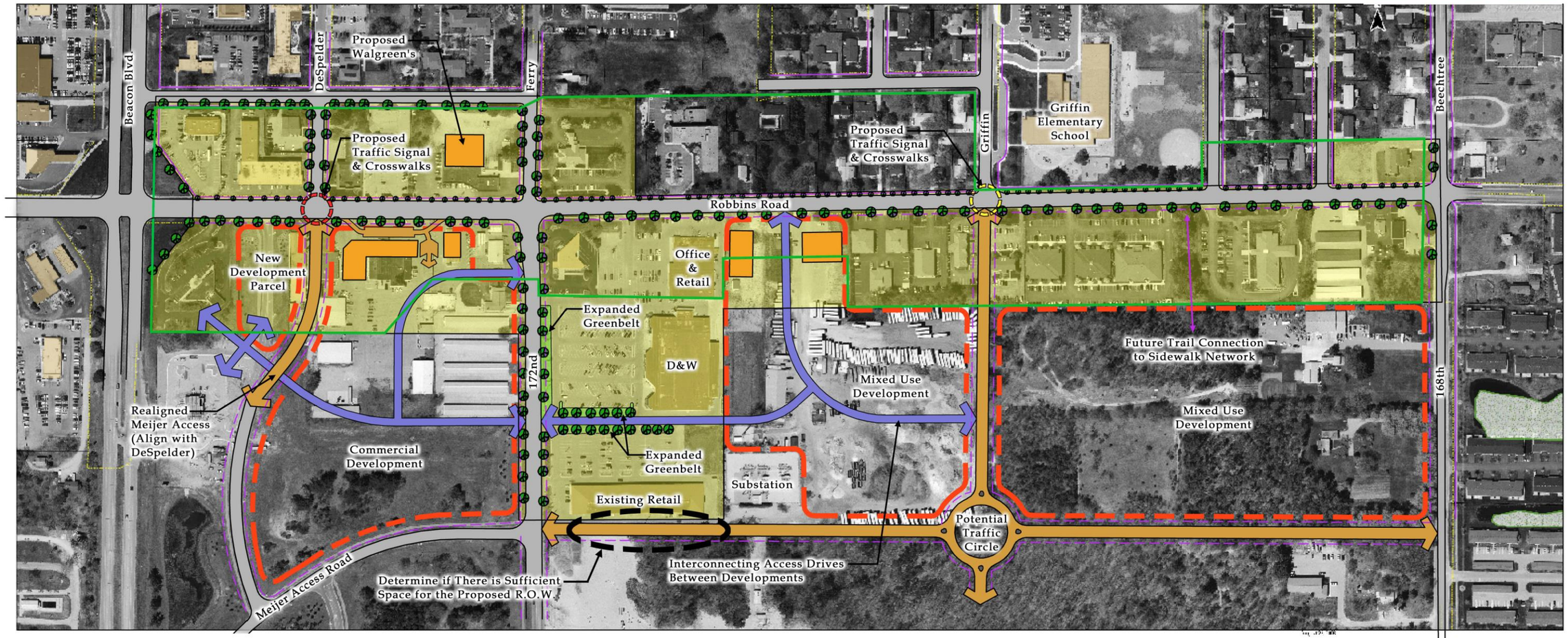

Legend

- Future Development Areas
- Existing Sidewalks
- Proposed Sidewalks
- Existing Roads
- Proposed Roads
- Unification Guidelines Area
- Conceptual Alignment of Future Connections
- Relocated Intersection with Signal
- Future Traffic Signal and Crosswalks
- New Entry Feature
- Potential New Development Sites
- Proposed Street Trees

Scale:
0' 150' 300' 600'

FINAL REPORT

SPECTRUM HEALTH – GRAND HAVEN TRAFFIC IMPACT STUDY

Grand Haven, Michigan

Prepared For:

NEDERVELD, INC.

Prepared By:

DETROIT – SOUTHFIELD – GRAND RAPIDS – TRAVERSE CITY

August 27, 2015

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Executive Summary

A 120,000 square-foot medical office building has been proposed by Spectrum Health in Grand Haven Township, Michigan. The Spectrum Health facility would include urgent care services and approximately 595 parking spaces. The project is located along the east side of US-31 on an "out-lot" north of Meijer. The land is currently vacant and abuts the Meijer store to the south. The proposed Spectrum Health facility will be phased, with full build-out expected by 2017.

Site access to the proposed Spectrum Health facility would be provided via one (1) site driveway on 172nd Avenue, one (1) on Whittaker Way, and an internal Meijer access road. Whittaker Way would provide access to/from the site to Robbins Road.

STUDY AREA AND STUDY METHODOLOGY

Twelve (12) intersections are included in the study:

- US-31 & Robbins Road
- Robbins Road & Whittaker Way
- Robbins Road & 172nd Avenue
- US-31 & Comstock Street
- Comstock Street & 172nd Avenue
- US-31 & Hayes Street
- Hayes Street & 172nd Avenue
- US-31 Crossover north of Robbins Road
- US-31 Crossover south of Robbins Road
- US-31 Crossover north of Comstock Street
- Comstock Street at Meijer south drive
- 172nd Avenue at Meijer north drive

URS conducted weekday traffic counts during the morning and afternoon peak periods at the study area intersections in late April 2015. Hourly turning-movement traffic volumes were completed at the twelve (12) intersections in the study area. Intersections were counted from 7:00 – 9:00 AM and 4:00 – 6:00 PM.

EXISTING (2015) CONDITIONS

All movements at all study area intersections operate at an acceptable LOS (LOS "D" or better), as shown in **Table 3**.

BASE YEAR (2017) CONDITIONS

The Michigan Department of Transportation (MDOT) and the Ottawa County Road Commission (OCRC) were contacted to procure a growth rate from existing (2015) to base year (2017). Based on information received from MDOT and OCRC, an annual background traffic growth rate of 2% per year (compounded) was applied to existing peak-hour volumes as part of the base year (2017) traffic volume determination.

In base year (2017), all movements are anticipated to operate at an acceptable LOS (see **Table 4**).

OPENING YEAR (2017) CONDITIONS

Trip Generation and Traffic Assignment - The proposed site is projected to generate 287 new trips (227 entering trips, 60 exiting trips) in the opening year (2017) weekday morning peak-hour, and 344 new trips (96 entering trips, 248 exiting trips) in the opening year (2017) weekday afternoon peak-hour (see **Table 5**).

Peak-hour traffic assignment for the proposed Spectrum Health facility was estimated from existing traffic patterns on US-31, Robbins Road, Comstock Street, Hayes Road, 172nd Avenue, and other study area roadways. Trip distribution percentages (see page 13) were applied to the trips in Table 5 to assign the proposed site trips to the adjacent roadway network.

In opening year (2017), all movements are anticipated to operate at an acceptable LOS (see **Table 6**).

CONCLUSIONS

1. All movements operate at an acceptable LOS under Existing (2015), Base Year (2017), and Opening Year (2017) conditions.
2. The adding of site traffic from the opening of the proposed Spectrum Health facility is expected to have little or no additional impact on traffic operations at any of the study area intersections in opening year 2017.
3. Based on the estimated trips to be generated by the site, the proposed site access from 172nd Avenue and Whittaker Way should adequately serve the site.
4. The existing study area intersections have the capacity to serve the additional traffic generated by the proposed Spectrum Health facility.

Section 1 Introduction

1.1 Background

A 120,000 square-foot medical office building has been proposed by Spectrum Health in Grand Haven Township, Michigan. The Spectrum Health facility would include urgent care services and approximately 595 parking spaces. The project is located along the east side of US-31 on an "out-lot" north of Meijer. The land is currently vacant and abuts the Meijer store to the south. The proposed Spectrum Health facility will be phased, with full build-out expected by 2017.
The site location is shown in **Figure 1**.

Site access to the proposed medical office proposed Spectrum Health facility would be provided via two (2) site driveways on 172nd Avenue, one (1) on Whittaker Way, and an internal Meijer access road. Whittaker Way would provide access to/from the site to Robbins Road. The site plan is depicted in **Figure 2**.

Twelve (12) intersections are included in the study (**bold** intersections are signalized):

- **US-31 & Robbins Road**
- Robbins Road & Whittaker Way
- **Robbins Road & 172nd Avenue**
- **US-31 & Comstock Street**
- **Comstock Street & 172nd Avenue**
- **US-31 & Hayes Street**
- Hayes Street & 172nd Avenue
- US-31 Crossover north of Robbins Road
- **US-31 Crossover south of Robbins Road**
- **US-31 Crossover north of Comstock Street**
- **Comstock Street at Meijer south drive**
- 172nd Avenue at Meijer north drive

URS will complete the traffic impact study in order to provide recommendations concerning the proposed site access, including whether improvements might be necessary at the study area intersections to mitigate capacity and operational deficiencies at the intersections. The study will take into account any planned roadway improvements in the area.

1.2 Report Organization

Following the introductory section, the report is presented in the following sections:

- ***Section 2: Existing (2015) Conditions***
  Section 2 contains an analysis of existing peak-hour traffic conditions at study area intersections.

- ***Section 3: Base Year (2017) Conditions***
  Section 3 contains an analysis of base year (2017) peak-hour traffic conditions – conditions for the projected opening year (2017) of the proposed Spectrum Health facility but without traffic generated by the proposed Spectrum Health facility. Base year conditions are used as

a “baseline” from which impacts associated with the proposed Spectrum Health facility can be quantified.

- ***Section 4: Opening Year (2017) Conditions***
  Section 4 contains an analysis of peak-hour traffic conditions at study area intersections under opening year (2017) conditions, incorporating a background growth factor and the traffic projected to be generated by the proposed Spectrum Health facility.

Section 2 Existing (2015) Conditions

Section 2 provides a description of the existing transportation system and its operational characteristics within the study area. The study area includes twelve (12) existing intersections, and is located in Grand Haven, Ottawa County, Michigan.

2.1 Study Area

Figure 1 depicts a vicinity map, including the study area and intersection locations. The following twelve (12) intersections were analyzed as part of the study area:

- **US-31 & Robbins Road**
- Robbins Road & Whittaker Way
- **Robbins Road & 172nd Avenue**
- **US-31 & Comstock Street**
- **Comstock Street & 172nd Avenue**
- **US-31 & Hayes Street**
- Hayes Street & 172nd Avenue
- US-31 Crossover north of Robbins Road
- **US-31 Crossover south of Robbins Road**
- **US-31 Crossover north of Comstock Street**
- **Comstock Street at Meijer south drive**
- 172nd Avenue at Meijer north drive

2.1.1 Existing Roadways

Following is a description of each roadway.

US-31 (South Beacon Boulevard) is a north-south 4-lane state trunkline boulevard. US-31 traverses the entire Lower Peninsula, from the Indiana State Line, and terminating at I-75 just a few miles south of the Mackinac Bridge. In the study area, US-31 employs indirect left-turns, with crossovers north and south of major cross roads. According to the Michigan Department of Transportation (MDOT), the 2014 Average Daily Traffic (ADT) volume was approximately 35,900 vehicles per day on US-31 south of Robbins Road and 43,500 vehicles per day on US-31 north of Robbins Road. The speed limit is 55 mph throughout the study area.

Robbins Road is an east-west four-lane undivided local road in the study area. The proposed Spectrum Health facility would be located approximately 700 feet south of the Robbins Road/172nd Avenue intersection. The ADT on Robbins Road ranges from 7,300 vehicles per day west of US-31 to 10,700 vehicles per day east of 172nd Avenue. The speed limit on Robbins Road is 35 mph in the study area.

Comstock Street is an east-west five-lane local road between US-31 and 172nd Avenue. East of 172nd Avenue Comstock Street narrows to three lanes. Comstock Street is located 1,700 feet south of the south end of the proposed Spectrum Health facility. The ADT on Comstock Street ranges from 12,400 vehicles per day east of US-31 to 8,300 vehicles per day east of 172nd Avenue. The speed limit is not posted on Comstock Street in the study area.

Hayes Street is a three-lane east-west local road in the study area. The ADT of Hayes Street ranges from 2,400 vehicles per day west of US-31 to 4,700 vehicles per day east of 172nd Avenue. The speed limit is 45 mph in the study area.

172nd Avenue is a three-lane north-south road in the study area. The proposed Spectrum Health facility would abut the west side of 172nd Avenue, with two access points, one 700 feet south of the 172nd Avenue/Robbins Road intersection and the other 1,000 feet south of the 172nd Avenue/Robbins Road intersection. The ADT of 172nd Avenue ranges from 4,400 vehicles per day south of Comstock Street to 7,900 vehicles per day south of Robbins Road. The speed limit is 50 mph in the study area. North of Robbins Road 172nd becomes Ferry Street.

Ferry Street is a two-lane north-south road on the north edge of the study area. The proposed Spectrum Health facility is 700 feet south of the 172nd Avenue/Ferry Street/Robbins Road intersection. The ADT of Ferry Street is 8,100 vehicles per day north of Robbins Road. The speed limit of Ferry Street is 25 mph. South of Robbins Road Ferry Street becomes 172nd Avenue.

Whittiker Way is a three-lane 1,300-foot long north-south connector street that links Robbins Road on the north and the Meijer north access drive on the south. Whittiker Way will form the western boundary of the proposed Spectrum Health facility and will provide several points of access to the west side of the site. The ADT of Whittiker Way is approximately 1,500 vehicles per day and the speed limit is 25 mph.

The intersection configurations, traffic control, speed limits, and ADT's in the study area are shown in **Figure 3**.

