

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
MARCH 25, 2013
6:30 P.M.
AGENDA**

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

CALL TO THE PUBLIC: *(Note: The Board reserves the right to not begin new business after 10:00 p.m.)*

OPEN PUBLIC HEARING #1...Review of special use application, environmental impact assessment and site plan for a proposed 20,680 sq. ft. office building located on the South side of Grand River Avenue between Hughes Road and Kellogg Road in Section 14, petitioned by Dakkota Integrated Systems.

Planning Commission of petition

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment.
- C. Recommendation of Site Plan.

OPEN PUBLIC HEARING #2...Review of request for an extension of a site plan and environmental impact assessment for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. (Aspen Glen).

Planning Commission disposition of petition

- A. Disposition of site plan extension

OPEN PUBLIC HEARING #3...Review of request for an extension of a site plan and environmental impact assessment for a proposed 16-unit single family site condominium development located north of Cunningham Lake Road, East of Sundance Trail in Section 34, petitioned by Mr. Moore.

Planning Commission disposition of petition

- A. Disposition of site plan extension

OPEN PUBLIC HEARING #4...Review of sketch plan application for approval of wall signs located at Champion Buick GMC, 7885 Grand River Avenue, Brighton, petitioned by Kathy Kaminsky on behalf of Brighton Land LLC.

Planning Commission disposition of petition

A. Disposition of Sketch Plan.

Administrative Business:

- *Staff report*
- *Approval of January 14th, 2013 Planning Commission meeting minutes*
- *Member Discussion*
- *Adjournment*

APPLICATION FOR SPECIAL LAND USE
GENOA TOWNSHIP

APPLICANT NAME* & ADDRESS: Dakota Integrated Systems, LLC
1875 Holloway Dr. Holt, MI 48842
OWNER NAME* & ADDRESS: Same as Applicant
SITE ADDRESS: Proposed Dakota Office PARCEL #(s): 11-14-100-014
APPLICANT PHONE: (517) 594-6500 OWNER PHONE: (517) 594-6500

Location and brief description of site and surroundings:

The site is located on the south side of Grand River with
frontage west of Trends in Tiles and east of Northwest Pipe &
Supply. The site contains significant woodlands and wetlands.

Proposed Use:

20,000+ Square foot corporate office building for
Dakota Integrated Systems, LLC

Describe how your request meets the Zoning Ordinance General Review Standards (section 19.03):

- a. Describe how the use will be compatible and in accordance with the goals, objectives, and policies of the Genoa Township Comprehensive Plan and subarea plans, and will promote the Statement of Purpose of the zoning district in which the use is proposed.

The proposed office building is a permitted use within
the OS District. The Special Use Permit is for minor
encroachment into the wetland buffer for grading.

- b. Describe how the use will be designed, constructed, operated, and maintained to be compatible with, and not significantly alter, the existing or intended character of the general vicinity.

All structures (building, entrance drive, parking lot and
storm sewer) are located outside the wetland buffers.
Minor grading will occur within the wetland buffer. Full
restoration will take place.

- c. How will the use be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, water and sewage facilities, refuse disposal and schools?

The site is located on Grand River Ave and is serviced
by public sewer and water. There will be minimal demand on
police and fire departments.

- d. Will the use involve any uses, activities, processes, or materials potentially detrimental to the natural environment, public health, safety, or welfare by reason of excessive production of traffic, noise, vibration, smoke, fumes, odors, glare, or other such nuisance? If so, how will the impacts be mitigated?

No- The only use will be a corporate office building.

e. Does the use have specific criteria as listed in the Zoning Ordinance (sections 3.03.02, 7.02.02, & 8.02.02)?
If so, describe how the criteria are met.

No - The Special Land Use is requested per Section
13-02-04 (d), Wetland Buffer.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I AGREE TO DESIGN, CONSTRUCT AND OPERATE, AND MAINTAIN THESE PREMISES AND THE BUILDINGS, STRUCTURES, AND FACILITIES WHICH ARE GOVERNED BY THIS PERMIT IN ACCORDANCE WITH THE STATED REQUIREMENTS OF THE GENOA TOWNSHIP ZONING ORDINANCE, AND SUCH ADDITIONAL LIMITS AND SAFEGUARDS AS MAY BE MADE A PART OF THIS PERMIT.

THE UNDERSIGNED MARK McCauley STATES THAT THEY ARE THE FREE OWNER* OF THE PROPERTY OF PROPERTIES DESCRIBED ABOVE AND MAKES APPLICATION FOR THIS SPECIAL LAND USE PERMIT.

X BY: [Signature]
Dakota Integrated Systems, LLC
ADDRESS: 1875 Holloway Dr, Holt, Mi 48842

*Submit a letter of Authorization from Property Owner if application is signed by Acting Agent.

Contact Information - Review Letters and Correspondence shall be forwarded to the following:		
<u>1) Brent Lavanway</u>	<u>of Boss Engineering</u>	<u>at (517) 548-1670</u>
Name	Business Affiliation	Fax No.

Note: This application must be accompanied by a site plan review application and the associated site plan review submittal requirements. (The Zoning Administrator may allow a less detailed sketch plan for a change in use.)



FEE EXCEEDANCE AGREEMENT	
As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.	
SIGNATURE: <u>[Signature]</u>	DATE: <u>2-26-13</u>
PRINT NAME: <u>MARK McCauley</u>	PHONE: <u>517 594-6500</u>
ADDRESS: <u>1875 Holloway Dr. Holt, Mi 48842</u>	

GENOA TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW

GENOA TOWNSHIP

FEB - 6 2013

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS*: Dakota Integrated Systems (Owner)

OWNER'S NAME & ADDRESS: 1875 Holloway Dr., Holt, MI 48842

SITE ADDRESS: Vacant Land - Grand River PARCEL #(s): 11-14-100-014

APPLICANT PHONE: () Same as Owner OWNER PHONE: (517) 594-6500

LOCATION AND BRIEF DESCRIPTION OF SITE: Vacant land on S. side of Grand River east of Hughes Road

BRIEF STATEMENT OF PROPOSED USE:

20,680 SF Office Building and associated parking for Dakota Integrated Systems Corporate Office

THE FOLLOWING BUILDINGS ARE PROPOSED:

one 20,680 SF Office Building

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: [Signature]

ADDRESS: Dakota Integrated Systems 1875 Holloway Dr. Holt, MI 48842

* If applicant is not the owner, a letter of Authorization from Property Owner is needed.

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1) Brent Lavanway of Boss Engineering at (517) 548-1670
Name Business Affiliation Fax No.

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ PHONE: _____

ADDRESS: _____

REQUIRED SITE PLAN CONTENTS

Each site plan submitted to the Township Planning Commission shall be in accordance with the provisions of the Zoning Ordinance. No site plan shall be considered until reviewed by the Zoning Administrator. The following information shall be included in the site plan submittal packet:

<u>SUBMITTED</u>	<u>NOT APPLICABLE</u>	<u>ITEM</u>												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Application form and fee: A completed application form and payment of a non-refundable application fee. (A separate escrow fee may be required for administrative charges to review the site plan submittal.)												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Applicant information: The name and address of the property owner and applicant, interest of the applicant in the property, the name and address of the developer, and current proof of ownership of the land to be utilized or evidence of a contractual ability to acquire such land, such as an option or purchase agreement.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Scale: The site plan should be drawn at an engineers scale on sheets measuring 24x36 inches at the scale noted below:												
		<table border="0"> <thead> <tr> <th><u>ACREAGE</u></th> <th><u>SCALE</u></th> </tr> </thead> <tbody> <tr> <td>160 or more</td> <td>1" = 200'</td> </tr> <tr> <td>5- 159.9</td> <td>1" = 100'</td> </tr> <tr> <td>2- 4.99</td> <td>1" = 50'</td> </tr> <tr> <td>1- 1.99</td> <td>1" = 30'</td> </tr> <tr> <td>0- .99</td> <td>1" = 20'</td> </tr> </tbody> </table>	<u>ACREAGE</u>	<u>SCALE</u>	160 or more	1" = 200'	5- 159.9	1" = 100'	2- 4.99	1" = 50'	1- 1.99	1" = 30'	0- .99	1" = 20'
<u>ACREAGE</u>	<u>SCALE</u>													
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2- 4.99	1" = 50'													
1- 1.99	1" = 30'													
0- .99	1" = 20'													
		<u>COVER SHEET CONTAINING</u>												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The name and address of the project.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The name, address and professional seal of the architect, engineer, surveyor or landscape architect responsible for preparation of the site plan.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	A complete and current legal description and size of property in acres and square feet. Where a metes and bound description is used, lot line angles or bearings shall be indicated on the plan. Lot line dimensions and angles or angles or bearings shall be based upon a boundary survey and shall correlate with the legal description.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	A small location sketch of sufficient size and scale to locate the property within the Township.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Title block with north arrow, date of preparation and any revisions.												
		<u>EXISTING CONDITION SHEETS ILLUSTRATING</u>												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	All existing lot lines and dimensions, including setback lines and existing or proposed easements.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing topography (minimum contour interval of two feet)												

Existing natural features such as streams, marshes, ponds; wetlands labeled with size and type (upland, emergent, etc)

Existing woodlands shall be shown by an approximate outline of the total canopy; individual deciduous trees of eight inch caliper or larger and individual evergreen trees six feet in height or higher, where not a part of a group of trees, shall be accurately located and identified by species and size (caliper for deciduous, height for evergreen).

Soil characteristics of the parcel to at least the detail as provided by the Soil Conservation Service Soil Survey of Livingston County. A separate map or overlay at the same scale as the site plan map may be used.

Zoning and current land use of applicants property and all abutting properties and of properties across any public or private street from the site.

Indication of existing drainage patterns, surface or water bodies.

The limits of any wetland regulated by the MDEQ, including attachment of any MDEQ approved wetland determination or documentation that an application for an MDEQ review has been submitted. If an MDEQ regulated wetland is to be impacted, an indication of the status of application for an MDEQ wetland permit or copy of a permit including description of any wetland migration required attached.

Aerial photograph indicating the limits of the site, surrounding land uses and street system.

PROPOSED PROJECT INFORMATION

Base information: The location of all existing buildings, structures, street names and existing right-of-way, utility poles, towers, drainage ditches, culverts, pavement, sidewalks, parking areas and driveways on the property and within one-hundred feet of the subject property (including driveways on the opposite side of any street). Notes shall be provided indicating those which will remain and those which are to be removed.

Building information: Footprints, dimensions, setbacks, typical floor plans, and a sketch of any rooftop or ground mounted equipment to scale.

Building elevations: Elevation drawings shall be submitted illustrating the building design and height, and describing construction materials for all proposed structures. Elevations shall be provided for all sides visible from an existing or proposed public street or visible to a residential district. The Planning commission may require color renderings of the Building. Proposed materials and colors shall be specified on the Plan and color chips or samples shall also be provided at the time of site plan review. These elevations, colors, and materials shall be considered part of the approval site plan. (as amended 4/15/95)

Building and lot coverage: Percentage of building coverage and impervious surface ratio (all paved areas and building v. total lot area) compared to the percentages specified in the Table of Dimensional Standards Article 4.