2.1.2 Existing Intersections

For the twelve (12) intersections in the study area, six (6) intersections are along US-31 (three intersections and three directional crossovers), four (4) intersections are along 172nd Avenue, one intersection on Robbins Road and one intersection on Comstock Street. Eight (8) of the intersections are signalized and four (4) intersections are STOP-sign controlled. The eight signalized intersections all operate with a 70-second cycle length in the morning and afternoon peak hours. The intersections in the study area are listed in **Table 1** from north to south.

Table 1. Existing Intersections

Intersection	Type of Traffic Control	Cycle Length	
		Weekday Morning	Weekday Afternoon
Signalized Intersections			
US-31/Robbins Road	Signal (2-phase)	70 seconds	70 seconds
Northbound US-31 at Crossover South of Robbins Road	Signal (2-phase)		
Southbound US-31 at Crossover North of Comstock Street	Signal (2-phase)		
US-31 at Comstock Street	Signal (2-phase)		
US-31 at Hayes Street	Signal (2-phase)		
172nd Avenue at Robbins Road	Signal (2-phase)		
172nd Avenue at Comstock Street	Signal (2-phase)		
Comstock Street at Meijer south drive/Wal-Mart drive	Signal (3-phase)*		
Unsignalized Intersections			
Southbound US-31 at Crossover North of Robbins Road	2-way STOP	---	---
Robbins Road at Whittiker Way			
North Meijer Drive at 172nd Avenue			
Hayes Street at 172nd Avenue	4-way STOP		

* Includes eastbound-westbound permissive/protected left-turns.

2.2 Existing (2015) Peak-Hour Traffic Volumes

URS conducted weekday traffic counts during the morning and afternoon peak periods at the study area intersections in May 2015. Hourly turning-movement traffic volumes were completed at the twelve (12) intersections in the study area. Intersections were counted from 7:00 – 9:00 AM and 4:00 – 6:00 PM on Tuesday, April 28, 2015, Wednesday, April 29, 2015, and Thursday, April 30, 2015. The morning peak-hour varied by intersection with most intersections having a peak-hour from 7:00 – 8:00 AM or 7:15 – 8:15 AM, while the afternoon peak-hour also varied by intersection with most intersections having a peak-hour from 4:30 – 5:30 PM or 4:45 – 5:45 PM. The existing (2015) morning and afternoon peak-hour traffic volumes are shown in **Figure 4**. The existing (2015) turning movement count reports are included in **Appendix A**.

2.3 Existing (2015) Levels of Service

In order to quantify intersection traffic operations, existing "Level-of-Service" (LOS) values were determined using industry-standard (*Synchro 8.0* and *Highway Capacity Software)* packages, which incorporate the methodology of the *Highway Capacity Manual*, published by the Transportation Research Board.

The term "Level of Service" denotes how well (or poorly) a traffic movement operates under given traffic demands, lane arrangements, and traffic controls. Each level is determined by the average amount of control delay per vehicle. Control delay is the total delay associated with stopping for a signal or stop sign, and includes four components; deceleration delay, stopped delay, queue move up time, and final acceleration delay.

The individual levels of service can be described by the following:

- *Level of Service A* – Very low vehicle delay
- *Level of Service B* – Low vehicle delays
- *Level of Service C* – Higher vehicle delays, significant number of stopped vehicles, not all vehicles in a queue are serviced by green signal phase
- *Level of Service D* – Congestion noticeable, longer vehicle delays, many vehicles stop at signals, many individual cycle failures
- *Level of Service E* – High vehicle delays, vehicle flow at lane capacity, frequent individual cycle failures
- *Level of Service F* – Vehicle flow exceeds lane capacity, significant congestion and vehicle delays, poor corridor progression, many individual cycle failures

As shown in **Table 2**, LOS "A" indicates small average control delays (less than ten seconds per vehicle) whereas LOS "F" indicates intersection failure, which results in extensive vehicular queues and long delays (over 50 seconds per vehicle at an unsignalized intersection, and over 80 seconds per vehicle at a signalized intersection). LOS "D" is typically considered acceptable peak-hour performance in an urban setting, and lower LOS values are tolerable for short time periods or during peak hours when heavier traffic volumes are expected.

Table 2. Level of Service Criteria at Intersections

Level-of-Service	Average Control Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	<10	<10
B	10-20	10-15
C	20-35	15-25
D	35-55	25-35
E	55-80	35-50
F	80>	>50

Source: *Highway Capacity Manual,* TRB, 2010.

Four (4) of the twelve (12) study area intersections operate under two-way STOP-control, and a LOS value was determined only for those movements that have to yield the right-of-way. The overall intersection LOS at the signalized intersections and the side-street approach LOS at the STOP-controlled intersections are shown in **Table 3**.

Table 3. Existing (2015) Intersection Level of Service

Intersection or Intersection Approach		Morning Peak-hour		Afternoon Peak-hour	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Signalized Intersections - Overall					
Northbound US-31 & Robbins Road		A	8.1	B	10.6
Southbound US-31 & Robbins Road		B	14.5		14.1
Robbins Road & 172nd Avenue/Ferry Street			13.3		15.7
Northbound US-31 & Comstock Street			11.0		12.1
Comstock Street & 172nd Avenue			12.7		13.9
Northbound US-31 & Hayes Street		A	9.3		11.5
Southbound US-31 & Hayes Street		B	14.3	A	7.0
Comstock Street at Meijer south drive/Wal-Mart drive		A	9.6	B	13.7
Northbound US-31 Crossover south of Robbins Road		B	11.5		15.8
Southbound US-31 Crossover north of Comstock Street		A	7.1	A	3.2
Crossover STOP-Controlled Intersection Approach					
US-31 Crossover north of Robbins Road		B	12.0	B	14.9
Two-Way STOP-Controlled Intersection Approaches					
Robbins Road & Whittaker Way	Northbound	A	9.3	B	12.2
172nd Avenue at Meijer north drive	Eastbound		9.7		12.1
Four-Way STOP-Controlled Intersection Approaches					
Hayes Street & 172nd Avenue	Northbound	A	8.9	A	8.6
	Southbound		8.7		9.1
	Eastbound		9.5		8.5
	Westbound		9.5	B	10.5

Source: URS Corporation, August 2015

The existing (2015) conditions analysis showed that all study area intersections operate at Level of Service (LOS) "B" or better under existing (2015) weekday morning and afternoon peak-hour conditions.

Section 3 Base Year (2017) Conditions

Section 3 contains an analysis of traffic conditions under base year (2017) conditions - the projected opening (full build-out) year (2017) of the proposed Spectrum Health facility, but without the traffic generated by the proposed Spectrum Health facility.

The Michigan Department of Transportation (MDOT) and the Ottawa County Road Commission (OCRC) were contacted to procure a growth rate from existing (2015) to base year (2017). Based on information received from MDOT and OCRC, an annual background traffic growth rate of 2% per year (compounded) was applied to existing peak-hour volumes as part of the base year (2017) traffic volume determination.

Planned roadway improvements are typically included in the base year analysis. Based on discussions with MDOT and the OCRC, as of this writing no road improvements are committed in the vicinity of the proposed Spectrum Health facility by base year 2017.

3.1 Background Traffic Volumes

Peak-hour traffic volumes for base year (2017) conditions were developed by applying the annual growth factor to the existing (2015) peak-hour volumes. Applying the above growth rates to existing (2015) peak-hour volumes resulted in base year (2017) peak-hour volumes, depicted in **Figure 5**.

3.2 Base Year (2017) Levels-of-Service

The overall intersection LOS at the signalized intersections and the side-street approach LOS at the two-way STOP-controlled intersections are shown in **Table 4**.

Table 4. Base Year (2017) Intersection Level of Service

Intersection or Intersection Approach		Morning Peak-hour		Afternoon Peak-hour	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Signalized Intersections - Overall					
Northbound US-31 & Robbins Road		A	8.4	B	11.3
Southbound US-31 & Robbins Road		B	18.0		15.4
Robbins Road & 172nd Avenue/Ferry Street			13.5		16.0
Northbound US-31 & Comstock Street			11.2		12.5
Comstock Street & 172nd Avenue			12.7		14.0
Northbound US-31 & Hayes Street		A	9.5		12.2
Southbound US-31 & Hayes Street		B	18.8		10.4
Comstock Street at Meijer south drive/Wal-Mart drive		A	9.7	B	14.0
Northbound US-31 Crossover south of Robbins Road		B	12.3		17.2
Southbound US-31 Crossover north of Comstock Street		A	7.6	A	3.3
Crossover STOP-Controlled Intersection Approach					
US-31 Crossover north of Robbins Road		B	12.6	B	16.6
Two-Way STOP-Controlled Intersection Approaches					
Robbins Road & Whittaker Way	Northbound	A	9.4	B	12.5
172nd Avenue at Meijer north drive	Eastbound		9.8		12.4
Four-Way STOP-Controlled Intersection Approaches					
Hayes Street & 172nd Avenue	Northbound	A	9.1	A	8.6
	Southbound		8.8	B	10.8
	Eastbound		9.7	A	8.7
	Westbound		9.7		9.4

Source: URS Corporation, August 2015

The base year (2017) conditions analysis showed that all study area intersections are anticipated to operate at Level of Service (LOS) "B" or better under base year (2017) weekday morning and afternoon peak-hour conditions, the same as in existing (2015) conditions.

Movement-by-movement LOS values are depicted in Figure 5 for base year (2017) weekday peak-hours for all study area intersections. Examination of Figure 5 reveals that no traffic movements are anticipated to operate at LOS "E" or "F" under base year (2017) peak-hour conditions. The base year (2017) intersection capacity reports are included in **Appendix C**.

Section 4 Opening Year (2017) Conditions

Section 4 contains the analysis of opening year (2017) conditions for the proposed Spectrum Health facility site. The generation of trips and the assignment of traffic to the roadway network are discussed herein. A capacity analysis of opening year (2017) conditions and an evaluation of the traffic impacts of the proposed Spectrum Health facility compared to base year (2017) conditions are also provided.

4.1 Proposed Spectrum Health Facility

A 120,000 square-foot medical office building has been proposed by Spectrum Health in Grand Haven Township, Michigan. The Spectrum Health facility would include urgent care services and approximately 595 parking spaces. The project is located along the east side of US-31 on an "out-lot" north of Meijer. The land is currently vacant and abuts the Meijer store to the south. The proposed Spectrum Health facility will be phased, with full build-out expected by 2017. The site location is shown in Figure 1.

Site access to the proposed medical office proposed Spectrum Health facility would be provided via one (1) site driveway on 172nd Avenue, one (1) on Whittaker Way, and an internal Meijer access road. Whittaker Way would provide access to/from the site to Robbins Road. The site plan is depicted in Figure 2.

4.2 Site Access

The proposed Spectrum Health facility will have two (2) access points, both via existing access points that serve Meijer (see Figure 2):

<u>Existing access points to Proposed Spectrum Health Facility</u>

- *Meijer North Driveway at 172nd Avenue* – The Meijer north driveway on 172nd Avenue will be move approximately 75 feet to the north in conjunction with the proposed development, yet maintaining northerly access to Meijer. The relocated driveway will provide a primary access point to Spectrum Health staff and patient/visitor parking in the south and east sections of the proposed Spectrum Health facility site. The driveway will be located approximately 900 feet south of Robbins Road and approximately 1,750 feet north of Comstock Street.
- *Whittiker Way at Robbins Road* - Whittiker Way will primarily provide access to staff and patients/visitors arriving from the north via US-31 and from the west via Robbins Road, and staff/patients/visitors departing to the east on Robbins Road (Whittiker Way is a right-in/right-out intersection at Robbins Road). The driveway will provide a primary access point to Spectrum Health staff and patient/visitor parking in the west section of the proposed Spectrum Health facility site.

4.3 Trip Generation

Trip generation for the weekday afternoon peak-hour for the proposed Spectrum Health facility is based on the methods of the *ITE Trip Generation Manual, 9th Edition*, published by the Institute of Transportation Engineers (ITE). The *ITE Trip Generation Manual* contains information on more than 4,800 trip generation studies nationwide for different land use purposes.

Traffic generated by the proposed Spectrum Health facility site was used to measure the impact of the proposed Spectrum Health facility on the study area intersections. **Table 5** summarizes the trip generation estimate for the proposed Spectrum Health facility site.

Table 5. Trip Generation - Proposed Spectrum Health Facility
Opening Year (2017)

Land Use	ITE Land Use Code [1]	Size	Weekday Morning Peak-hour Trips			Weekday Afternoon Peak-hour Trips		
			Enter	Exit	Total	Enter	Exit	Total
Medical Office Building	720	120,000 gross square feet	227	60	287	96	248	344

[1] Source: ITE Trip Generation Manual, 9th Edition

As shown in Table 5, the proposed site is projected to generate 287 new trips (227 entering trips, 60 exiting trips) in the opening year (2017) weekday morning peak-hour, and 344 new trips (96 entering trips, 248 exiting trips) in the opening year (2017) weekday afternoon peak-hour.

4.4 Trip Distribution and Traffic Assignment

Peak-hour traffic assignment for the proposed Spectrum Health facility was estimated from existing traffic patterns on US-31, Robbins Road, Comstock Street, Hayes Road, 172nd Avenue, and other study area roadways. The following trip distribution percentages were applied to the trips in Table 5 to assign the proposed site trips to the adjacent roadway network.

Traffic Distribution

- 28% to/from the north via US-31
- 20% to/from the south via US-31
- 16% to/from the east via Robbins Road
- 14% to/from the north via Ferry Street
- 12% to/from the west via Robbins Road
- 4% to/from the east via Comstock Street
- 2% to/from the south via 172nd Avenue
- 2% to/from the east via Hayes Street
- 2% to/from the west via Hayes Street

Opening year (2017) peak-hour traffic assignments are shown in **Figure 6** for the anticipated new trips associated with the proposed Spectrum Health facility.

4.5 Opening Year (2017) Level of Service

With the addition of the proposed entrance on 172nd Avenue, the opening year (2017) analysis includes a total of eight (8) signalized and four (4) unsignalized intersections. The opening year analysis assumed no changes to existing intersection lane configurations.

As in the existing and base year conditions analyses, for intersections that are under two-way STOP-control, LOS values were determined only for those movements that must yield the right-of-way. The overall intersection LOS at the signalized intersection and the side-street approach LOS at the two-way STOP-controlled intersections are shown in **Table 6**.

Table 6. Opening Year (2017) Intersection Level of Service

Intersection or Intersection Approach		Morning Peak-hour		Afternoon Peak-hour	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Signalized Intersections - Overall					
Northbound US-31 & Robbins Road		A	9.0	B	13.5
Southbound US-31 & Robbins Road		C	25.6		16.3
Robbins Road & 172nd Avenue/Ferry Street		B	13.7		17.6
Northbound US-31 & Comstock Street			11.5		12.9
Comstock Street & 172nd Avenue			12.3		14.1
Northbound US-31 & Hayes Street		A	9.2		12.2
Southbound US-31 & Hayes Street		C	20.4		10.8
Comstock Street at Meijer south drive/Wal-Mart drive		A	9.9		14.0
Northbound US-31 Crossover south of Robbins Road		B	12.8	C	24.3
Southbound US-31 Crossover north of Comstock Street		A	7.6	A	4.4
Crossover STOP-Controlled Intersection Approach					
US-31 Crossover north of Robbins Road		B	13.2	B	16.8
Two-Way STOP-Controlled Intersection Approaches					
Robbins Road & Whittaker Way	Northbound	A	9.7	B	12.8
172nd Avenue at Meijer north drive	Eastbound	B	11.0	C	17.6
Four-Way STOP-Controlled Intersection Approaches					
Hayes Street & 172nd Avenue	Northbound	A	9.3	A	8.8
	Southbound		9.0		9.7
	Eastbound		10.0		8.9
	Westbound	B	10.1	B	11.1

Source: URS Corporation, August 2015

The opening year (2017) conditions analysis showed that all study area intersections are anticipated to operate at Level of Service (LOS) "C" or better under opening year (2017) weekday morning and afternoon peak-hour conditions.

Movement-by-movement LOS values are depicted in **Figure 7** for opening year (2017) weekday peak-hours for all study area intersections. Examination of Figure 7 reveals that no traffic movements are anticipated to operate at LOS "E" or "F" under opening year (2017) peak-hour conditions. The opening year (2017) intersection capacity reports are included in **Appendix D**.

4.6 Conclusions

1. All movements operate at an acceptable LOS under Existing (2015), Base Year (2017), and Opening Year (2017) conditions.
2. The adding of site traffic from the opening of the proposed Spectrum Health facility is expected to have little or no additional impact on traffic operations at any of the study area intersections in opening year 2017.
3. Based on the estimated trips to be generated by the site, the proposed site access from 172nd Avenue and Whittaker Way should adequately serve the site.
4. The existing study area intersections have the capacity to serve the additional traffic generated by the proposed Spectrum Health facility.

EXISTING STUDY AREA INTERSECTIONS

SOUNCE: GOOGLE MAPS

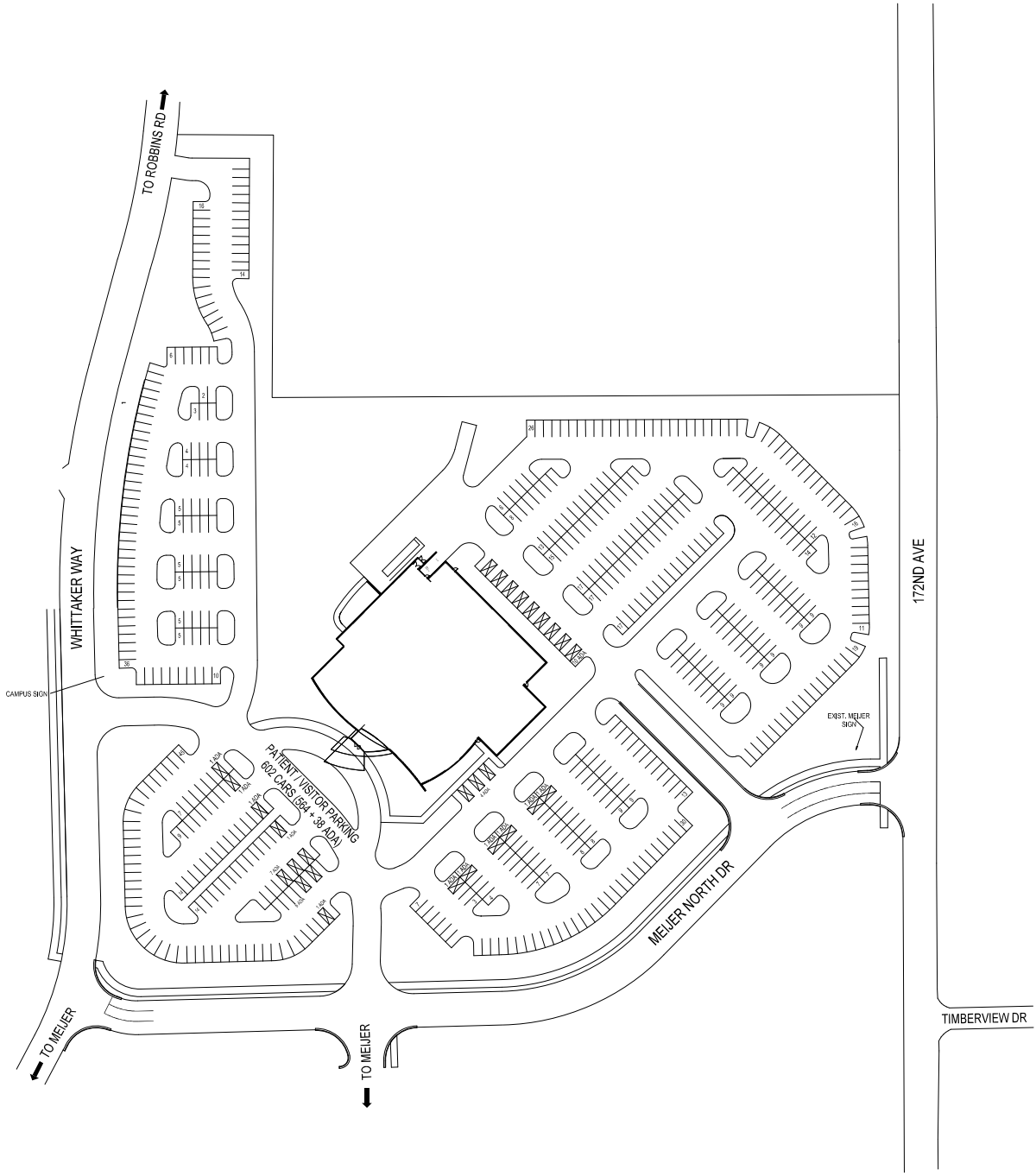
SPECTRUM HEALTH - GRAND HAVEN TRAFFIC IMPACT STUDY

NEDERVELD URS

SITE LOCATION

FIGURE 1

M:/PROJECTS/12945195/CADD/TRAFFIC/1_Site Location.DGN



SPECTRUM HEALTH - GRAND HAVEN TRAFFIC IMPACT STUDY

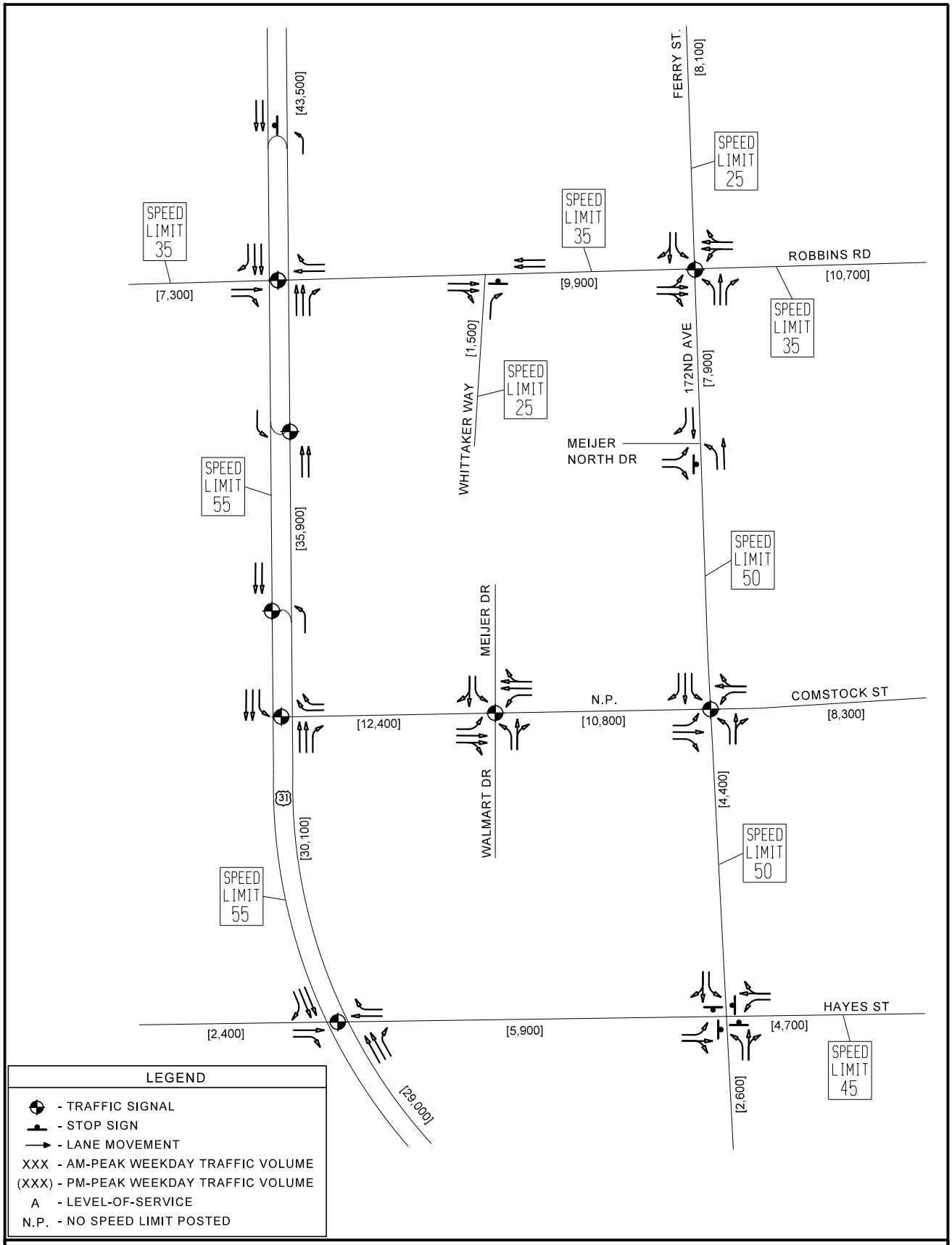
NEDERVELD

URS

SITE PLAN

FIGURE 2

M:\PROJECTS\12945195\CADD\TRAFFIC\2_Proposed Site Plan.dgn



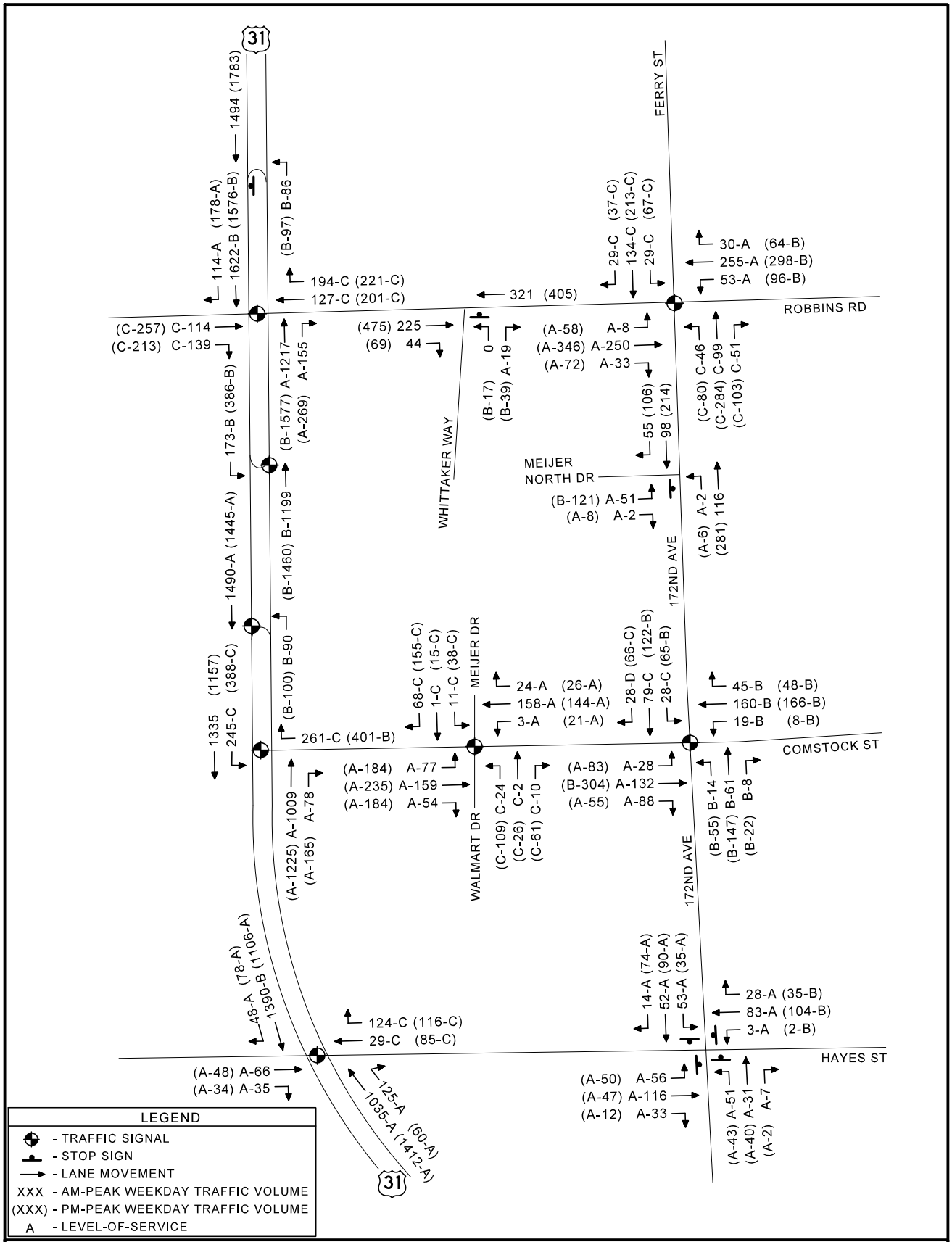
SPECTRUM HEALTH - GRAND HAVEN TRAFFIC IMPACT STUDY