N/A

For residential developments: Number of residential unit for each project phase divided by acreage exclusive of any public right-of-way or private road access easement; lot area for each lot; and a description of the number of each unit by size and number of bedrooms; if a multi-phase development is proposed, identification of the areas included in each phase.

For commercial and office uses: The Gross Floor Area and Useable Floor Area of each use or lease space. For industrial uses: The floor area devoted to industrial uses and the area intended for accessory office use.

Streets, driveways, and circulation: The layout and dimensions of proposed lots, streets and drives (including grades, existing or proposed right-of-way or easement and pavement width, number of lanes and typical cross section showing surface and sub base materials and dimensions, grades of all entrances and exits, location and typical detail of curbs, intersection radii), access points (including deceleration or passing lanes, distance from adjacent driveways or street intersection), sidewalks (width, pavement type and distance from street) and recreation areas. Written verification of any access easements or agreements for shared access or driveway curb return extending beyond the property line shall be required.

Utilities: Existing and proposed locations of utility services (with sizes), degrees of slope of sides of retention/ detention ponds; calculations for size of storm drainage facilities; location of electricity and telephone poles and wires; location and size of surface mounted equipment for electricity and telephone services; location and size of underground tanks where applicable; location and size of outdoor incinerators; location and size of wells, septic tanks and drain fields; location of manholes, catch basins and fire hydrants; location, size, and inverts for storm and sanitary sewers, any public or private easements; notes shall be provided clearly indicating which existing services will remain and which will be removed.

Grading and drainage: A site grading plan for all developments where grading will occur, with existing and proposed topography at a minimum of two (2) foot contour intervals and with topography extending a minimum of twenty (20) feet beyond the site in all directions and a general description of grades within fifty (50), and further where required to indicate stormwater runoff into an approved drain or detention/ retention pond so as to clearly indicate cut and fill required. All finished contour lines are to be connected to existing contour lines

at or before the property lines. A general description and location of the stormwater management system shall be shown on the grading plan. The Township Engineer may require detailed design information for any retention/detention ponds and stormwater outfall structures or basins. If MDEQ regulated wetlands are to be used, status of MDEQ permit application or copy of permit with attached conditions shall be provided.

Landscape and screening: A landscape plan indicating proposed ground cover and plant locations and with common plant name, number, and size at installation. For any trees over eight (8) inch caliper to be preserved. A detail shall be provided to illustrate protection around the tree's drip line. Berms, retaining walls or fences shall be shown with elevations or cross section from the surrounding average grade. The location, type and height of proposed fences shall be described.

Waste receptacles: Location of proposed outdoor trash container enclosures; size, typical elevation, and vertical section of enclosures; showing materials and dimensions in compliance with Zoning Ordinance Standards.

Signs: Locations of all signs including location, size, area type, height, and method of lighting. Note that all regulatory signs shall meet the standards from the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

Lighting: Details of exterior lighting including location, height, method of shielding and style of fixtures.

Parking: Parking, storage and loading/unloading areas, including the dimensions of typical space, aisle, and angle of spaces. The total number of parking and loading/unloading spaces to be provided and the method spaces to be provided and the method by which the required parking was calculated shall be noted.

The applicant shall erect flagged stakes at the perimeter points of the property to assist Township officials and staff in reviewing the site.

GENOA CHARTER TOWNSHIP BOARD

Special Meeting
January 14, 2013

MINUTES

Supervisor McCririe called the special meeting of the Genoa Charter Township Board to order at 6:00 p.m. The Pledge of Allegiance was then said. The following persons were present constituting a quorum for the transaction of business: Gary McCririe, Paulette Skolarus, Robin Hunt, Linda Rowell, Jim Mortensen, Todd Smith and Jean Ledford. Also present were Township Manager Michael Archinal; Township Assistant Manager Kelly VanMarter and eight persons in the audience.

A Call to the Public was made with no response.

Approval of Regular Agenda:

1. Request for approval of rezoning agreement, impact assessment, rezoning plan and adoption of Ordinance #Z-13-01 to amend the zoning map of Genoa Charter Township by rezoning property located on the south side of Grand River Avenue between Hughes Road and Kellogg Road involving parcel numbers 11-14-100-014 and 11-14-200-011 from Rural Residential/Town Center (RR/TC) to Conditional Office Service District (conditional OSD) petitioned by Dakkota Integrated Systems.

VanMarter was asked to review the residential equivalent users and bike/walk path for this site.

A. Disposition of Rezoning Agreement.

Moved by Skolarus and supported by Ledford to approve the Rezoning Agreement with reference to Attorney Frank Mancuso's letter of Jan. 4, 2013. The motion carried unanimously.

B. Disposition of Impact Assessment.

Moved by Ledford and supported by Smith to approve the Environmental Impact Assessment (11/26/2012) correcting typographical errors. The motion carried unanimously.

C. Disposition of Rezoning Site Plan.

Moved by Hunt and supported by Skolarus to approve the Rezoning Site Plan as submitted. The motion carried unanimously.

D. Approval and adoption of Ordinance Z-13-01.

Moved by Ledford and supported by Hunt to approve Ordinance Z-13-01 amending the Zoning Map of the township on the south side of Grand River between Hughes and Kellogg Roads from

GENOA CHARTER TOWNSHIP BOARD – Special Meeting – Jan 14, 2013

RR/TC to conditional OSD. The motion carried by roll call vote as follows: Ayes – Ledford, Smith, Hunt, Rowell, Mortensen, Skolarus and McCririe. Nays – None. Absent – None.

The Special Meeting of the Genoa Charter Township Board was adjourned at 6:13 p.m.



Paulette A. Skolarus
Genoa Township Clerk

(Press/argus 01/18/2013)

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
DECEMBER 10th, 2012
6:30 P.M.**

AGENDA

CALL TO ORDER : The meeting of the Genoa Charter Township Planning Commission was called to order at 6:30 p.m. Present constituting a quorum were Dean Tenge, Lauren Brookins, Chairman Doug Brown, Diana Lowe, John McManus, James Mortensen and Barbara Figurski. Also present were Assistant Manager, Kelly VanMarter, Gary Markstrom from Tetra Tech, and Brian Borden of LSL.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Upon motion by Barbara Figurski and support by Diana Lowe, the agenda was approved as submitted. **Motion carried unanimously.**

CALL TO THE PUBLIC: *(Note: The Board reserves the right to not begin new business after 10:00 p.m.)*

OPEN PUBLIC HEARING#1... Review of rezoning application, rezoning agreement, impact assessment and site plan for property located on the south side of Grand River Avenue between Hughes Road and Kellogg Road, Brighton, Sec. 14, from Rural Residential/Town Center (RR/TC) to Office Service District (OSD), petitioned by Dakkota Integrated Systems.

Brian McDonnell, Chief Officer of Dakkota Integrated Systems addressed the Planning Commission. Dakkota is interested in setting an office up in Livingston County because the area is convenient for 80% of their employees. They have 12 locations in the US and one in Canada. They are a community involved company.

Brent Lavanway of Boss Engineering addressed the Planning Commission. He laid out the location of the site at issue. He presented a drawing which reflects ~~four possible potential locations for the office building on the site at issue.~~

Tony Delllicolli of Cityscapes addressed the Planning Commission. The preferred location for the building would allow for a southwest orientation of the building to best utilize the natural sun for solar panel purposes. Additionally, this would disrupt as few trees as possible. A handout was provided to the Planning

Commission that reflected imagery of the proposed materials, which would be consistent with the natural amenities on site.

Brian Borden addressed the Planning Commission and reminded them that this is a request for conditional rezoning. The request does include a zoning agreement. Therefore, the Planning Commission can't make suggested changes or edits to the plans. The Planning Commission is not requested to accept it as submitted either.

Any rezoning needs to maintain consistency with master plan. This application is consistent. A OSD would restrict the uses of the site and the design of the site. Brian Borden is concerned with the building materials referred to in the zoning agreement. The site has many natural features that could be tricky to develop. He believes it would be difficult to apply zoning requirements as required by the current zoning. There may be some justification for re-zoning. Strict compliance with Town Center Overlay standards would be very difficult. This would be a good transitional use to buffer the more intense (Grand River) to the less intense use (residential). The concept plan protects and preserves many natural features. They may attempt to fill in wetlands and create a different development but approval from MDEQ would be difficult to obtain. There are two points of frontage on Grand River. Utilities should not be a problem. The zoning agreement does contain all information required by the ordinance. It is a binding, legal document if approved. Therefore, it should be reviewed by the Township Attorney prior to the Township Board approving it. The agreement applies to the entire property.

Any further building on the site would need site plan approval.

Gary Markstrom of Tetra Tech addressed the Planning Commission. His comments apply more to the site plan. He feels storm water will not be an issue. During the site plan, impervious areas would be limited to make sure no downstream problem is created.

Municipal water is available and the sanitary sewer is available at that location. A pump may be necessary because it is shallow. The uses on the proposal are limited to low flow uses, so Gary Markstrom perceives no stress on the sanitary sewer systems or water systems. He sees no red flags to be raised tonight.

The fire department reported no issues at this time.

No adjacent properties have ingress/egress rights being recorded on this property.

The subdivision control ordinance was addressed. Chairman Brown asked why that language was in subsection (d). Brian Borden indicates that was taken verbatim from the ordinance. Kelly VanMarter confirmed that.

There is no sidewalk reflected on the site plan at this time. That can be addressed at the site plan review.

Barbara Figurski asks how much overflow would go into Lake Chemung. Gary Markstrom indicated all of it, but there are many restrictions that will prevent overflow that would be utilized and addressed in a site plan. Mr. Markstrom indicated there is a lot of room to put in preventative measures.

No one from the public wished to address the Planning Commission regarding this project.

Planning Commission disposition of petition

- A. Recommendation of Rezoning Agreement.
- B. Recommendation of Impact Assessment dated 11-26-12.
- C. Recommendation of Site Plan dated 11-26-12.

Motion by James Mortensen to recommend to the Township Board approval of a conditional rezoning agreement to rezone the property located on the south side of Grand River between Hughes and Kellogg Roads from rural residential town center overlay to office service district as petitioned by the petitioner. This rezoning and acceptance of the conditional rezoning agreement is recommended because the change to an office service district is compatible with surrounding sites and continuation in the town center overlay would be difficult because of the topography and wetlands on this site. This recommendation requires the review of the Township Attorney prior to submission to the Township Board.

Support by Barbara Figurski. **Motion carried unanimously.**

Motion by Barbara Figurski to recommend to the Township Board approval of the impact assessment dated November 26, 2012.

Support by John McManus. **Motion carried unanimously.**

Motion by James Mortensen to recommend to the Township Board approval of the site plan dated November 26, 2012.

Support by Barbara Figurski. **Motion carried unanimously.**

Administrative Business:

- *Staff report.* Kelly VanMarter gives a staff report to the Planning Commission.
- *Approval of October 9, 2012 Planning Commission meeting minutes.* **Motion** by Barbara Figurski and support by Diana Lowe to approve the minutes of the October 9, 2012 meeting minutes. **Motion carried unanimously.**



LSL Planning, Inc.