NEDERVELD URS

EXISTING (2015) TRAFFIC OPERATIONS

FIGURE 3

M:/PROJECTS/12945195/CADD/TRAFFIC/3_EXISTING (2015) TRAFFIC OPERATIONS.DGN



SPECTRUM HEALTH - GRAND HAVEN TRAFFIC IMPACT STUDY

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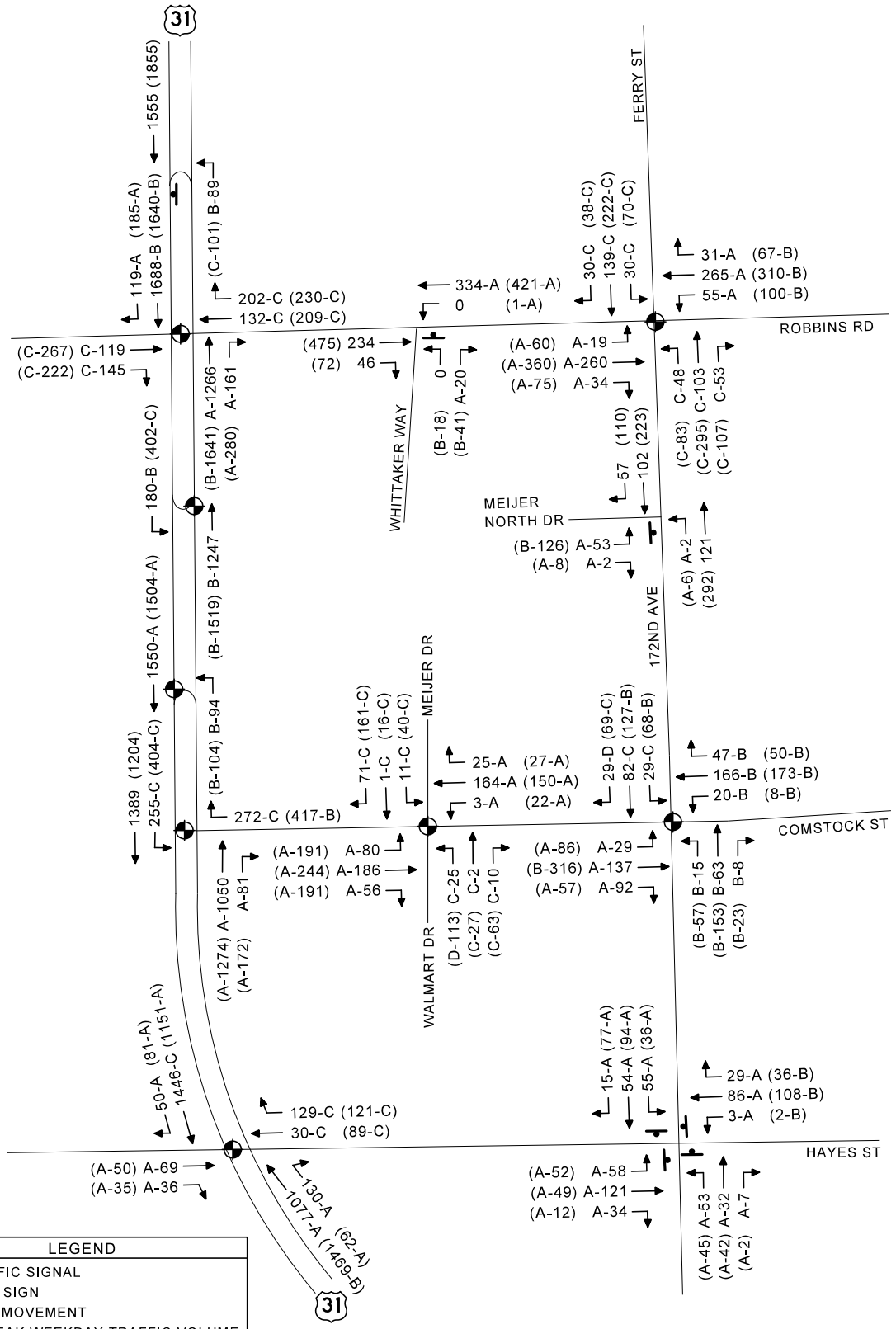
EXISTING (2015) PEAK-HOUR VOLUMES AND LEVEL OF SERVICE

FIGURE 4

M:/PROJECTS/12945195/CADD/TRAFFIC/4_EXISTING (2015) PEAK-HOUR VOLUMES AND LEVEL OF SERVICE.DGN



SPECTRUM HEALTH - GRAND HAVEN TRAFFIC IMPACT STUDY

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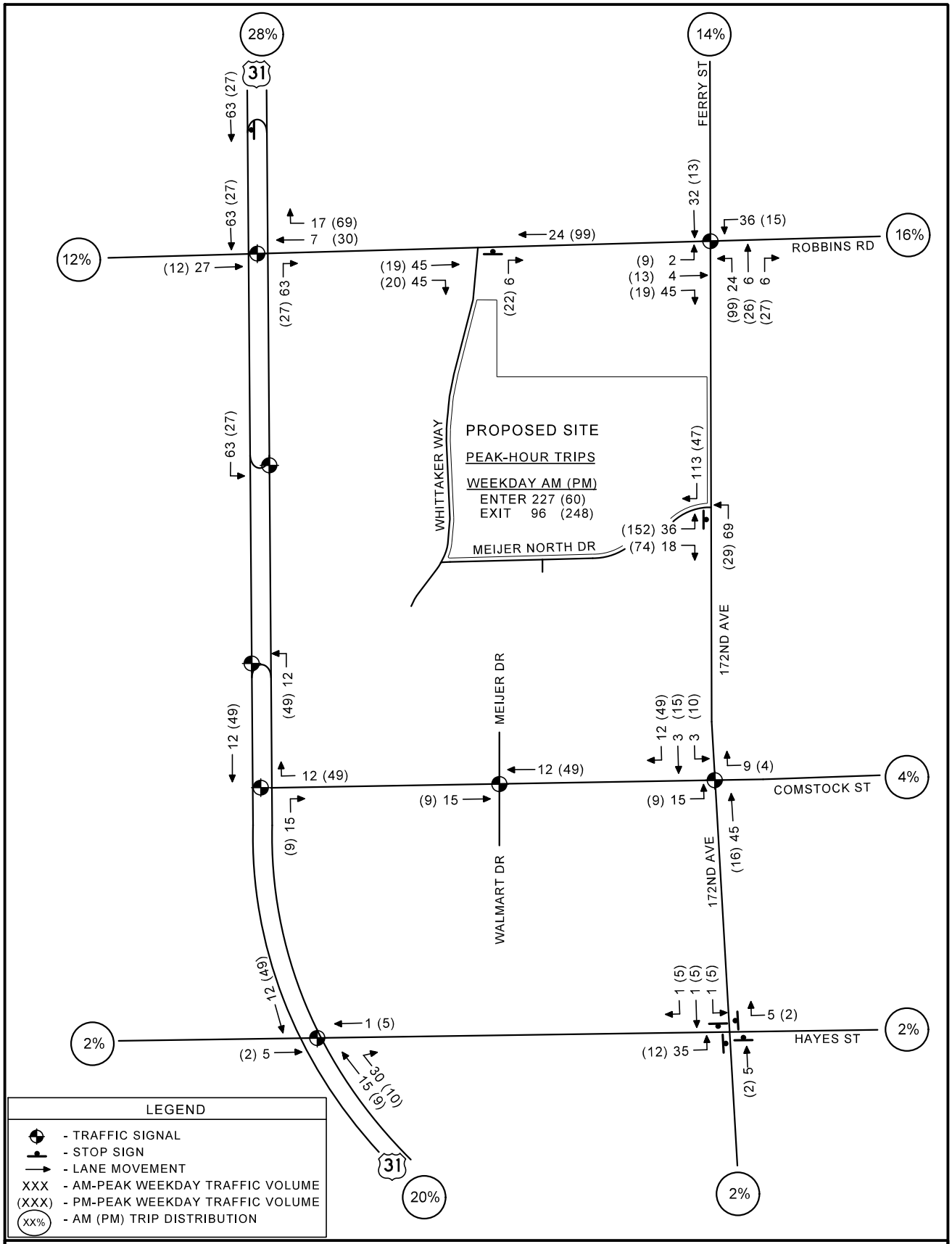
BASE YEAR (2017) PEAK-HOUR VOLUMES AND LEVEL OF SERVICE

FIGURE 5

M:/PROJECTS/12945195/CADD/TRAFFIC/5_BASE YEAR (2017) PEAK-HOUR VOLUMES AND LEVEL OF SERVICE.DGN



SPECTRUM HEALTH - GRAND HAVEN TRAFFIC IMPACT STUDY

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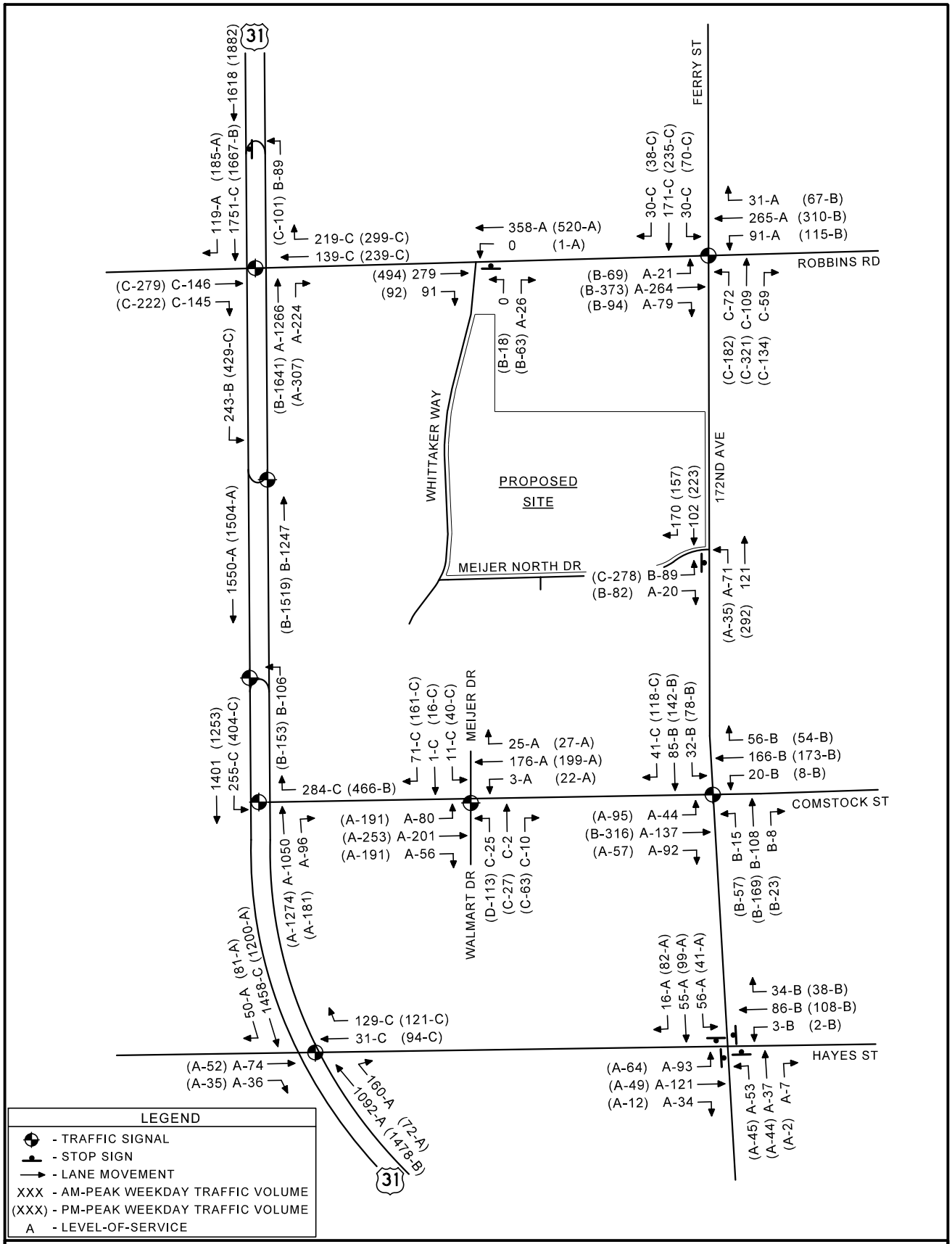
OPENING YEAR (2017) PEAK-HOUR SITE TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

FIGURE 6

M:/PROJECTS/12945195/CADD/TRAFFIC/6_OPENING YEAR (2017) PEAK-HOUR SITE TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT.DGN



SPECTRUM HEALTH - GRAND HAVEN TRAFFIC IMPACT STUDY

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OPENING YEAR (2017) PEAK-HOUR VOLUMES AND LEVEL OF SERVICE

FIGURE 7

M:/PROJECTS/12945195/CADD/TRAFFIC/5_OPENING YEAR (2017) PEAK-HOUR VOLUMES AND LEVEL OF SERVICE.DGN

From: Fred Keena
To: Stacey Fedewa; John Gutierrez
Subject: RE: Health Pointe - Driveway Agreement
Date: Friday, September 18, 2015 8:23:43 AM

Stacey,

The following is an explanation of OCRC's recommendations for left turn treatments at the Robbins Rd/172nd Ave/Ferry St intersection:

Left Turn Lane for east/west Robbins Rd

Section 9.7.3 of AASHTO (American Association of State Highway and Transportation Officials) "A Policy on Geometric Design of Highways and Streets" (Green Book) references the Federal Highway Capacity Manual (HCM) which states "Exclusive left turn lanes should be considered where left-turn volumes exceed 100 vehicles per hour".

The TIS indicated the projected base year westbound left turn peak hour volume is 100 vph. The TIS indicated the development will add an additional 15 vph peak hour westbound left turns during the opening year for a total of 115 vph.

It is the opinion of the road commission that the addition of east/west left turn lanes will increase traffic capacity at the intersection and will provide a safer environment for left-turning vehicles (anticipated reduction in Head-On Left Turn, Rear End – Left Turn and Sideswipe types of crashes).

Left Turn Signal for north/south Robbins Rd

Based on the Federal Highway Administration Traffic Control Devices Handbook and Michigan Department of Transportation guidelines for installation of Left-Turn signals, the following traffic volume criteria is used to determine the need for Left-Turn signals: Left-turn volumes exceeds 90 vph and the product of opposing through hourly volume and the left-turn hourly volume exceeds 50,000 if there is one opposing through lane.

It should be noted there are existing dedicated left turn lanes for north/south 172nd Ave/Ferry St at Robbins Rd. The TIS indicated the projected base year northbound left turn volume is 83 vph and the southbound through/right movement totals 260 vph. The product of these two movements is 21,580. The TIS indicated the development will add an additional 99 northbound left turns during the peak hour. The project total left turn volume during the peak hour for the opening year is 182 vph (Figure 7). The southbound through/right movement totals 273 vph during the peak hour of the opening year. The product of these two movements is 49,686 which essentially meets the requirement for a left-turn signal.

Please contact me if you have any questions or comments regarding the information above.

Sincerely,

Fred Keena
Traffic Engineer

Ottawa County Road Commission
P.O. Box 739
Grand Haven, MI 49417
Phone: 616/850-7220
Fax: 616/850-7237

From: Stacey Fedewa [mailto:SFedewa@ght.org]
Sent: Thursday, September 17, 2015 6:09 PM
To: John Gutierrez <JGutierrez@ottawacorc.com>; Fred Keena <FKeena@ottawacorc.com>
Subject: Health Pointe - Driveway Agreement

John and Fred,

Thank you for both taking the time to discuss the Health Pointe project today. Per our discussion, I have attached the Driveway Agreement between Meijer and Health Pointe that clearly describes the driveway relocating to the south (*and not north as mistakenly described in the TIS*).

As requested, I sent an email to the City of Grand Haven (*which was forwarded to their DPW Director*) and described our discussion about the OCRC preliminary findings that the Robbins Road/Ferry Street/172nd Avenue intersection needs to be improved with a center left turn lane and green left turn arrow.

I am hoping you can also supply me with the reasoning behind this finding since the TIS does not identify those conclusions. I appreciate the information in helping me to better understand the OCRCs position.

Best regards,

Stacey Fedewa
Planning & Zoning Official
Grand Haven Charter Township
(616) 604-6326
sfedewa@ght.org

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Project Name: Robbins Road and S. Ferry Street - Traffic Signal Upgrades
Project Number: P15-010
Completed By: Timothy Drews, PE, PTOE
Date: 11/3/2015

Scope: Robbins Road and S. Ferry Street - Removal of existing traffic signal and replacement with a box span configuration including LED traffic signals, Countdown pedetrian signals, new base mount controller and cabinet, traffic detection loops, and disappearing legend "No Turn on Red" case signs. Existing ADA ramps meet current standards and are not included. Pavement markings and temporarty traffic control items are not included in this estimate.

No.	Code	Item Description	Unit	Quantity	Unit Price	Amount
1	1500001	Mobilization, Max. ____	LS	1	$ 15,000.00	$ 15,000.00
2	2040055	Sidewalk, Rem	Syd	45	$ 10.00	$ 450.00
3	2040080	Exploratory Investigation, Vertical	Ft	50	$ 10.00	$ 500.00
4	2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	4	$ 150.00	$ 600.00
5	8030044	Sidewalk, Conc, 4 inch	Sft	400	$ 4.00	$ 1,600.00
6	8100404	Sign, Type IIIA	Sft	20	$ 25.00	$ 500.00
7	8160020	Fertilizer, Chemical Nutrient, Cl A	Lb	20	$ 4.00	$ 80.00
8	8160027	Mulch Blanket	Syd	45	$ 2.00	$ 90.00
9	8160037	Seeding, Mixture TDS	Lb	20	$ 5.00	$ 100.00
10	8160062	Topsoil Surface, Furn, 4 inch	Syd	45	$ 8.00	$ 360.00
11	8190025	Conduit, DB, 1, 1/2 inch	Ft	150	$ 8.00	$ 1,200.00
12	8190029	Conduit, DB, 1, 3 inch	Ft	150	$ 10.00	$ 1,500.00
13	8190038	Conduit, DB, 4, 3 inch	Ft	20	$ 20.00	$ 400.00
14	8190250	Hh, Polymer Conc	Ea	4	$ 550.00	$ 2,200.00
15	8190254	Hh, Rem	Ea	2	$ 100.00	$ 200.00
16	8190259	Hh, Round, 3 foot Dia.	Ea	2	$ 1,800.00	$ 3,600.00
17	8190505	Wood Pole, Rem	Ea	1	$ 300.00	$ 300.00
18	8200030	Controller and Cabinet, Rem	Ea	1	$ 250.00	$ 250.00
19	8200031	Controller and Cabinet, Digital Type	Ea	1	$ 20,000.00	$ 20,000.00
20	8200042	Case Sign (LED), Disappearing Legend, 24 inch x 30 inch	Ea	4	$ 4,000.00	$ 16,000.00
21	8200045	Controller Fdn, Base Mount	Ea	1	$ 1,000.00	$ 1,000.00
22	8200090	Metered Serv	Ea	1	$ 750.00	$ 750.00
23	8200095	Metered Serv, Rem	Ea	1	$ 100.00	$ 100.00
24	8200105	Pedestal, Fdn	Ea	8	$ 750.00	$ 6,000.00
25	8200106	Pedestal Fdn, Rem	Ea	4	$ 150.00	$ 600.00

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26	8200110	Pedestal, Rem	Ea	4	$ 100.00	$ 400.00
27	8200116	Power Co. (Est. Cost to Contractor)	Dlr	1500	$ 1.00	$ 1,500.00
28	8200122	Pushbutton, Rem	Ea	1	$ 50.00	$ 50.00
29	8200123	Pushbutton Pedestal, Alum	Ea	4	$ 600.00	$ 2,400.00
30	8200135	Serv Disconnect	Ea	1	$ 1,000.00	$ 1,000.00
31	8200136	Serv Disconnect, Rem	Ea	1	$ 100.00	$ 100.00
32	8200140	Span Wire	Ea	4	$ 1,000.00	$ 4,000.00
33	8200141	Span Wire, Rem	Ea	1	$ 250.00	$ 250.00
34	8200180	TS, Pedestrian, Bracket Arm Mtd, Rem	Ea	4	$ 75.00	$ 300.00
35	8200181	TS, Pedestrian, Pedestal Mtd, Rem	Ea	4	$ 75.00	$ 300.00
36	8200182	TS, Span Wire Mtd, Rem	Ea	2	$ 100.00	$ 200.00
37	8200185	Riser, Rem	Ea	2	$ 100.00	$ 200.00
38	8200313	TS, One Way Span Wire Mtd (LED)	Ea	8	$ 1,200.00	$ 9,600.00
39	8200314	TS, One Way Span Wire Mtd, FYA (LED)	Ea	4	$ 1,500.00	$ 6,000.00
40	8200339	TS, Pedestrian, Two Way Bracket Arm Mtd (LED) Countdown	Ea	4	$ 1,600.00	$ 6,400.00
41	8200171	Traf Loop, Presence	Ea	4	$ 1,500.00	$ 6,000.00
42	8200172	Traf Loop, Calling	Ea	4	$ 1,000.00	$ 4,000.00
43	8200460	Strain Pole, Steel, 6 bolt, 30 foot	Ea	4	$ 6,000.00	$ 24,000.00
44	8200470	Strain Pole Fdn, 6 Bolt	Ft	56	$ 425.00	$ 23,800.00
45	8200480	Casing	Ft	48	$ 125.00	$ 6,000.00
46	8207050	Pushbutton and R10-3e (Bulldog Type)	Ea	8	$ 500.00	$ 4,000.00
47	8207050	Span Wire Tether	Ea	4	$ 750.00	$ 3,000.00

Construction SubTotal	$	176,880.00
Contingency (10%)	$	17,688.00
Engineering - Design and Construction Admin (15%)	$	29,200.00
Total	$	223,768.00

From: Bill Hunter
To: Stacey Fedewa
Subject: RE: Robbins Road Cost
Date: Monday, November 02, 2015 3:44:46 PM

Stacey,

The following is an estimate to restripe Robbins Road to 3 lanes:

Description	Quantity	Units	Unit Price	Total
Mobilization	1	LS	$5,000.00	$5,000.00
Traffic Control	1	LS	$5,000.00	$5,000.00
Pavement Marking Removal, Overlay Cold Plastic 6" Crosswalk	520	FT	$1.50	$780.00
Pavement Marking Removal, Overlay Cold Plastic 24" Stop Bar	40	FT	$2.00	$80.00
Pavement Marking Removal, Left Turn Arrow Symbol	2	EA	$25.00	$50.00
Pavement Marking Removal, Trough and Right Turn Arrow	2	EA	$25.00	$50.00
Pavement Marking, Waterborne & Modified Urethane, Removal, 4" White	1100	FT	$1.50	$1,650.00
Pavement Marking Removal ,Modified 4" Yellow	5200	FT	$1.50	$7,800.00
Pavement Marking, Overlay Cold Plastic 6" Crosswalk	520	FT	$3.50	$1,820.00
Pavement Marking, Overlay Cold Plastic 24" Stop Bar	40	FT	$13.00	$520.00
Pavement Marking, Overlay Cold Plastic Left Turn Arrow Symbol	2	EA	$200.00	$400.00
Pavement Marking, Waterborne, 4" White.	10400	FT	$1.50	$15,600.00
Pavement Marking, Modified Urethane, 4" Yellow	10400	FT	$1.50	$15,600.00
			Estimated Total:	$54,350.00

I do not have an estimated cost as of yet to install a suspended box traffic signal over Robbins & Ferry. I am working on it.

William Hunter
Director of Public Works
519 Washington Ave.
Grand Haven, MI 49417
(O) 616-847-3493
(C) 616-638-7696
(F) 616-847-3470

From: Stacey Fedewa [mailto:SFedewa@ght.org]
Sent: Tuesday, October 27, 2015 1:50 PM
To: Bill Hunter
Subject: Robbins Road Cost

Bill,

Have you been able to identify the approximate costs of restriping Robbins Road and updating the signals?

Best regards,

Stacey Fedewa
Planning & Zoning Official
Grand Haven Charter Township
(616) 604-6326
sfedewa@ght.org

GRAND HAVEN CHARTER TOWNSHIP

Community Development Memo

DATE: February 22, 2016

TO: GHT Planning Commission

FROM: Stacey Fedewa, Planning & Zoning Official

RE: Health Pointe Revisions

BACKGROUND

On January 25th the Township Board adopted a motion to direct the applicant to revise the architectural features, vary the roofline, and include more landscaping that abuts the walls of the building. The applicant has revised their plans accordingly.

REVISIONS

The applicant has added stone projection walls to each side of the building, the projections extend horizontally from the building wall and vertically above the roofline; included more windows, and reshaped other windows; landscaping now abuts all walls of the building, with the exception of doorways; approximately 50 new plantings (*trees, shrubs, perennials, and grasses*) have been added too.