Community Planning Consultants

March 14, 2013

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
Subject:	Dakkota Integrated Systems – Special Land Use and Site Plan Review #1
Location:	Vacant property on the south side of Grand River Avenue, east of Dorr Road
Zoning:	OSD Office Service District

Dear Commissioners:

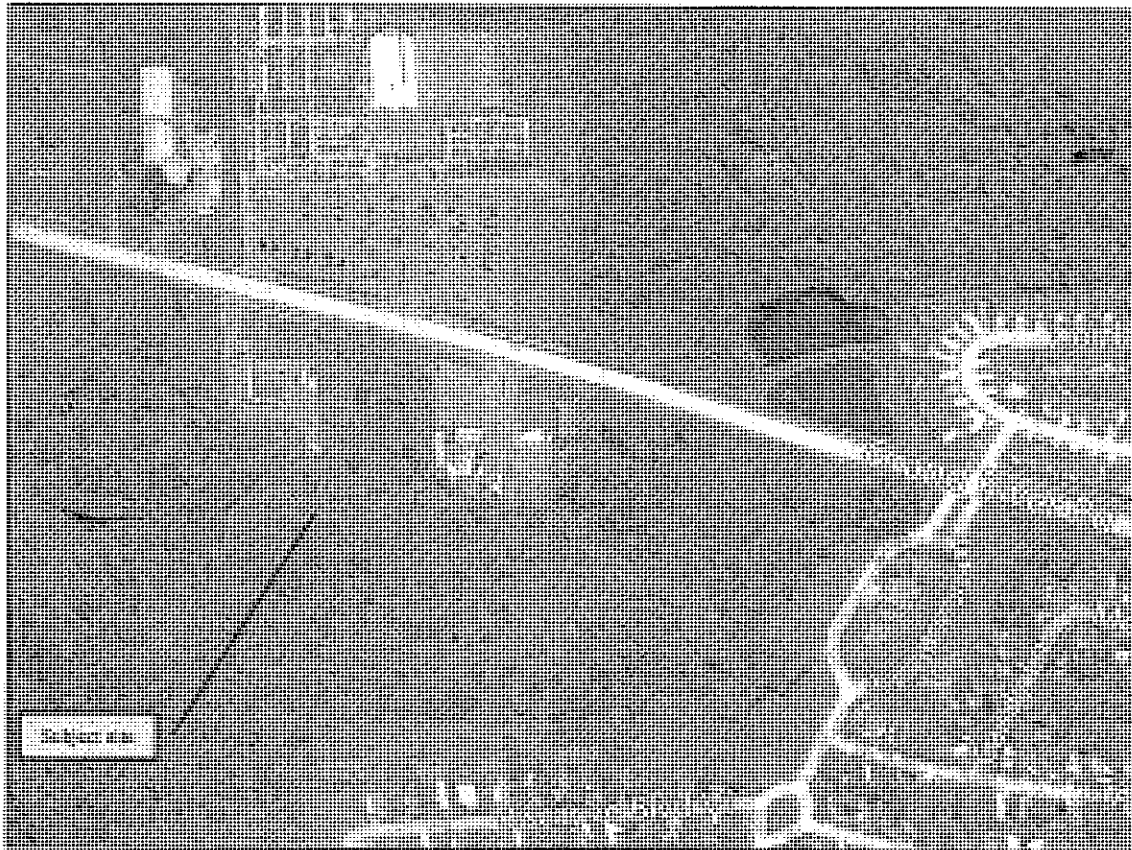
At the Township’s request, we have reviewed the site plan and architectural drawings (both dated 2/6/13), as well as the application for special land use (dated 2/26/13) proposing a new office building for the vacant 28.7-acre site located on the south side of Grand River Avenue, east of Dorr Road. The subject site was recently rezoned from RR/TCOD to OSD. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance.

A. Summary

1. In our opinion, the general special land use standards of Article 19 are met; however, any issues raised by the Township Engineer must be addressed and/or mitigated. Additionally, if required by MDEQ, the applicant must obtain any permits needed in relation to the wetland areas.
2. The Planning Commission has approval authority over the building elevations, including materials and colors.
3. We recommend the Township Engineer review driveway alignment and spacing.
4. The site plan does not identify the required loading space.
5. The applicant requests Commission authorization to modify landscaping requirements given the presence of existing natural vegetation and wetlands.
6. There are minor discrepancies on the landscape plan that need to be corrected.
7. The applicant must confirm that irrigation will be provided for all proposed landscaped areas.
8. Planning Commission approval is needed for the proposed waste receptacle placement within the required side yard, or an alternate location must be provided.
9. In our opinion, the applicant is required to install sidewalks along the site’s entire Grand River frontage unless there are significant site constraints that prevent construction at this time.
10. The applicant must provide detail sheets for the proposed light fixtures.
11. Planning Commission approval is needed for the second wall sign.
12. We request the applicant provide sign area calculations for the proposed wall signs.

B. Proposal

The applicant requests site plan review and approval for a new 20,680 square foot office building intended for use by Dakkota Integrated Systems. Table 7.02 of the Zoning Ordinance lists office buildings with between 15,000 and 55,000 square feet as permitted uses in the OSD. However, the project also proposes grading within the required 25-foot setback from wetland areas. As such, special land use approval is also needed in accordance with Section 13.02.04(d).



aerial view of site and surroundings (looking north)

C. Special Land Use Review

Section 19.03 of the Zoning Ordinance identifies the review criteria for Special Land Use applications as follows:

1. **Master Plan.** The Township Master Plan and Future Land Use map designate the site as Mixed-Use Town Center; however, given the nature of the request, the Environmental Conditions chapter of the Plan is more pertinent than the Future Land Use chapter.

The natural feature setback regulations are supported by the Master Plan to prevent activities that could harm features, such as wetlands, and restrict their ability to perform their natural functions. In this particular instance, the applicant proposes grading within 25 feet of wetland areas, but does not propose any permanent structures and notes that disturbed areas will be restored upon completion of the project. As such, we are of the opinion that the proposal is in keeping with Master Plan in that it will not result in a permanent disturbance to a natural feature.

2. **Compatibility.** Given the nature of the subject site (size, shape and presence of natural features) the proposed development is well buffered from surrounding uses. Furthermore, the portion of the project subject to special land use review (grading within 25 feet of a wetland) does not occur near the surrounding properties, but rather is generally internal to the site itself, and such areas are to be restored upon project completion.

The activities proposed are not expected to result in a disturbance to the wetland areas themselves, or to adjacent and surrounding properties.

3. **Public Facilities and Services.** Aside from any stormwater management concerns, the proposal for minor grading activities within 25 feet of a wetland is not anticipated to impact public facilities and services. We defer to the Township Engineer for review of the stormwater management and grading plans and any impact it may have under this criterion.
4. **Impacts.** As noted above, the proposal entails grading within 25 feet of wetland areas, which the applicant notes will be restored fully upon completion of the project. Given the nature of the request and the fact that the disturbance will only be temporary, the proposal is not expected to result in adverse impacts.
5. **Mitigation.** The Township may require mitigation necessary to limit or alleviate any potential adverse impacts as a result of the proposed activities; however, the submittal already notes that the disturbed areas will be fully restored upon project completion. With that being said, any comments provided from an engineering perspective should be addressed as part of this criterion. Lastly, if necessary, the applicant will also be responsible for any permits required by MDEQ.

D. Site Plan Review

1. **Dimensional Requirements.** As described in the table below, the project complies with the dimensional standards of the OSD:

District	Lot Size		Minimum Setbacks (feet)				Max. Height	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
OSD	1	100	35	20	40	20 front 10 side/rear	35	35% building 60% impervious
Proposal	28.7	790	448	80 (N) 810 (E) 494 (W)	390	13 side (N)	32'-2" (max)	1.06% building 5.05% impervious

2. **Building Materials and Design.** The proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission. The drawings include a variety of materials and design elements. Materials include brick, stone, metal and expansive window areas. The applicant must confirm colors for Planning Commission consideration and may wish to provide a color rendering, along with material samples for their review.
3. **Parking and Vehicular Circulation.** Based upon the size of the building (20,680 square feet) and proposed use (general office), the project requires 69 parking spaces. The site plan provides 80 spaces, including the required number of barrier free spaces (4).

The parking spaces and drive aisles meet or exceed the dimensional standards of Section 14.06, while the details on Sheet 2 also provide for looped (or double) striped spaces, as required.

4. **Vehicular Circulation.** Vehicular access to the site is proposed via a single driveway along Grand River Avenue. The Township's Access Management standards (Article 15) require 300-foot spacing between commercial driveways on Grand River, as well as alignment or a 250-foot offset from opposing driveways.

The proposed placement does not meet the spacing requirement from the nearest driveway to the east (Trends in Tile; approximately 200-foot spacing). The driveway is generally aligned with the opposing driveway on the north side of Grand River, although a slight shift to the east could better prevent "left turn lockup." However, this would also reduce the already deficient driveway spacing noted above. We recommend the Township Engineer review the driveway location to ensure it will function properly without causing disruption to Grand River traffic.

5. **Loading.** Given the size of the building, Section 14.08.08 requires 1 loading space, which is to be located in a rear or side yard not directly visible to a public street. The site plan does not identify the required space, which is to contain 500 square feet, unless otherwise approved by the Planning Commission.

The applicant must either provide the required space, or request that the Commission waive this requirement based upon a lack of need. In order to demonstrate a lack of need, the applicant should describe the nature of a typical delivery for the business.

6. **Landscaping.** The following table is a summary of the landscaping required by Section 12.02:

Location	Requirements	Proposed	Comments
Front yard greenbelt	20 canopy trees 20-foot width (based upon full property street frontage; submittal calculations are based on partial frontage)	Retain existing trees 20-plus foot width	In our opinion, the site would benefit from some greenbelt trees near the driveway, while any gaps along the easterly frontage could be filled in. Section 12.02.13 allows the PC to modify landscaping requirements based on presence of existing natural vegetation and wetlands.
Buffer zone "B" (W) adjacent to MDR zoning	89 canopy trees 89 evergreens 355 shrubs 6' wall or 3' berm 20-foot width	Retain existing vegetation and wetland areas 20-plus foot width	Section 12.02.13 allows the PC to modify landscaping requirements based on presence of existing natural vegetation and wetlands.
Buffer zone "C" (S & E) adjacent to MHP zoning	104 canopy trees OR 104 evergreens OR 415 shrubs (OR combination therefor) 10-foot width	Retain existing vegetation and wetland areas 14 evergreen trees 10-plus foot width	Section 12.02.13 allows the PC to modify landscaping requirements based on presence of existing natural vegetation and wetlands.
Detention ponds (4)	Total of 32 canopy OR evergreen trees Total of 318 shrubs	Retain existing vegetation 12 trees 114 shrubs	Section 12.02.13 allows the PC to modify landscaping requirements based on presence of existing natural vegetation and wetlands.
Parking lot	10 canopy trees 800 s.f. of landscaped area	15 canopy trees 4,473 s.f. of landscaped area	Requirement met

Additionally, there are some minor discrepancies between the landscape plan and table on Sheet 6. Specifically, the following items must be corrected for consistency:

- The table identifies 7 "QR" trees, although the plan depicts only 6;
- The plan notes 1 "PS" tree southeast of the building, although 2 are shown;
- The table identifies 31 "FIS" shrubs, although the plan depicts 37;
- The table identifies 15 "HPL" shrubs, although the plan depicts only 8;
- The table identifies 12 "HB" perennials, although the plan depicts only 7; and
- The plan identifies a shrub noted as "CAK" that is not described in the table.