Staff notes, the applicant did seriously contemplate removing the mechanical penthouse from the roof, but determined it would move forward with the current proposal. It is staff's understanding the applicant will provide the reasoning for this decision in a narrative, which includes energy efficiency and preserving viewsheds for employees and patients.

UPCOMING INFORMATION

Based on the requests submitted by Township Board members, Planning Commissioners, and staff the following documents will be available on, or before, the March 14th Board meeting:

- Revised perspective drawings from US-31, Robbins Road, and 172nd Avenue.

- Determine the true height of the rooftop mechanical equipment, and ascertain if the proposed penthouse height can be lowered.
- Voluntary financial contribution to the Robbins Road improvements.

SAMPLE MOTION

If the Planning Commission finds the revised Health Pointe elevations and landscape plan meets the applicable standards, the following motion can be offered:

> **Motion** to recommend to the Township Board **approval with conditions** of the Health Pointe PUD Amendment, which includes the revised elevations, revised landscape plan, proposed text amendments recommended for approval on January 19th, and after having met with the City of Grand Haven Planning Commission to discuss the Traffic Impact Study as it relates to the Robbins Road Sub-Area Plan. This is based on the application meeting the requirements and standards set forth by the Grand Haven Charter Township Zoning Ordinance and Master Plan. The motion is subject to, and incorporates, the following report*.

**** Attorney Bultje is adjusting some of the language found in the Report. Once complete, it will be emailed for review, and a hardcopy will be placed at your seat before the meeting.***

If the Planning Commission finds the revised Health Pointe elevations and landscape plan does not meet the applicable standards, the following motion can be offered:

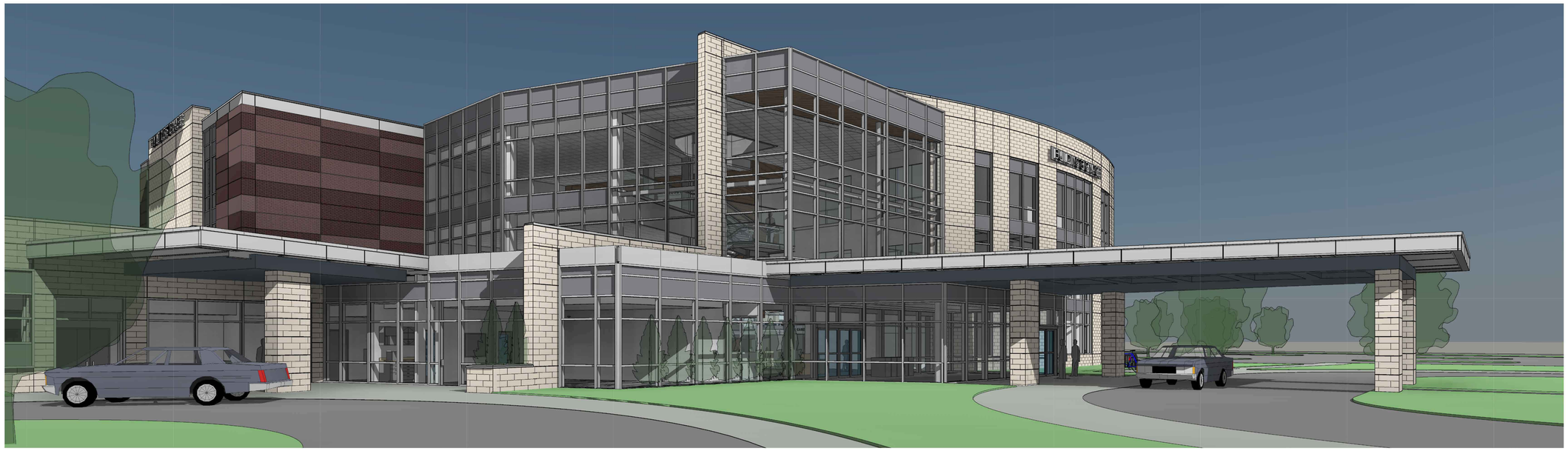
> **Motion** to direct staff to draft a formal motion and report, which will recommend **denial** of the revised Health Pointe PUD Amendment application, with those discussion points which will be reflected in the meeting minutes. This will be reviewed and considered for adoption at the next meeting.

If the Planning Commission finds the applicant must make additional revisions to the Health Pointe elevations and landscape plan, the following motion can be offered:

> **Motion** to **table** the revised Health Pointe PUD Amendment application, and direct the applicant to make the following revisions:
>
> 1. *List the revisions.*

Please contact me prior to the meeting with questions or concerns.

MAIN ENTRANCE CANOPY
NOT TO SCALE



SOUTHWEST - ENTRANCE
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URS
ARCHITECTS • ENGINEERS • PLANNERS
3950 Sparks Drive, SE
Grand Rapids, MI 49546
United States
P: 616 574 8500
F: 616 574 8542
www.URScorp.com

Sheet Revisions

mark	date	description

HEALTH POINTE
GRAND HAVEN, MICHIGAN

Health Pointe Grand Haven

Project Issue Dates
01
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drawn by	checked by	manager
Author	Checker	Designer

URS project no.	client project no.	file no.
60444906	TBD	

EXTERIOR PERSPECTIVES

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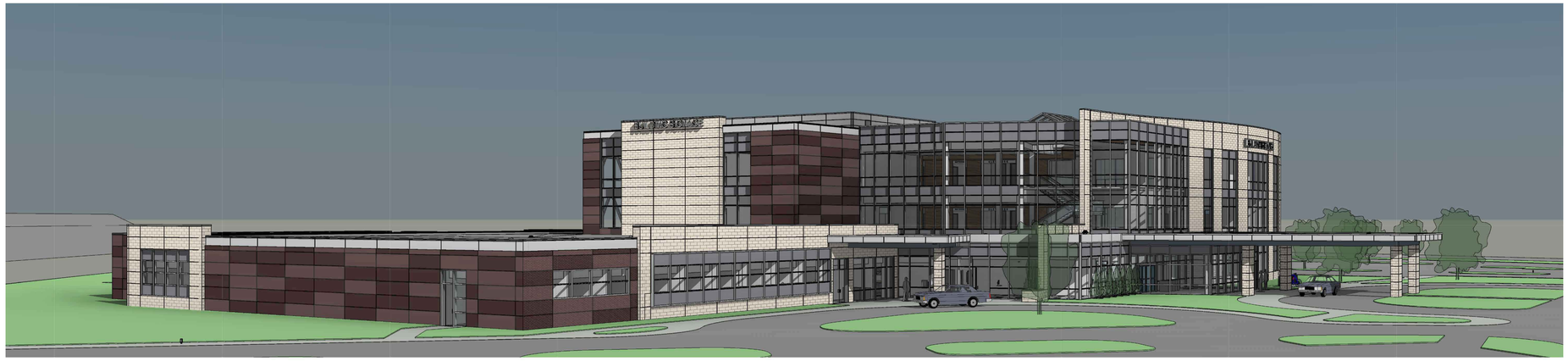

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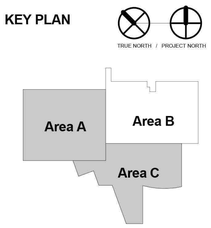
KEY PLAN



Sheet Revisions

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HEALTH POINTE
GRAND HAVEN, MICHIGAN

Health Pointe Grand Haven

Project Issue Dates
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drawn by	checked by	manager
Author	Checker	Designer

URS project no.	client project no.	file no.
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EXTERIOR PERSPECTIVES

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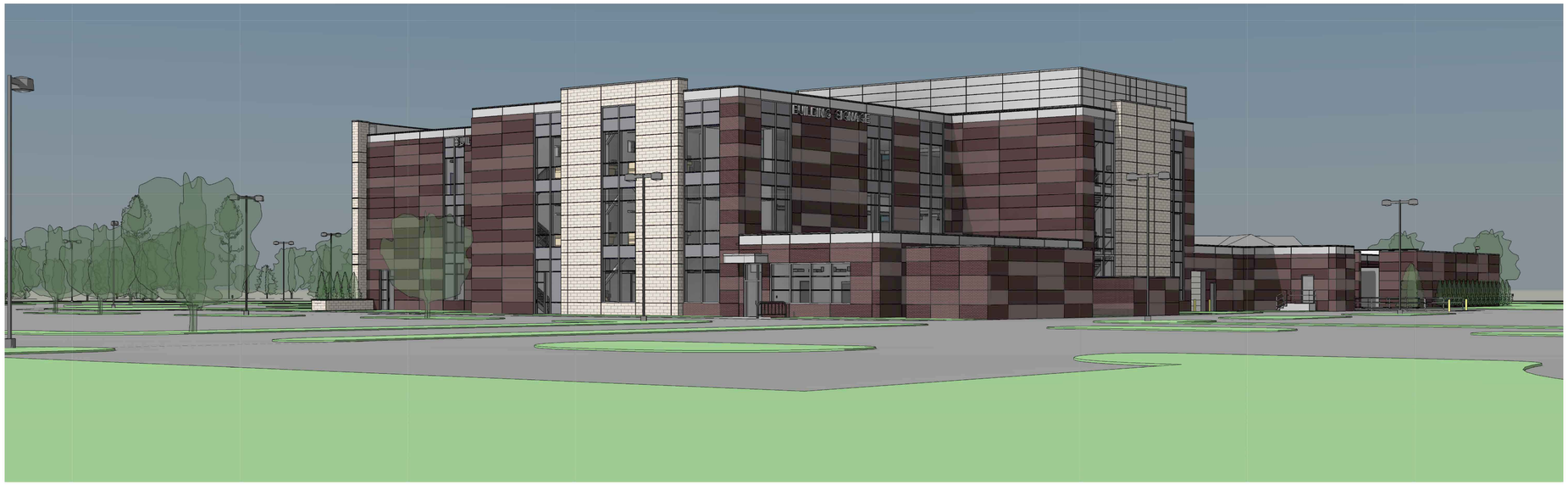
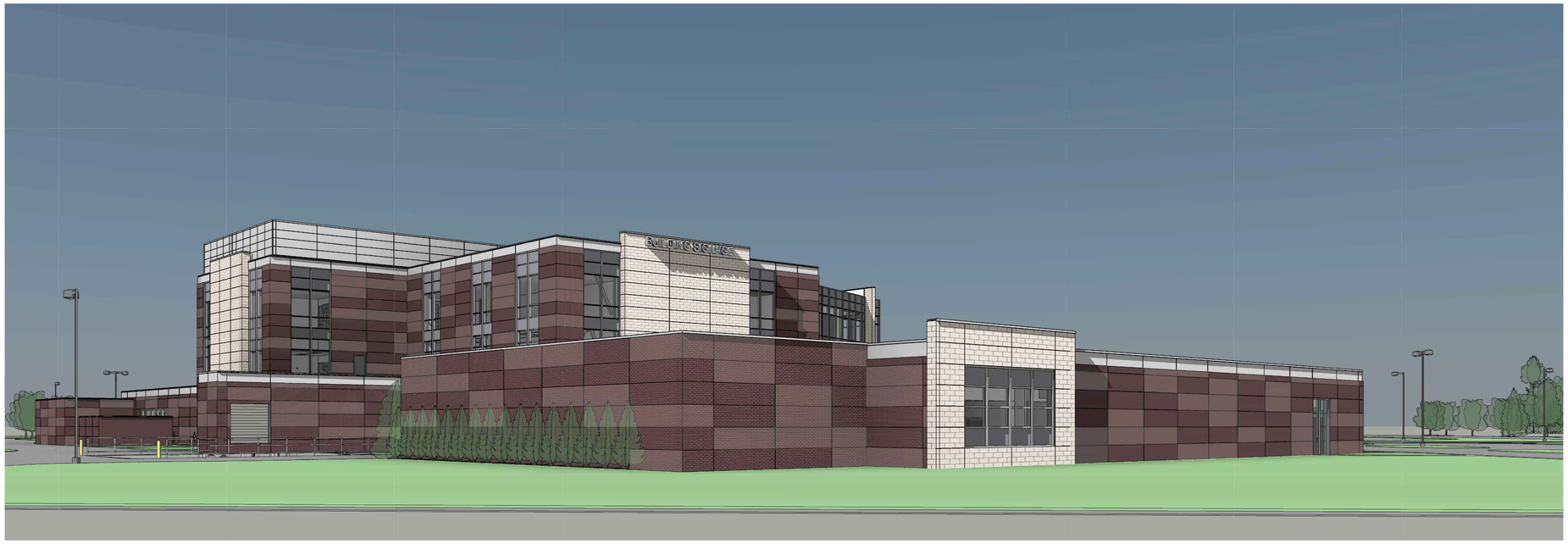


NORTHEAST
NOT TO SCALE



NORTHWEST
NOT TO SCALE

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Grand Rapids, MI 49546
United States
P: 616 574 8500
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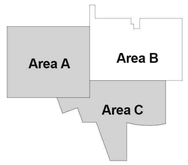
KEY PLAN

TRUE NORTH / PROJECT NORTH



Sheet Revisions

mark	date	description

HEALTH POINTE
GRAND HAVEN,
MICHIGAN

Health Pointe Grand Haven

Project Issue Dates

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drawn by	checked by	manager
Author	Checker	Designer