The plan also shows 14 evergreen trees along the southerly lot line to fill in gaps between existing plantings; however, there is no indication as to their size or type. These plantings must be included in the table along with their details. Lastly, the applicant must confirm that irrigation will be provided for all landscaped areas in accordance with Section 12.02.11.

7. **Waste Receptacle and Enclosure.** The project includes a new waste receptacle and enclosure northeast of the building. Section 12.04 requires a rear yard or non-required side yard location, unless otherwise approved by the Planning Commission. Given the proposed placement within the required side yard (7.8-foot setback provided; 20-foot required), the location requires Commission approval.

The applicant proposes a concrete base and masonry enclosure matching materials used on the building in accordance with current requirements.

- 8. Pedestrian Circulation.** Section 12.05 requires sidewalks and pathways along certain road frontages, including a 5-foot sidewalk along Grand River Avenue east of the 141 interchange. Accordingly, the site plan provides the required sidewalk with the connection to the existing sidewalk in front of the adjacent business to the east (Trends in Tile).

Our only additional comments on this item are that: 1) the sidewalk ends short of the westerly lot line (likely due to the presence of a wetland); and 2) no sidewalk is shown along the site's easterly Grand River frontage. In our opinion, the Ordinance requires a sidewalk along the full frontage and design options should be considered such that the sidewalk extends all the way to the edge of each side lot line. The Ordinance allows an exception for a performance guarantee in lieu of construction where there are "significant site constraints."

- 9. Exterior Lighting.** The submittal includes a photometric plan (Sheet 7), which proposes the installation of 5 light poles in the parking lot (3 of which have double fixtures), 25 bollards along the driveway and 2 fixtures used to illuminate the proposed ground sign. The pole mounted fixtures are at a height of 20 feet and the photometric readings are well within Ordinance limitations. Our only comment is that the applicant needs to provide detail sheets for the proposed fixtures.
- 10. Signs.** The submittal proposes a monument sign near the driveway, as well as two wall signs on the building itself. The ground sign complies with Ordinance standards for height, area and setback; however, the inclusion of two wall signs requires Commission approval in accordance with Footnote 2(b) of Table 16.1.

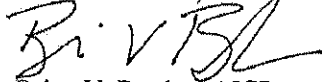
More specifically, the Commission may permit a two wall signs for businesses on interior lots, which requires additional visibility due to obstructed views or building orientation. If both signs are allowed, their area cannot exceed a total of 100 square feet. We estimate this standard to be met, but request the applicant provide area calculations to confirm compliance. If approved, the applicant must obtain a sign permit prior to installation of any signage.

- 11. Impact Assessment.** As required by Ordinance, the submittal includes an Impact Assessment (dated 2/6/13). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

Should you have any questions concerning this matter, please do not hesitate to contact our office. I can be reached by phone at (248) 586-0505, or via e-mail at borden@lsplanning.com.

Sincerely,

LSL PLANNING, INC.



Brian V. Borden, AICP
Senior Planner



March 5, 2013

Ms. Kelly Van Marter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Dakkota Integrated Systems Corporate Office
Site Plan Review #2**

Dear Ms. Van Marter:

We have reviewed the resubmitted site plan documents for the Dakkota Integrated Systems Corporate Office and the letter from Boss Engineering dated February 28, 2013, which was sent to us by the Township on February 27, 2013. The site is on the south side of Grand River immediately west and south of Trends in Tile. It is proposed for office building and associated parking facilities. Tetra Tech has reviewed the documents and offers the following comments for consideration by the planning commission:

SITE PLAN

1. The minimum listed setback along parking areas is 10 feet, yet there is only a 7.8-foot setback from the dumpster enclosure to the north property line adjacent to 6430 Grand River Avenue. If a variance is being requested, it should be stated on the plans.
2. Water main is shown connecting off the existing water main stub on the property of 6300 Grand River Avenue. The connection is proposed as a tapping sleeve and valve. This section of line can be isolated, so the connection should be revised to be a cutting-in sleeve and tee on the 8-inch water main. Calculations are needed for water usage and fire flow demand to confirm that the necessary capacity is available at the proposed tapping location for the MDEQ water main permit.
3. A fire department connection has been added to the NW corner of the building. Is piping to connection going to be all internal to building? If not, show exterior piping and provide a detail for the fire department connection and how it is isolated with a check valve from the public system.
4. Sanitary sewer service lateral will require a permit from the Livingston County Road Commission (LCRC) for installation across the road. We recommend from past projects with the LCRC that the portion in the road right-of-way be perpendicular to the roadway. An isolation valve should be placed on the southern right-of-way of Grand River, as this will be the limits of the sanitary sewer lead. There is an existing sign and sidewalk in the area that need to be accounted for on the drawings, along with existing sewer information.

Tetra Tech

1921 East Miller Road, Suite A, Lansing, MI 48911
Tel 517.394.7900 Fax 517.394.0011 www.tetrattech.com

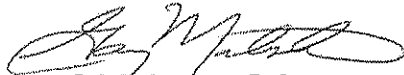
Ms. Kelly Van Marter
Site Plan Review #2 – Dakota Integrated Systems Corporate Office
March 5, 2013
Page 2

Show limits of proposed bore pits on both sides of the road as the bore pit locations currently shown are in conflict with existing water mains.


The Township should consider these issues in your discussion on the site plan application. From an engineering viewpoint, the overall site plan appears to be acceptable once the aforementioned concerns are addressed.

Please call if you have any questions.

Sincerely,



Gary J. Markstrom, P.E.
Unit Vice President



Joseph C. Siwek, P.E.
Project Engineer

copy: Brent LaVanway, P.E., Boss Engineering



Brighton Area Fire Department

615 W. Grand River

Brighton, Michigan 48116

810-229-6640 Fax: 810-229-1619

February 27, 2013

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Dakkota Office Building
Grand River
Site Plan Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The revised plans were received for review on February 26, 2013 and the drawings are dated February 6, 2013 with a revision date of February 25, 2013. The project is based on a new 20,680 square foot building (business). The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

1. The use group and type of construction was not indicated in the initial submittal. Provide this information to the Brighton Area Fire Department.
2. The water main shall be sized in such a way as to meet the requirement set out in the International Fire Code 2012 Appendix B Table B105.1 and Table C105.1. Provide the location of the water main and the closest hydrant to the site. A hydrant shall be located within 100' of the fire department connection.

IFC 912.2
3. Depending on the type of construction, the building may be required to provide an automatic sprinkler system in accordance with NFPA 13, *Standard for the Installation of Automatic Sprinkler Systems*.

IFC 903

 - A. The location, size, gate valve, and connection of the fire protection lead shall be indicated on the utility site plan.
4. Future project submittals shall include the address and street name of the project in the title block.

IFC 105.4.2

5. The building shall include the building address on the building. The address shall be a **minimum of 6"** high letters of contrasting colors and be clearly visible from the street. The location and size shall be verified prior to installation.

IFC 505.1

6. The access road into the site shall be a minimum of 26' wide. With a width of 26' wide, one side of the street shall be marked as a fire lane. Include the location of the proposed fire lane signage and include a detail of the fire lane sign in the submittal. Access roads to site shall be provided and maintained during construction. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds.

IFC D 103.6

IFC D103.1

IFC D 102.1

IFC D 103.3

7. Access around building shall provide emergency vehicles with a turning radius up to 55' wall to wall and a minimum vertical clearance of 13 ½ feet.

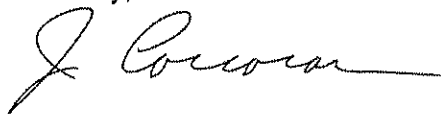
8. The location of a key box (Knox Box) shall be indicated on future submittals. The Knox box will be located adjacent to the front door of the structure.

IFC 506.1

9. Provide names, addresses, phone numbers, emails of owner or owner's agent, contractor, architect, on-site project supervisor.

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Sincerely,



Jim Corcoran
Captain – Fire Inspector

**IMPACT ASSESSMENT
FOR
SITE PLAN PETITION
“DAKKOTA INTEGRATED SYSTEMS OFFICE BUILDING”
GENOA TOWNSHIP, LIVINGSTON COUNTY
MICHIGAN**

Prepared for:

**DAKKOTA INTEGRATED SYSTEMS
1875 HOLLOWAY DRIVE
HOLT, MICHIGAN 48842
(517) 594-6500**

Prepared by:

**BOSS ENGINEERING COMPANY
3121 E. GRAND RIVER
HOWELL, MI 48843
(517) 546-4836**

February 6, 2013

12-183EIA

INTRODUCTION

The purpose of this Impact Assessment (IA) report is to show the effect that this proposed development may have on various factors in the general vicinity of the project. The format used for presentation of this report conforms to the *Submittal Requirements For Impact Assessment* guidelines in accordance with Section 18.07 of the published Zoning Ordinance for Genoa Township, Livingston County, Michigan.

DISCUSSION ITEMS

A. Name(s) and address(es) of person(s) responsible for preparation of the impact assessment and a brief statement of their qualifications.

Prepared By :
BOSS ENGINEERING COMPANY
Civil Engineers, Land Surveyors, Landscape Architects and Planners
3121 E. Grand River
Howell, MI 48843
(517) 546-4836

Prepared For :
DAKKOTA INTEGRATED SYSTEMS
Owner of property
1875 Holloway Drive
Holt, MI 48842
(517) 594-6500

B. Map(s) and written description / analysis of the project site including all existing structures, manmade facilities, and natural features. The analysis shall also include information for areas within 10 feet of the property. An aerial photograph or drawing may be used to delineate these areas.

The site is located on the south side of Grand River Avenue, approximately 1,100 feet east of the Hughes Road intersection. The property has frontage on Grand River at two different locations. There are 5 parcels along Grand River under separate ownership which divide the road frontage. Across Grand River there exist both commercial and industrial uses. The western property line runs along the Grand Beach Lake county drain. West of the drain is vacant property. To the south and east is the Sylvan Glen manufactured home community. The subject property is currently undeveloped, currently zoned Office Service District (OSD) and governed by a Rezoning Agreement.

C. Impact on natural features: A written description of the environmental characteristics of the site prior to development and following development, i.e., topography, soils, wildlife, woodlands, mature trees (eight inch caliper or greater), wetlands, drainage, lakes, streams, creeks or ponds. Documentation by a qualified wetland specialist shall be required wherever the Township determines that there is a potential regulated wetland. Reduced copies of the Existing Conditions Map(s) or aerial photographs may accompany written material.

The total site area is 29.64 acres. There are 10.25 acres of wetlands and 1.02 acres of right-of-way for Grand River Avenue leaving a total of 18.37 acres of upland. With regards to the wetlands, there are two large areas on the property. One area is on the west of the property associated with the drain running along the west property line. The other large area is on the east side of the site adjacent to the aforementioned manufactured community. There are two smaller areas towards the center of the property. Because of their size and proximity to the drain, all of the wetlands appear to be regulated by the Michigan Department of Environment Quality. The upland areas on the site are rolling with approximately 25 feet of relief from the center of the property to the wetlands. Most of the upland area is

covered with medium to large trees. Most of the trees are black cherry, with a few white oak, red maple, apple, and a few other species.