URS project no.	client project no.	file no.
60444906	TBD	

EXTERIOR PERSPECTIVES

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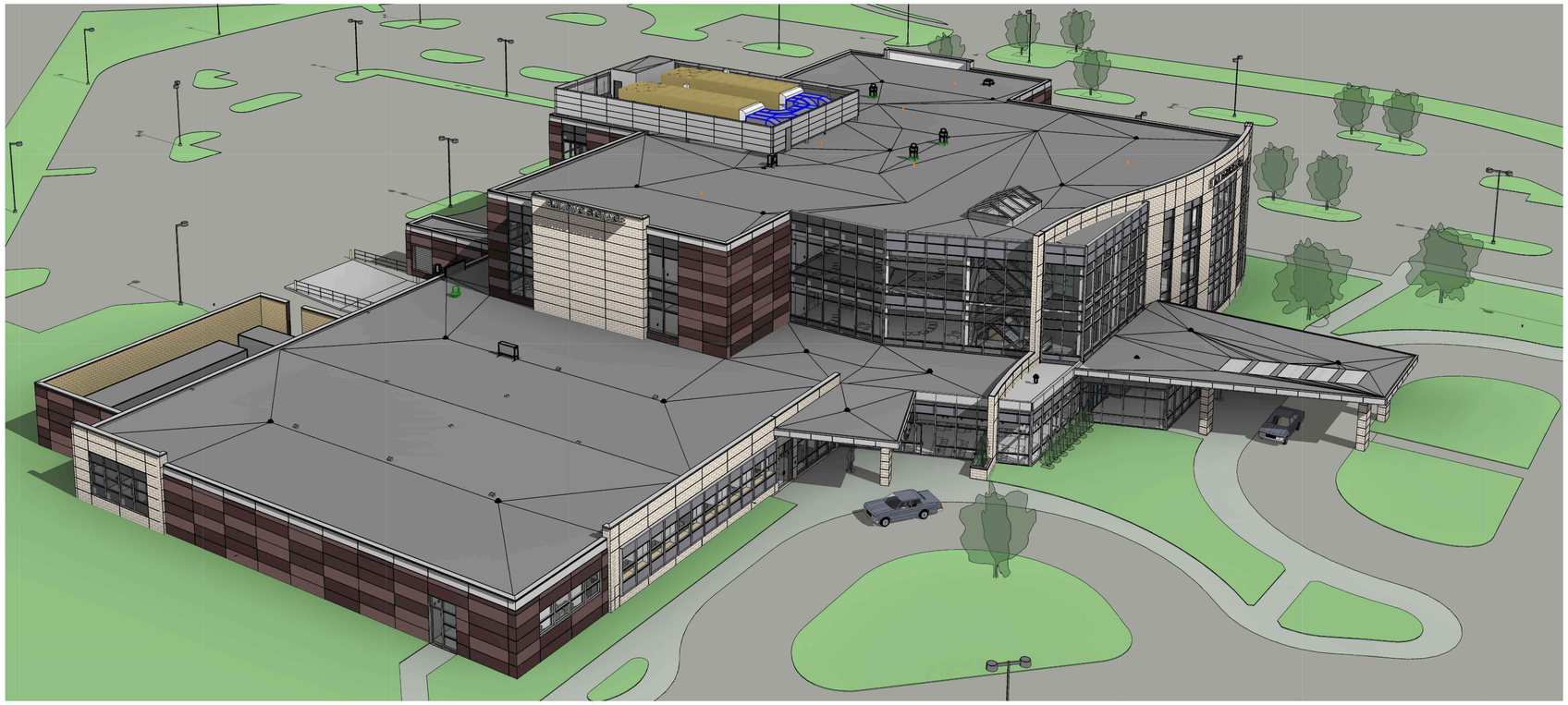

SOUTHWEST AERIAL

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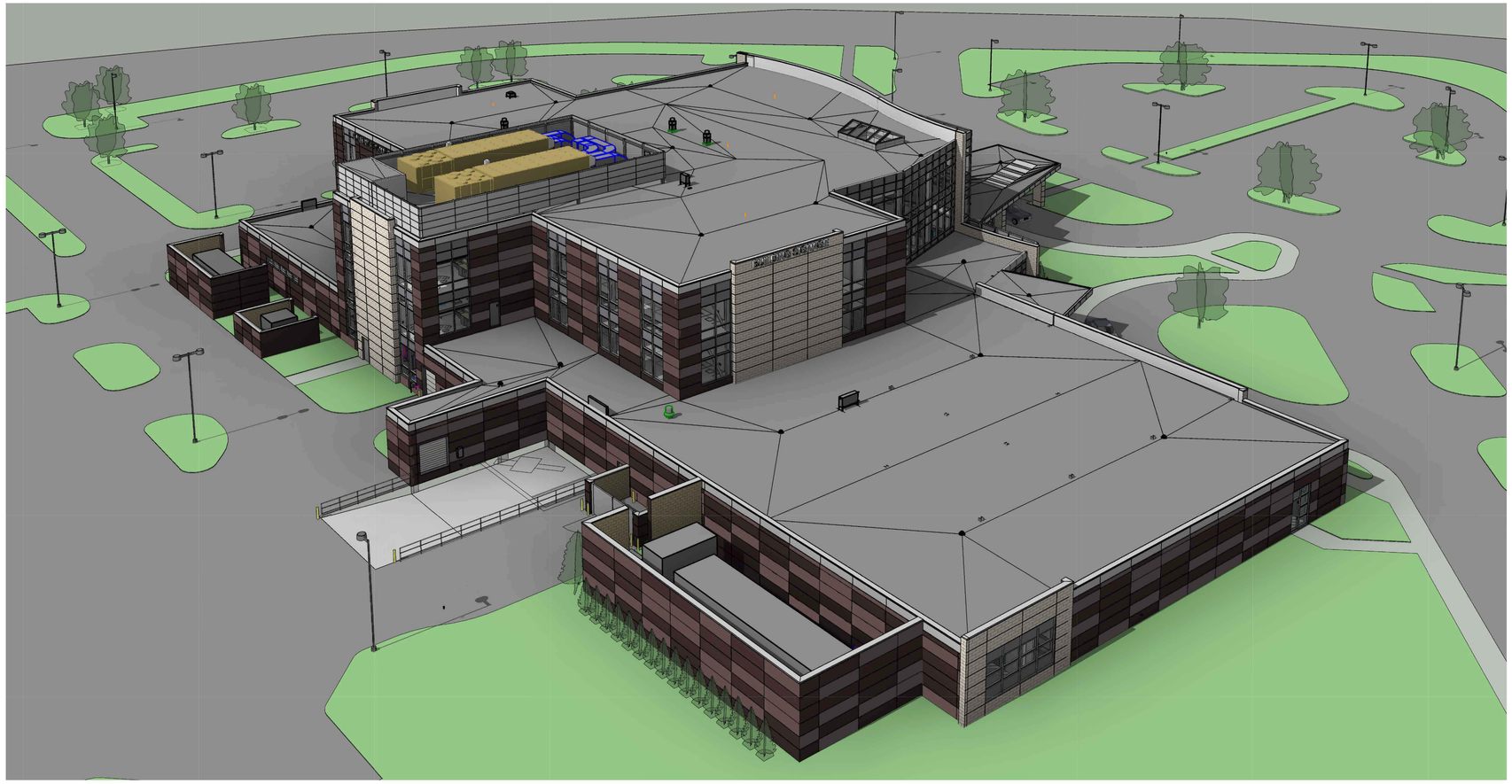

NORTHWEST AERIAL

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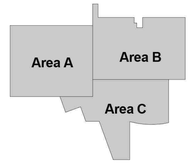
KEY PLAN

TRUE NORTH / PROJECT NORTH



Sheet Revisions

mark	date	description

HEALTH POINTE
GRAND HAVEN, MICHIGAN

Health Pointe Grand Haven

Project Issue Dates

01 2016.02.08 DESIGN DEVELOPMENT
02
03
04
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drawn by	checked by	manager
Author	Checker	Designer

URS project no.	client project no.	file no.
60444906	TBD	

AERIAL PERSPECTIVES

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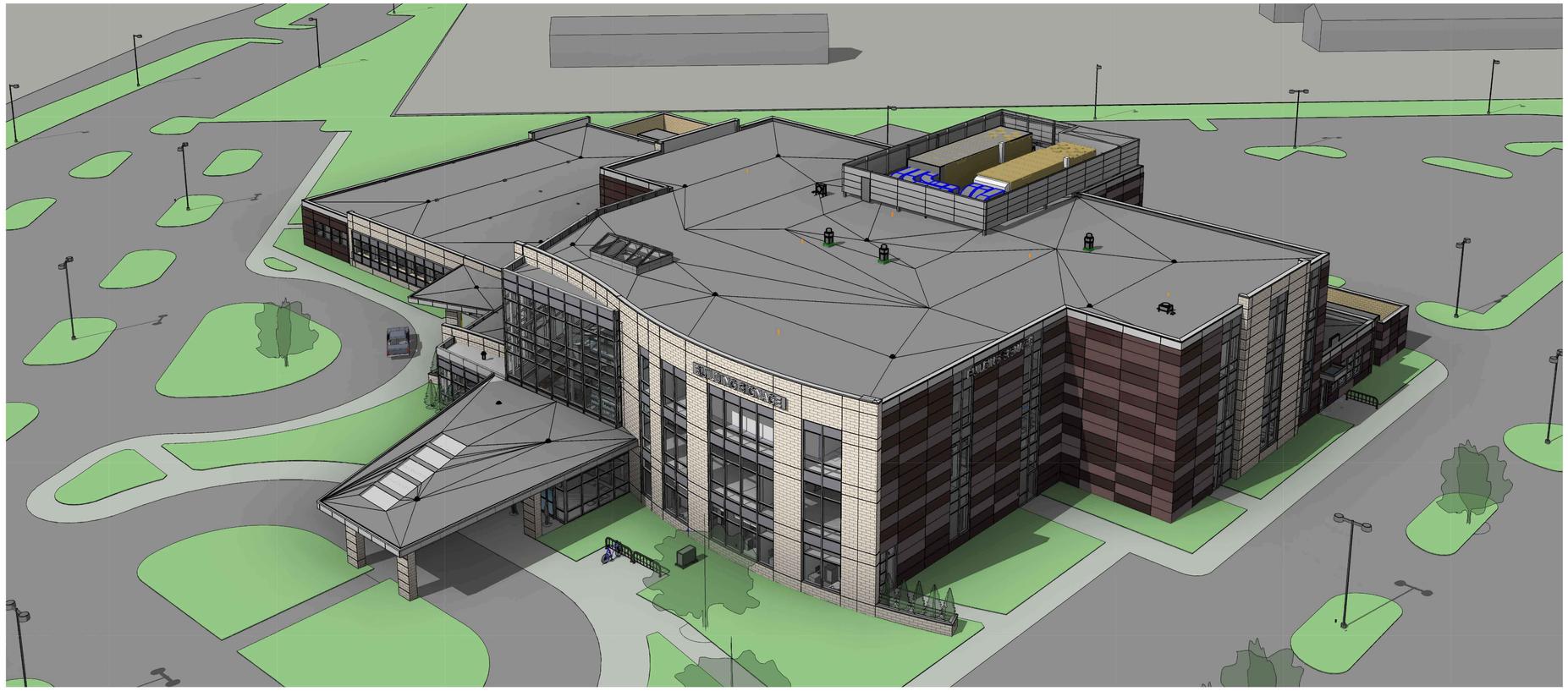

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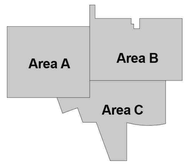

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AERIAL PERSPECTIVES

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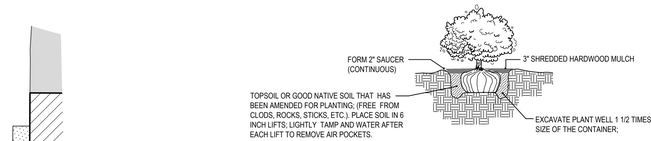
811 Know what's **below.** **CALL** before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NOTE:
EXISTING UTILITIES AND SERVICE LINES IDENTIFIED AS "PLAN" WERE OBTAINED FROM AVAILABLE AS-BUILT RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND STATUS OF ALL UTILITIES AND SERVICE LINES PRIOR TO NEW CONNECTIONS.