The proposed office building will be located in the central wooded area on the property south of the existing commercial properties fronting Grand River Avenue. There will be some tree removal associated with construction of the office building and parking lot. The trees being removed are indicated in the Site Plan documents.

D. Impact on storm water management: Description of measures to control soil erosion and sedimentation during grading and construction operations and until a permanent ground cover is established. Recommendations for such measures may be obtained from County Soil Conservation Service.

Surface runoff during periods of construction will be controlled by proper methods set forth by the Livingston County Drain Commissioner, including silt fence, pea stone filters, and seed and mulch. A meeting was held with the Drain Commissioner's office to discuss stormwater management. Their primary recommendation is to maintain the existing drainage patterns as closely as possible.

At the time of construction, there may be some temporary dust, noise, vibration and smoke, but these conditions will be of relatively short duration and shall be controlled by applying appropriate procedures to minimize the effects, such as watering if necessary for dust control.

The Site Plan documents show the proposed locations of all site improvements along with detailed soil erosion control information. The plans will be reviewed by the Livingston County Drain Commissioner's office for compliance with their regulations prior to issuance of a Soil Erosion Control permit.

E. Impact on surrounding land use: Description of the types of proposed uses and other man made facilities, including any project phasing, and an indication of how the proposed use conforms or conflicts with existing and potential development patterns. A description shall be provided of any increases of light, noise or air pollution which could negatively impact adjacent properties.

The applicant is planning on constructing a single office building totaling 20,680 square feet in size, with the required parking, pedestrian circulation and storm water management system associated with it. The applicant is proposing an entrance drive extending from Grand River Avenue to the building and associated parking which will both be placed near the center of the property. This placement will allow a large vegetative buffer around the east, south and west sides of the project to screen the building from any existing or future residential.

The applicant is anticipating constructing the development in one phase.

With the proposed use being office, most of the activity on the property would be weekdays 8 AM to 5 PM. Unlike a commercial use, there would be limited evening or weekend traffic.

The increase in light, noise or air pollution would be far less than what is typically associated with a commercial development. Developing a single smaller office building on the property will have minimal impact on surrounding properties.

F. Impact on public facilities and services: Description of number of expected residents, employees, visitors, or patrons, and the anticipated impact on public schools, police protection and fire protection. Letters from the appropriate agencies may be provided, as appropriate.

The developer anticipates bringing up to 70 jobs to the area. This will lead to people moving to the area to be closer to their jobs, therefore purchasing homes in the area. This would also mean addition children enrolling in one the school systems in the area. With most of the schools having seen a steady decline in

enrollment over the last 5 to 7 years, an increase in students would be seen as a positive for the community.

G. Impact on public utilities: Description of the method to be used to service the development with water and sanitary sewer facilities, the method to be used to control drainage on the site and from the site, including runoff control during periods of construction. For sites service with sanitary sewer, calculations for pre- and post development flows shall be provided in equivalents to a single family home. Where septic systems are proposed, documentation or permits from the Livingston County Health Department shall be provided.

The development will be served by both public water and sanitary sewer. With regards to storm water management, the project would be required to meet all local, county and state storm water and erosion control requirements. All of the required information is included in the Site Plan documents.

H. Storage or handling of any hazardous materials: Description of any hazardous substances expected to be used, stored or disposed of on the site. The information shall describe the type of materials, location within the site and method of containment. Documentation of compliance with federal and state requirements, and a Pollution Incident Prevention Plan (PIPP) shall be submitted, as appropriate.

There will be no hazardous materials used or disposed of on this site.

I. Impact on traffic and pedestrians: A description of the traffic volumes to be generated based on national reference documents, such as the most recent edition of the Institute of Transportation Engineers Trip Generation Manual, other published studies or actual counts of similar uses in Michigan.

According to the Institute of Transportation Engineers Trip Generation 6th addition, the number of trips generated by this development would be an average of 52 vehicle trips per hour during the AM peak hours, and 50 vehicle trips per hour during the PM peak hours. This is based on a Single Tenant Office Building.

J. A detailed traffic impact study shall be submitted for any site over ten (10) acres in size which would be expected to generate 100 directional vehicle trips (i.e. 100 inbound or 100 outbound trips) during the peak hour of traffic of the generator or on the adjacent streets.

The anticipated number of directional vehicle trips during the peak hour of traffic is 52. Therefore a detailed traffic impact study is not necessary.

K. Special Provisions: General description of any deed restrictions, protective covenants, master deed or association bylaws.

The property is zoned OSD and subject to the Rezoning Agreement executed by Genoa Charter Township and Dakkota Integrated Systems, LLC.

L. A list of all sources shall be provided.

Genoa Township's *Submittal Requirements For Impact Assessment*

Genoa Township Zoning Ordinances

Soil Survey of Livingston County, Michigan, U.S.D.A. Soil Conservation Service

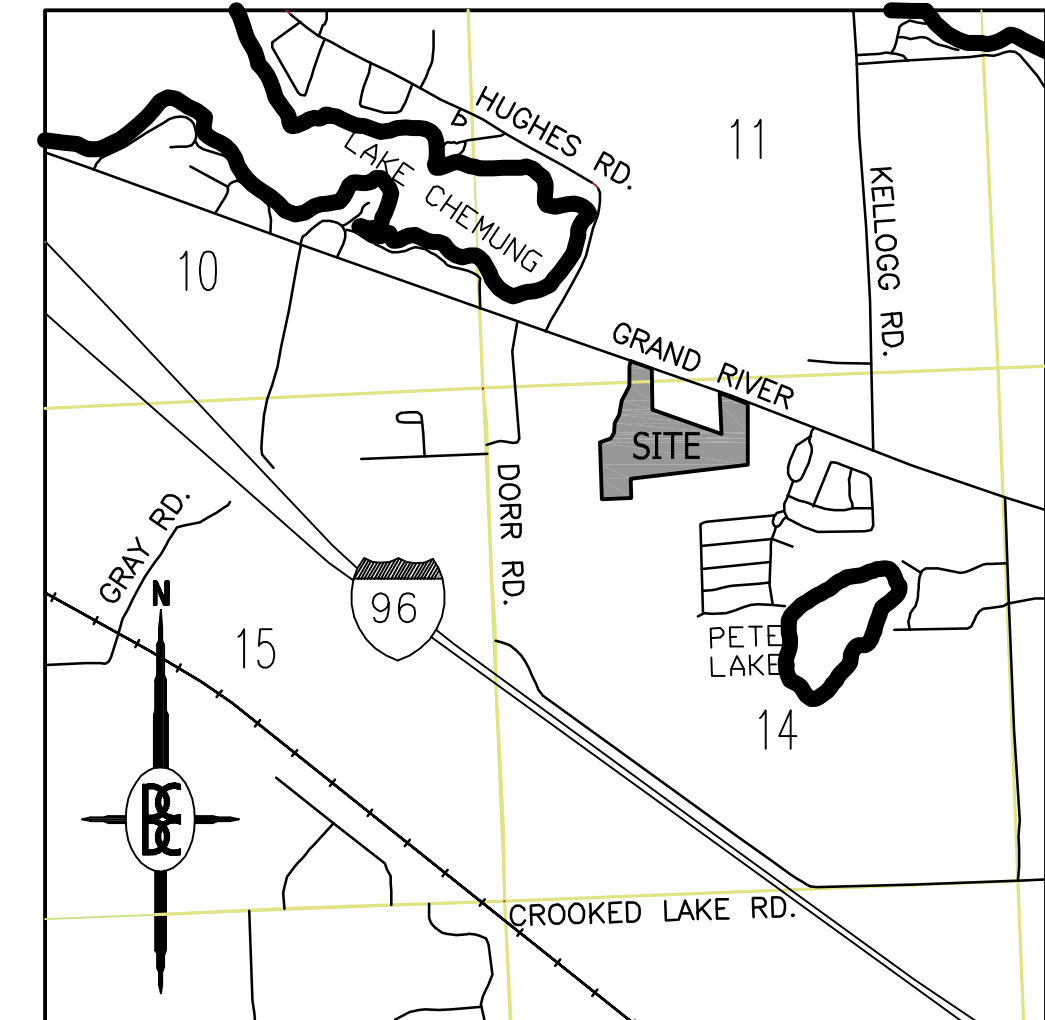
National Wetland Inventory Plan, United States Department of the Interior, Fish and Wildlife Service

Trip Generation manual, 6th edition, Institute of Transportation Engineers

APPENDIX

SITE PLAN / CONSTRUCTION PLANS FOR DAKKOTA INTEGRATED SYSTEMS OFFICE BUILDING

PART OF SW 1/4 SEC. 11 & NW 1/4 & NE 1/4 SEC. 14, T.2N., R.5E.
GENOA TOWNSHIP, LIVINGSTON COUNTY, MI



LOCATION MAP
NO SCALE



OVERALL SITE MAP
NO SCALE

PROPERTY DESCRIPTION:

Part of the Southwest 1/4 of Section 11 and a part of the Northeast 1/4 and the Northwest 1/4 of Section 14, T2N, R5E, Genoa Township, Livingston County, Michigan, described as: Commencing at the West 1/4 corner of Section 14, T2N, R5E, Genoa Township, Livingston County, Michigan, said corner being distant 2681.56 feet South 02 degrees 16' 19" East (South 00 degrees 15' East record) from the Northwest corner of said Section 14; thence North 02 degrees 16' 19" West (North 00 degrees 15' 00" West record) 1330.95 feet; thence North 87 degrees 12' 41" East 1335.68 feet (North 89 degrees 14' 00" East 1336.92 feet record), along the North line of a parcel described in Warranty Deed recorded in Liber 1236, page 675, Livingston County Records, to the place of beginning; thence North 02 degrees 03' 48" West 627.88 feet along the East line of a parcel described in Warranty Deed recorded in Liber 4766, page 796, Livingston County Records; thence the following eight courses along the centerline of a 50 foot wide permanent public drainage easement as described in the instrument recorded in Liber 2551, page 917, Livingston County Records: (1) North 70 degrees 54' 48" East 125.92 feet (North 72 degrees 55' 28" East 124.89 feet record), and (2) North 30 degrees 08' 19" East (North 32 degrees 17' 22" East record) 74.01 feet, and (3) North 04 degrees 55' 59" East (North 07 degrees 05' 02" East record) 106.46 feet, and (4) North 27 degrees 13' 52" East (North 29 degrees 22' 55" East record) 94.96 feet, and (5) North 10 degrees 53' 03" East (North 13 degrees 02' 06" East record) 190.20 feet, and (6) North 32 degrees 01' 45" East (North 34 degrees 10' 48" East record) 158.67 feet, and (7) North 00 degrees 37' 14" West (North 01 degrees 31' 49" East record) 231.55 feet, and (8) North 17 degrees 27' 52" East 48.61 feet (North 19 degrees 36' 55" East 49.69 feet record); thence South 70 degrees 21' 38" East (South 68 degrees 30' East record) 241.01 feet along the centerline of Grand River Avenue; thence South 02 degrees 25' 07" East (South record) 450.00 feet; thence South 70 degrees 21' 38" East (Southeasterly record) 701.45 feet; thence South 02 degrees 20' 18" East 1.68 feet; thence South 69 degrees 24' 15" East (Southeasterly record) 100.00 feet; thence North 02 degrees 20' 18" West (North record) 450.00 feet; thence along said centerline of Grand River Avenue the following two courses: (1) Easterly 194.91 feet along the arc of an 11459.19 foot radius curve to the right through a central angle of 00 degrees 58' 28" and having a long chord which bears South 68 degrees 33' 53" East 194.91 feet, and (2) South 68 degrees 04' 39" East (South 66 degrees 13' East record) 454.53 feet; thence South 21 degrees 55' 21" West (South record) 150.00 feet; thence North 68 degrees 04' 39" West (West record) 100.00 feet; thence South 21 degrees 55' 21" West 483.63 feet (South 23 degrees 47' West 500.00 feet record); thence South 82 degrees 59' 37" West (South 85 degrees 11' West record) 1268.16 feet; thence South 02 degrees 01' 19" East (South record) 207.19 feet; thence South 87 degrees 12' 41" West 323.00 feet (West 350 feet record), along said North line of a parcel described in Warranty Deed recorded in Liber 1236, page 675, Livingston County Records, to the place of beginning. Excepting therefrom that part described on County Tax Rolls under Parcel I.D. No. 4711-14-200-011 as Section 14, T2N, R5E, beginning at a point distant North 00 degrees 15' 00" West 557.20 feet, North 89 degrees 30' 56" East 1833.66 feet North 518.76 feet; thence West 175 feet; thence North 462.18 feet; thence North 85 degrees 11' 00" East 1218.16 feet; thence North 23 degrees 47' 00" East 500.00 feet from the West 1/4 corner for a place of beginning; thence North 23 degrees 47' 00" East 150 feet; thence South 66 degrees 13' 00" East 100 feet; thence South 23 degrees 47' 00" West 150 feet; thence North 66 degrees 13' 00" West 100 feet to the place of beginning.
CONTAINING 29.63 AC.

CONSTRUCTION NOTES

- THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING NOTES AND ANY WORK INVOLVED SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.
 - DO NOT SCALE THESE DRAWINGS AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
 - A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
 - IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
 - ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TOWNSHIP, COUNTY, AND STATE OF MICHIGAN PERMITS.
 - PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
 - ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND A.D.A. REQUIREMENTS.
 - ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
 - THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, IRRIGATION LINES, AND PRIVATE UTILITY LINES.
 - THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
 - THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
 - THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
 - THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
 - ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOT CLASS II).
 - ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP, INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
 - NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
 - DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
 - IF WORK EXTENDS BEYOND NOVEMBER 15, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
 - NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE CONSTRUCTION LIMITS INCLUDING BUT NOT LIMITED TO EXISTING FENCE, LAWN, TREES AND SHRUBBERY.
 - ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODDED OR SEEDED AS SPECIFIED OR DIRECTED BY THE ENGINEER.
 - ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
 - TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT NO COST TO THE TOWNSHIP. NO WORK SHALL BE DONE UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
 - ALL DEMOLISHED MATERIALS AND SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
 - AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT.
 - ALL GRADING IN THE PLANS SHALL BE DONE AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
 - NO SEEDING SHALL BE DONE AFTER OCTOBER 15 WITHOUT APPROVAL OF THE ENGINEER.
 - ANY EXISTING APPURTENANCES SUCH AS MANHOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
 - SOIL EROSION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
 - ALL PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF THE MICHIGAN MUTCD MANUAL AND SHALL BE INCIDENTAL TO THE CONTRACT.
 - PROPOSED STORM DRAINAGE/RETENTION SYSTEM IS PRIVATE, AND TO BE OWNED AND MAINTAINED BY THE PROPERTY OWNER.

INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SITE PLAN
3	GRADING PLAN
4	UTILITY & DRAINAGE PLAN
5	SOIL EROSION CONTROL PLAN
6	LANDSCAPE PLAN
7	LIGHTING PLAN
8	TOPOGRAPHIC SURVEY & DEMOLITION PLAN
9	CONSTRUCTION NOTES & DETAILS
10	CONSTRUCTION NOTES & DETAILS
11	CONSTRUCTION NOTES & DETAILS
12	CONSTRUCTION NOTES & DETAILS
DRAWINGS PREPARED BY ARCHITECT	
A-100	LOWER LEVEL FLOOR PLAN
A-101	FIRST FLOOR PLAN
A-201	EXTERIOR ELEVATIONS

DAKKOTA INTEGRATED SYSTEMS OFFICE BUILDING

PREPARED FOR:

DAKKOTA INTEGRATED SYSTEMS LLC
1875 HOLLOWAY DRIVE
HOLT, MI 48842
517.594.6500



GENERAL CONTRACTOR:

THE WIELAND-DAVCO CORPORATION
4162 ENGLISH OAK DRIVE
LANSING, MI 48911
517.372.8650

ARCHITECT:



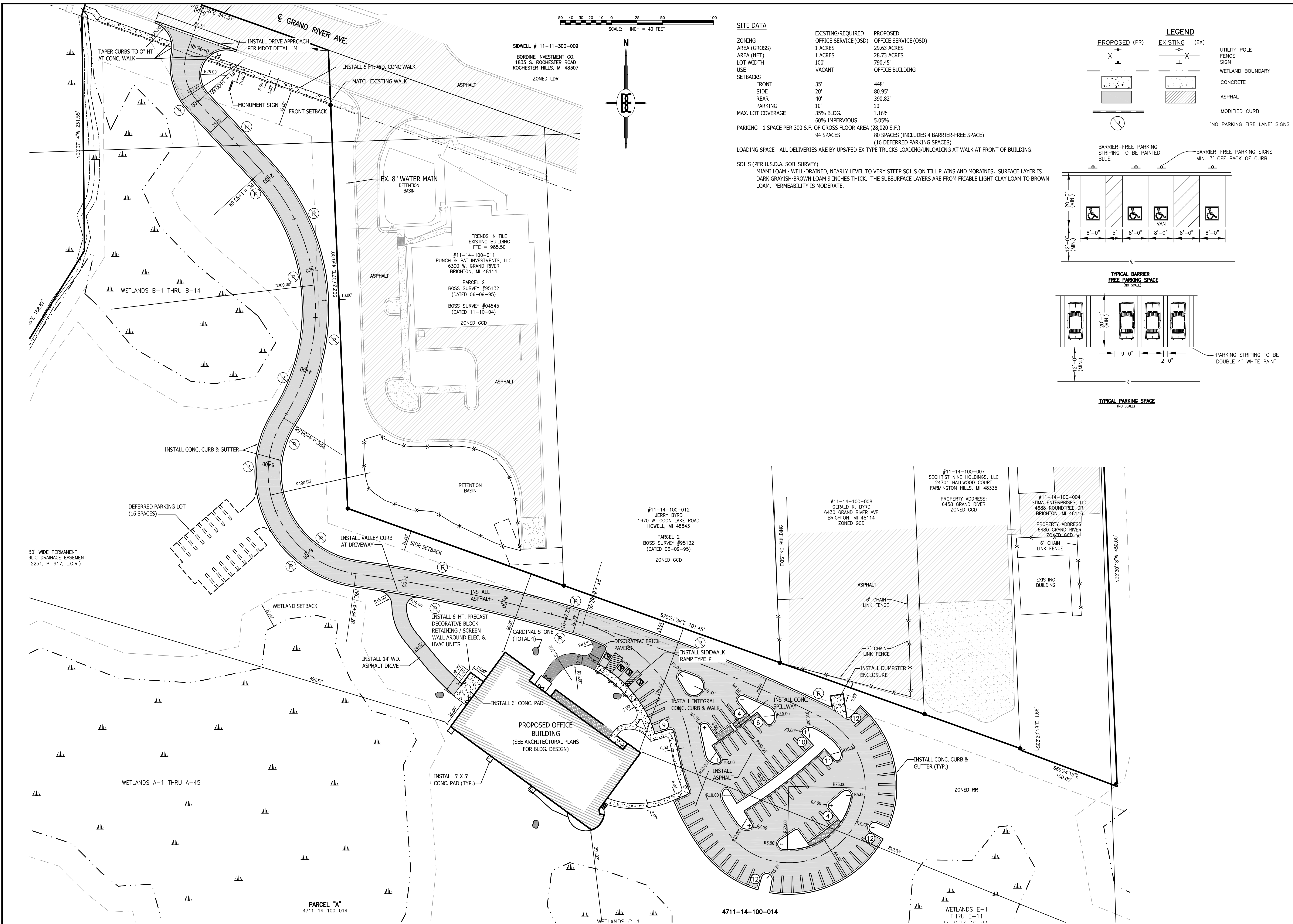
CITYSCAPE ARCHITECTS INC.
40850 GRAND RIVER AVE, SUITE 200
NOVI, MI 48375
248.471.7877

CIVIL ENGINEER/LANDSCAPE ARCHITECT



3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 546-1670

1	TD	TWP. REVIEW	2-25-13	ISSUE DATE: 2-6-13
	NO	BY CK	REVISION PER	DATE
				1
				JOB NO. 12-183

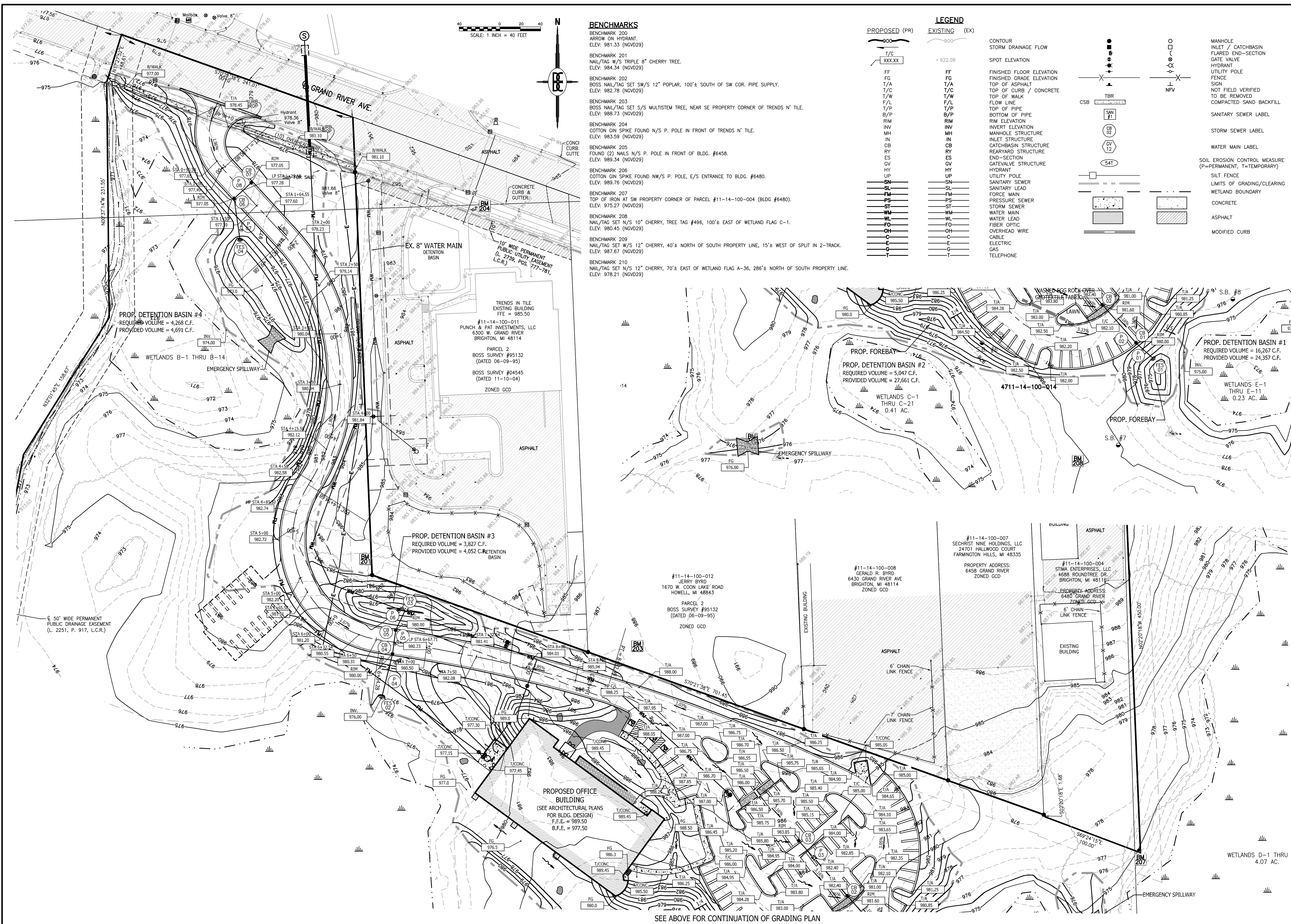


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BEFORE YOU DIG
CALL MISS DIG
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(E-MAIL: boss@bosseng.com)
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT:	DAKOTA OFFICE BUILDING
PREPARED FOR:	DAKOTA INTEGRATED SYSTEMS, INC. 1875 HOLLOWAY DRIVE HOLT, MI 48842 (517) 594-6500
TITLE:	SITE PLAN
NO. BY:	
DATE:	2-25-13
REVISION PER:	
DESIGNED BY:	TD
DRAWN BY:	TD
CHECKED BY:	
SCALE:	1" = 40'
JOB NO.:	12-183
DATE:	2-6-13
SHEET NO.:	2



BENCHMARKS

- BENCHMARK 200
ARROW ON HYDRANT.
ELEV. 981.33 (NGVD29)
- BENCHMARK 201
NAIL/TAG W/S TRIPLE 8" CHERRY TREE.
ELEV. 984.34 (NGVD29)
- BENCHMARK 202
BOSS NAIL/TAG SET SW/S 12" POPLAR, 100'± SOUTH OF SW COR. PIPE SUPPLY.
ELEV. 982.78 (NGVD29)
- BENCHMARK 203
BOSS NAIL/TAG SET S/S MULTISTEM TREE, NEAR SE PROPERTY CORNER OF TRENDS N' TILE.
ELEV. 988.73 (NGVD29)
- BENCHMARK 204
COTTON GIN SPIKE FOUND N/S P. POLE IN FRONT OF TRENDS N' TILE.
ELEV. 983.59 (NGVD29)
- BENCHMARK 205
FOUND (2) NAILS N/S P. POLE IN FRONT OF BLDG. #6458.
ELEV. 989.34 (NGVD29)
- BENCHMARK 206
COTTON GIN SPIKE FOUND NW/S P. POLE, E/S ENTRANCE TO BLDG. #6480.
ELEV. 989.34 (NGVD29)
- BENCHMARK 207
TOP OF IRON AT SW PROPERTY CORNER OF PARCEL #11-14-100-004 (BLDG #6480).
ELEV. 975.27 (NGVD29)
- BENCHMARK 208
NAIL/TAG SET N/S 10" CHERRY, TREE TAG #496, 100'± EAST OF WETLAND FLAG C-1.
ELEV. 980.45 (NGVD29)
- BENCHMARK 209
NAIL/TAG SET W/S 12" CHERRY, 40'± NORTH OF SOUTH PROPERTY LINE, 15'± WEST OF SPLIT IN 2-TRACK.
ELEV. 987.67 (NGVD29)
- BENCHMARK 210
NAIL/TAG SET N/S 12" CHERRY, 70'± EAST OF WETLAND FLAG A-36, 286'± NORTH OF SOUTH PROPERTY LINE.
ELEV. 978.21 (NGVD29)

LEGEND

PROPOSED (PR)	EXISTING (EX)	
900	900	CONTOUR
T/C	XXXXXX	STORM DRAINAGE FLOW
FF	FF	SPOT ELEVATION
FG	FG	FINISHED FLOOR ELEVATION
T/A	T/A	FINISHED GRADE ELEVATION
T/C	T/C	TOP OF ASPHALT
T/W	T/W	TOP OF CURB / CONCRETE
F/L	F/L	TOP OF WALK
T/P	T/P	FLOW LINE
B/P	B/P	TOP OF PIPE
RIM	RIM	BOTTOM OF PIPE
INV	INV	RIM ELEVATION
MH	MH	INVERT ELEVATION
IN	IN	MANHOLE STRUCTURE
RY	RY	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
ES	ES	REARWARD STRUCTURE
RY	RY	END-SECTION
GV	GV	GATEVALE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE

MANHOLE INLET / CATCHBASIN FLARED END-SECTION GATE VALVE HYDRANT UTILITY POLE FENCE SIGN NOT FIELD VERIFIED TO BE REMOVED COMPACTED SAND BACKFILL SANITARY SEWER LABEL STORM SEWER LABEL WATER MAIN LABEL SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY) SILT FENCE LIMITS OF GRADING/CLEARING WETLAND BOUNDARY CONCRETE ASPHALT MODIFIED CURB

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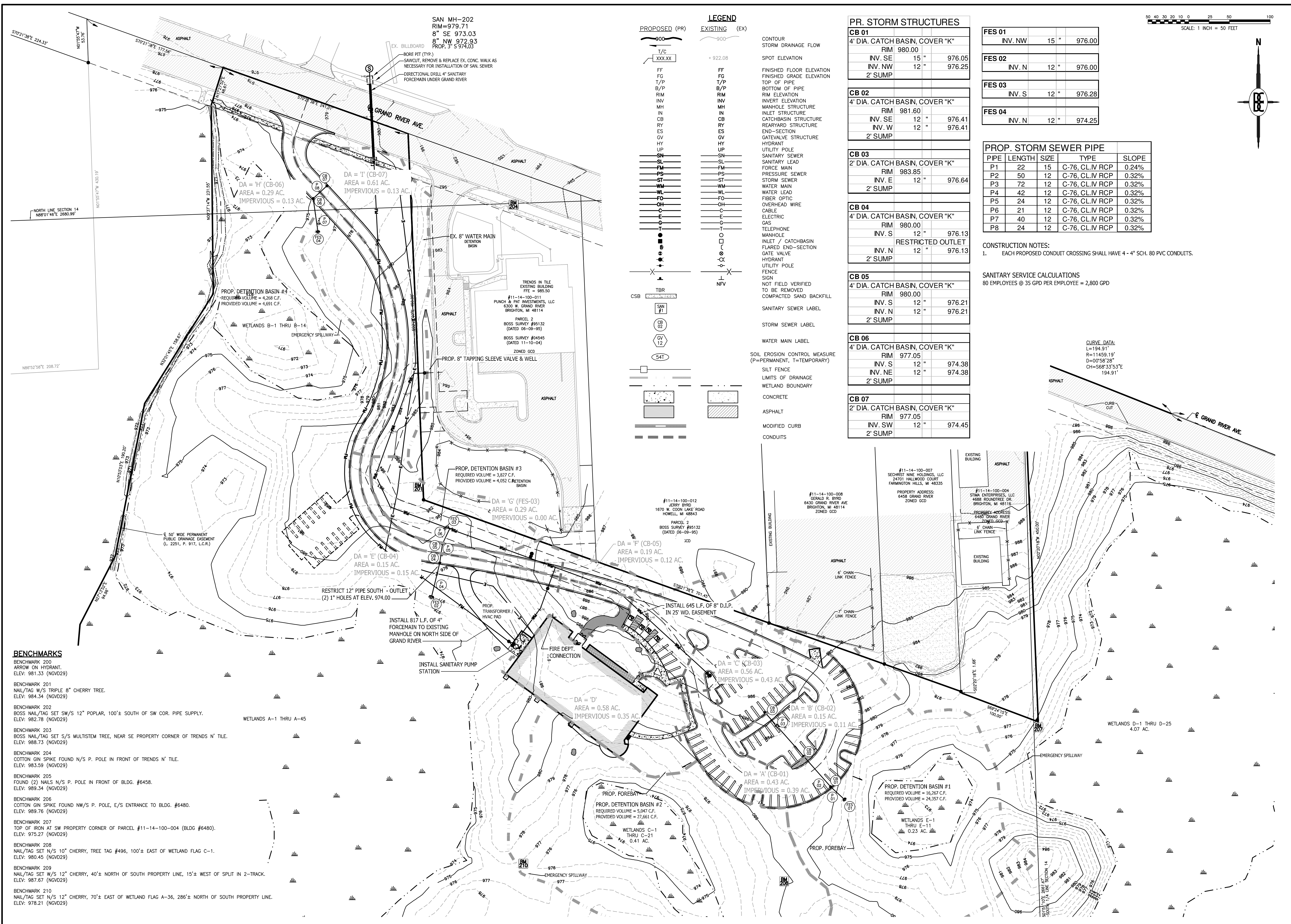
PROJECT: DAKOTA OFFICE BUILDING
PREPARED FOR: DAKKOTA INTEGRATED SYSTEMS, INC.
1875 HOLLOWAY DRIVE
HOLT, MI 48842
(517) 594-6500

TITLE: GRADING & DRAINAGE PLAN

NO	BY	TWP.	REVIEW PER	DATE
1	TD			2-25-13

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE: 1" = 50'
JOB NO.: 12-183
DATE: 2-6-13
SHEET NO.: 3

SEE ABOVE FOR CONTINUATION OF GRADING PLAN



BENCHMARKS

BENCHMARK 200
ARROW ON HYDRANT.
ELEV: 981.33 (NGVD29)

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NAIL/TAG W/S TRIPLE B* CHERRY TREE.
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BOSS NAIL/TAG SET S/S MULTISTEM TREE, NEAR SE PROPERTY CORNER OF TRENDS N' TILE.
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NAIL/TAG SET W/S 12" CHERRY, 40'± NORTH OF SOUTH PROPERTY LINE, 15'± WEST OF SPLIT IN 2-TRACK.
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BENCHMARK 210
NAIL/TAG SET N/S 12" CHERRY, 70'± EAST OF WETLAND FLAG A-36, 286'± NORTH OF SOUTH PROPERTY LINE.
ELEV: 978.21 (NGVD29)

SAN MH-202
RIM=979.71
8" SE 973.03
8" NW 972.93
PROP. 3" S 974.03

EX. BILLBOARD
BORE PIT (TYP.)
SAW CUT, REMOVE & REPLACE EX. CONC. WALK AS NECESSARY FOR INSTALLATION OF SAN. SEWER
DIRECTIONAL DRILL 4" SANITARY FORCEMAIN UNDER GRAND RIVER

DA = 'I' (CB-07)
AREA = 0.61 AC.
IMPERVIOUS = 0.13 AC.