TYPICAL SHRUB / PERENNIAL / ORNAMENTAL GRASS PLANTING DETAIL

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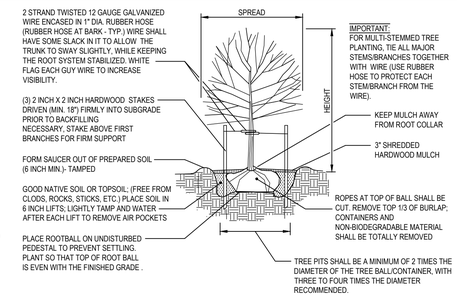

TYPICAL TREE PLANTING DETAIL

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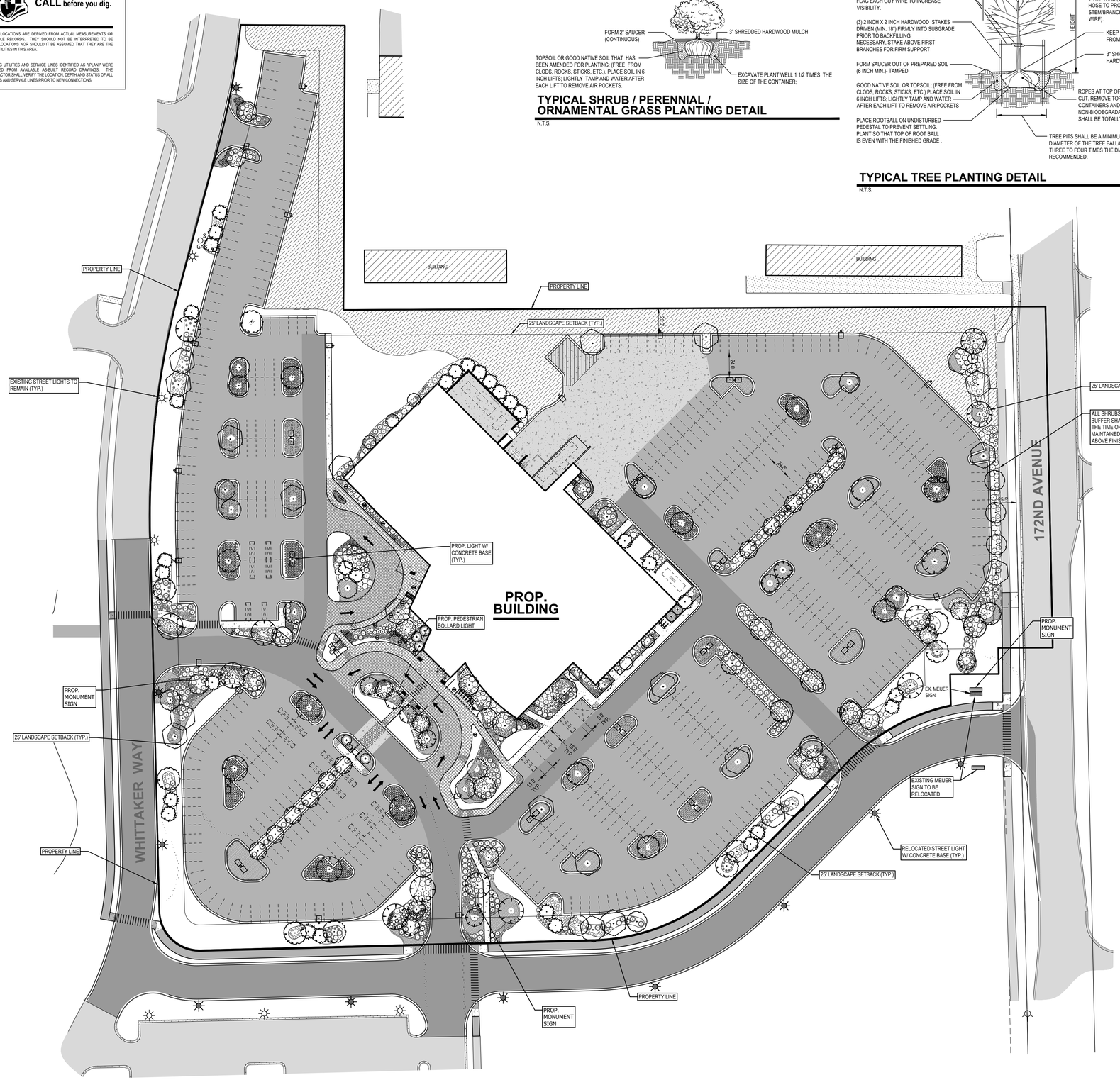

LANDSCAPE LEGEND / SCHEDULE

TREES

SYMBOL	KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE
	AA	7	Quercus robur f. fastigiata	Fastigiate Oak	3.5" cal. min.
	AF	29	Nyssa sylvatica	Black Gum	3.5" cal. min.
	AS	19	Acer saccharum	Sugar Maple	3.5" cal. min.
	CC	29	Cercis canadensis	Eastern Redbud	3" cal. min.
	GB	25	Ginkgo biloba	Ginkgo (Male)	3.5" cal. min.
	PP	31	Picea pungens	Colorado Blue Spruce	6' hgt. min.(1)
	SR	25	Syringa reticulata 'Ivory Silk'	Japanese Tree Lilac	3" cal. min.

(1) Colorado Blue Spruce shall be planted at varying heights, approximately 6'-10'.

SHRUBS

SYMBOL	KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE
	Hi	9	Hamamelis x intermedia 'Arnold Promise'	'Arnold Promise' Witch Hazel	7 gal .
	Hp	90	Hydrangea paniculata 'Limelight'	'Limelight' Hydrangea	5 gal.
	Jp	85	Juniperus pfitzerina 'Mint Julep'	'Mint Julep' Juniper	5 gal.
	Js	358	Juniperus sabina 'Broadmoor'	'Broadmoor' Juniper	3 gal.
	Mp	55	Myrica pensylvanica	Bayberry	5 gal.
	Pf	98	Potentilla fruticosa	Shrubby Cinquefoil	3 gal.
	Rk	157	Rosa 'Knockout'	'Knockout' Rose	3 gal.
	Sb	320	Spirea x bumalda	Bumald Spirea	3 gal.
	Tm	196	Taxus x media 'Densiformis'	Compact Yew	3 gal.
	Wf	353	Weigela florida 'Dark Horse'	'Dark Horse' Weigela	3 gal.

PERENNIALS & GRASSES

SYMBOL	KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE
	bs	65	Baptisia 'Solar Flare Prairie Blues'	"Solar Flare Prairie Blues' False Indigo	2 gal.
	bg	2303	Bouteloua gracilis 'Blonde Ambition'	"Blonde Ambition' Blue Grama Grass	2 gal.
	ca	144	Calamagrostis x acutiflora 'Karl Foerster'	'Karl Foerster' Feather Reed Grass	3 gal.
	cr	58	Cimicifuga racemosa 'Pink Spike'	"Pink Spike' Snakeroot	2 gal.
	hh	340	Hemerocallis 'Happy Returns'	'Happy Returns' Daylily	2 gal.
	nf	1193	Nepeta x faasenii 'Walkers Low'	'Walkers Low' Catmint	2 gal.

GROUND COVER

SYMBOL	KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE
		As Needed(1)	N/A	Bark Mulch	3" depth
		As Needed(2)	Poa pratensis	Kentucky Bluegrass Sod	Roll
		11,563 s.f.(3)	Liriope spicata	Lily Turf	Flat
		As Needed	N/A	Native Meadow Grass Seed Mix	Hydroseed

(1) All disturbed areas programmed as planting beds shall receive bark mulch to a depth of 3".

(2) All disturbed areas not otherwise programmed shall receive turf grass sod.

(3) All areas programmed as Lily Turf shall be planted with spacing of 8"-10".

LANDSCAPE NOTES

PLANTING NOTES:

1) ALL PLANT MATERIAL SHALL BE LOCALLAY NURSERY GROWN NO.1 GRADE AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES. ALL PLANT MATERIALS SHALL MEET CURRENT AMERICAN ASSOCIATION OR NURSERYMEN STANDARDS. DO NOT PLANT MATERIALS UNTIL DIRECTED BY OWNER, LANDSCAPE ARCHITECT, AND/OR CONSTRUCTION MANAGER. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL, FOR ANY REASON BEFORE OR AFTER IT IS INSTALLED.
2) SIZES SPECIFIED ARE MINIMUM SIZES TO WHICH THE PLANTS ARE TO BE INSTALLED.
3) ANY PLANT SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
4) MAINTENANCE OF LANDSCAPING ITEMS, TREES, AND PLANTS SHALL BE PERFORMED BY THE PROPERTY OWNER OR A QUALIFIED PROFESSIONAL. ALL LANDSCAPING SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE MUNICIPAL STANDARDS AND IN ACCORDANCE WITH CURRENT INDUSTRY STANDARDS IN A NEAT, HEALTHY AND WEED FREE CONDITION. ANY DEAD, DISEASED OR DAMAGED PLANT MATERIALS ARE TO BE REPLACED IMMEDIATELY AFTER NOTIFIED TO DO SO.
5) PLANT TREES AND SHRUBS IN ACCORDANCE WITH PLANTING DETAILS. DIG TREE PITS PER DETAILS. PLANT TREES AND SHRUBS AT THE SAME GRADE LEVEL AT WHICH THEY WERE GROWN AT THE NURSERY. IF HEAVY CLAY SOILS ARE EVIDENT, PLANT TREES AND SHRUBS HIGHER, APPROX. 1/4 OF THE ROOT BALL ABOVE GRADE, AND BACKFILL TO TOP OF ROOT BALL.
6) REMOVE ALL TWINE, WIRE, NURSERY TREE GUARDS, TAGS AND INORGANIC MATERIAL FROM ROOT BALLS. REMOVE THE TOP 1/3 OF BURLAP FROM EARTH BALLS AND REMOVE BURLAP FROM AROUND TRUNK.
7) FINELY SHREDDED HARDWARD BARK MULCH, NATURAL COLOR (NON-COLORED), IS REQUIRED FOR ALL PLANTINGS AND PLANTING BEDS. MULCH PER PLANTING DETAILS. MULCH IN PLANT BEDS SHALL BE 3" THICK AT TIME OF INSPECTION AND AFTER COMPACTED BY RAIN OR IRRIGATION. ALL PLANTING BEDS SHALL BE EDGED WITH 6" X 12 GAUGE STEEL LANDSCAPE EDGING.
8) LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES. IF A CONFLICT WITH UTILITIES EXIST, NOTIFY OWNER/CONSTRUCTION MANAGER PRIOR TO PLANTING.
9) PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER PLANTING AND ACCEPTANCE.

TOPSOIL AND TURF NOTES:

1) WHEREVER GROUND IN ITS NATURAL STATE HAS BEEN DISTURBED, APPROVED LANDSCAPING OR GRASS SHALL BE FULLY INSTALLED, AND ESTABLISHED WITHIN A REASONABLE PERIOD OF TIME, BUT NO LONGER THAN ONE GROWING SEASON (UNLESS OTHERWISE NOTED AND APPROVED).
2) DURING EXCAVATION, GRADING, AND INSTALLATION OF REQUIRED LANDSCAPING, ALL SOIL EROSION AND SEDIMENTATION CONTROL REGULATIONS SHALL BE STRICTLY FOLLOWED AND COMPLIED WITH.
3) ALL LAWN AREAS SHALL RECEIVE SOD OR HYDROSEED. TURF SHALL BE INSTALLED ON TOPSOIL UNLESS APPROVED OTHERWISE. DO NOT PLANT UNTIL ACCEPTANCE OF FINISH GRADE.
3) SOD SHALL BE GROWN ON TOPSOIL UNLESS APPROVED OTHERWISE. SOD SHALL BE 2 YEARS OLD AND STRONGLY ROOTED. PLACE SOD TIGHTLY WITH NO GAPS AND WITH GRAIN IN SAME DIRECTION. SEAMS OF SOD SHALL BE STAGGERED IN A RUNNING BOND PATTERN. SOD SHALL BE WATERED IMMEDIATELY TO AVOID DRYING OUT. DO NOT INSTALL SOD UNTIL ACCEPTANCE OF FINISH GRADE AND IRRIGATION SYSTEM IS OPERATING PROPERLY UNLESS DIRECTED IN WRITING TO DO OTHERWISE. FINISH ROLL SOD WITH A WATER FILLED LAWN ROLLER, ROLL PERPENDICULAR TO LENGTH OF SOD.
4) TURF SHALL BE INSTALLED ON A MIN. OF 3"-4" OF LIGHTLY COMPACTED APPROVED TOPSOIL. TOPSOIL SHALL BE FERTILE, SCREENED, FRIABLE TOPSOIL FREE OF STONES 1/2" IN DIA. AND LARGER, ROOTS, STICKS, OR OTHER EXTRANEOUS MATERIAL INCLUDING NOXIOUS PLANTS. PH BETWEEN 6.0 AND 6.5, SALTS 500 PARTS PPM, ORGANIC CONTENT 3% MIN. DO NOT INSTALL TOPSOIL UNTIL APPROVED BY OWNER/C.M.. TOPSOIL SHALL BE FINE GRADED TO A SMOOTH FINISH, FREE OF LUMPS AND DEPRESSIONS.
5) ALL LANDSCAPE ISLANDS WITHIN PARKING LOTS SHALL BE BACK FILLED WITH TOPSOIL TO A DEPTH OF 18" MIN.

IRRIGATION NOTES:

1) ALL PLANTING AREAS, LAWN AREAS AND LANDSCAPE ISLANDS SHOWN ARE TO HAVE A COMPLETE IRRIGATION SYSTEM. THE G.C. SHALL BE RESPONSIBLE FOR RETAINING A QUALIFIED FIRM FOR THE DESIGN OF THE IRRIGATION SYSTEM. THE DESIGN MUST SHOW HOW THE SYSTEM TIES INTO THE BUILDING AND MUST SHOW ALL OF THE NECESSARY EQUIPMENT FOR A COMPLETE SYSTEM. THE G.C. SHALL SUBMIT THE IRRIGATION SYSTEM DESIGN TO THE ARCHITECT/OWNER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.

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REVISIONS:

Title: DD Submittal		V. Date:02.08.16
Drawn: BEM	Checked: RJB	S. Date:02.08.16
Title: OCRC Submittal		V. Date:02.10.16
Drawn: BEM	Checked: RJB	S. Date:02.10.16

HEALTH POINTE

Landscape Plan

PART OF THE NW 1/4 OF SECTION 33, T8N, R16W,
GRAND HAVEN TOWNSHIP, OTTAWA COUNTY, MICHIGAN

STAMP:

STATE OF MICHIGAN
JAMES C. WALTER, JR.
LANDSCAPE ARCHITECT
No. 1588
REGISTERED LANDSCAPE ARCHITECT

PROJECT NO:
14201485

SHEET NO:
L-101

14201485-CPD.dwg JM 2/11/2016 13:00

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