DA = 'H' (CB-06)
AREA = 0.29 AC.
IMPERVIOUS = 0.13 AC.

DA = 'G' (FES-03)
AREA = 0.29 AC.
IMPERVIOUS = 0.00 AC.

DA = 'E' (CB-04)
AREA = 0.15 AC.
IMPERVIOUS = 0.15 AC.

DA = 'F' (CB-05)
AREA = 0.19 AC.
IMPERVIOUS = 0.12 AC.

DA = 'C' (CB-03)
AREA = 0.56 AC.
IMPERVIOUS = 0.43 AC.

DA = 'D' (CB-02)
AREA = 0.15 AC.
IMPERVIOUS = 0.11 AC.

DA = 'A' (CB-01)
AREA = 0.43 AC.
IMPERVIOUS = 0.39 AC.

LEGEND

PROPOSED (PR)	EXISTING (EX)
900	900
T/C	+ 922.08
XXX.XX	
FF	FF
FC	FC
T/P	T/P
B/P	B/P
INV	INV
MH	MH
IN	IN
CB	CB
RY	RY
ES	ES
OV	OV
HY	HY
UP	UP
SN	SN
SL	SL
FM	FM
PS	PS
ST	ST
WM	WM
WL	WL
FO	FO
OH	OH
C	C
E	E
G	G
T	T
PH	PH
INLET / CATCHBASIN	INLET / CATCHBASIN
FLARED END-SECTION	FLARED END-SECTION
GATE VALVE	GATE VALVE
HYDRANT	HYDRANT
UTILITY POLE	UTILITY POLE
FENCE	FENCE
SIGN	SIGN
NOT FIELD VERIFIED TO BE REMOVED	NOT FIELD VERIFIED TO BE REMOVED
COMPACTED SAND BACKFILL	COMPACTED SAND BACKFILL
SANITARY SEWER LABEL	SANITARY SEWER LABEL
STORM SEWER LABEL	STORM SEWER LABEL
WATER MAIN LABEL	WATER MAIN LABEL
SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
SILT FENCE	SILT FENCE
LIMITS OF DRAINAGE	LIMITS OF DRAINAGE
WETLAND BOUNDARY	WETLAND BOUNDARY
CONCRETE	CONCRETE
ASPHALT	ASPHALT
MODIFIED CURB	MODIFIED CURB
CONDUITS	CONDUITS

PR. STORM STRUCTURES

STRUCTURE	RIM	INVERT	DIAMETER	COVER	TYPE
CB 01	980.00	976.05	15"	"K"	4' DIA. CATCH BASIN, COVER "K"
CB 02	981.60	976.41	12"	"K"	4' DIA. CATCH BASIN, COVER "K"
CB 03	983.85	976.64	12"	"K"	2' DIA. CATCH BASIN, COVER "K"
CB 04	980.00	976.13	12"	"K"	4' DIA. CATCH BASIN, COVER "K"
CB 05	980.00	976.21	12"	"K"	4' DIA. CATCH BASIN, COVER "K"
CB 06	977.05	974.38	12"	"K"	4' DIA. CATCH BASIN, COVER "K"
CB 07	977.05	974.45	12"	"K"	2' DIA. CATCH BASIN, COVER "K"

FES 01

INV. NW	15"	976.00
---------	-----	--------

FES 02

INV. N	12"	976.00
--------	-----	--------

FES 03

INV. S	12"	976.28
--------	-----	--------

FES 04

INV. N	12"	974.25
--------	-----	--------

PROP. STORM SEWER PIPE

PIPE	LENGTH	SIZE	TYPE	SLOPE
P1	22	15"	C-76, CL.IV RCP	0.24%
P2	50	12"	C-76, CL.IV RCP	0.32%
P3	72	12"	C-76, CL.IV RCP	0.32%
P4	42	12"	C-76, CL.IV RCP	0.32%
P5	24	12"	C-76, CL.IV RCP	0.32%
P6	21	12"	C-76, CL.IV RCP	0.32%
P7	40	12"	C-76, CL.IV RCP	0.32%
P8	24	12"	C-76, CL.IV RCP	0.32%

CONSTRUCTION NOTES:

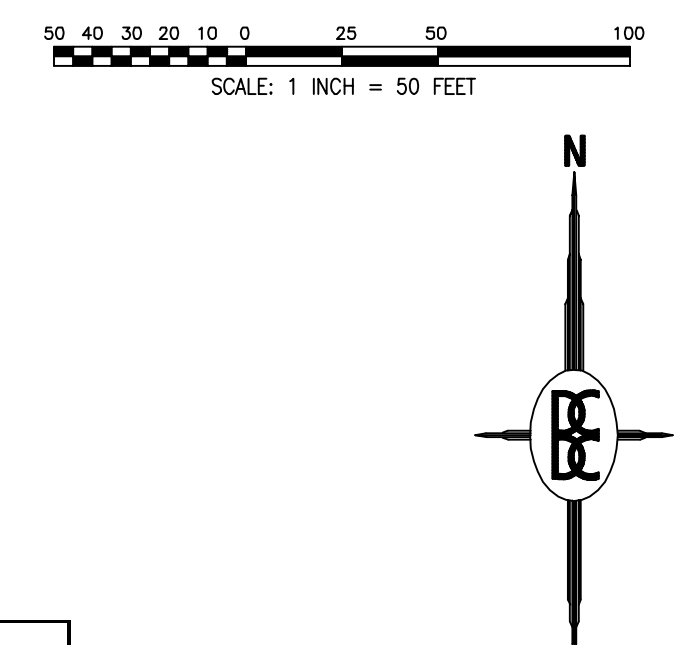
1. EACH PROPOSED CONDUIT CROSSING SHALL HAVE 4 - 4" SCH. 80 PVC CONDUITS.

SANITARY SERVICE CALCULATIONS

80 EMPLOYEES @ 35 GPD PER EMPLOYEE = 2,800 GPD

CURVE DATA:

L=194.91'
R=11459.19'
D=0°58'28"
CH=568'33.53"
194.91'



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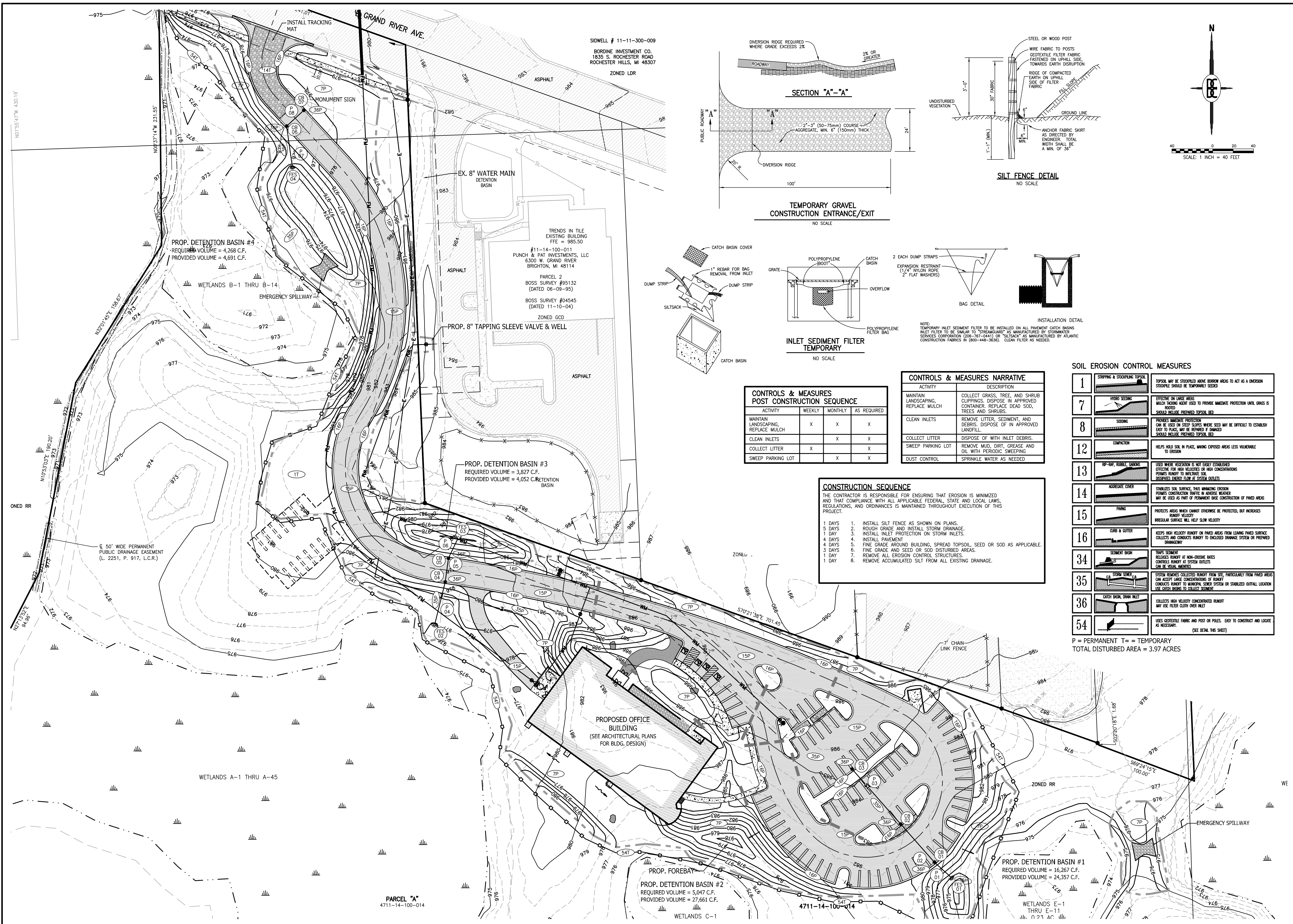
PROJECT: DAKOTA OFFICE BUILDING
PREPARED FOR: DAKOTA INTEGRATED SYSTEMS, INC.
1875 HOLLOWAY DRIVE
HOLT, MI 48842
(517) 594-6500

TITLE: UTILITY & DRAINAGE PLAN

NO	BY	TWP.	REVIEW PER	DATE
1	TD	2-25-13		

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:

SCALE: 1" = 50'
JOB NO.: 12-183
DATE: 2-6-13
SHEET NO.: 4



SIDWELL # 11-11-300-009
 BORDINE INVESTMENT CO.
 1835 S. ROCHESTER ROAD
 ROCHESTER HILLS, MI 48307

TRENDS IN TILE
 EXISTING BUILDING
 FTE = 985.50

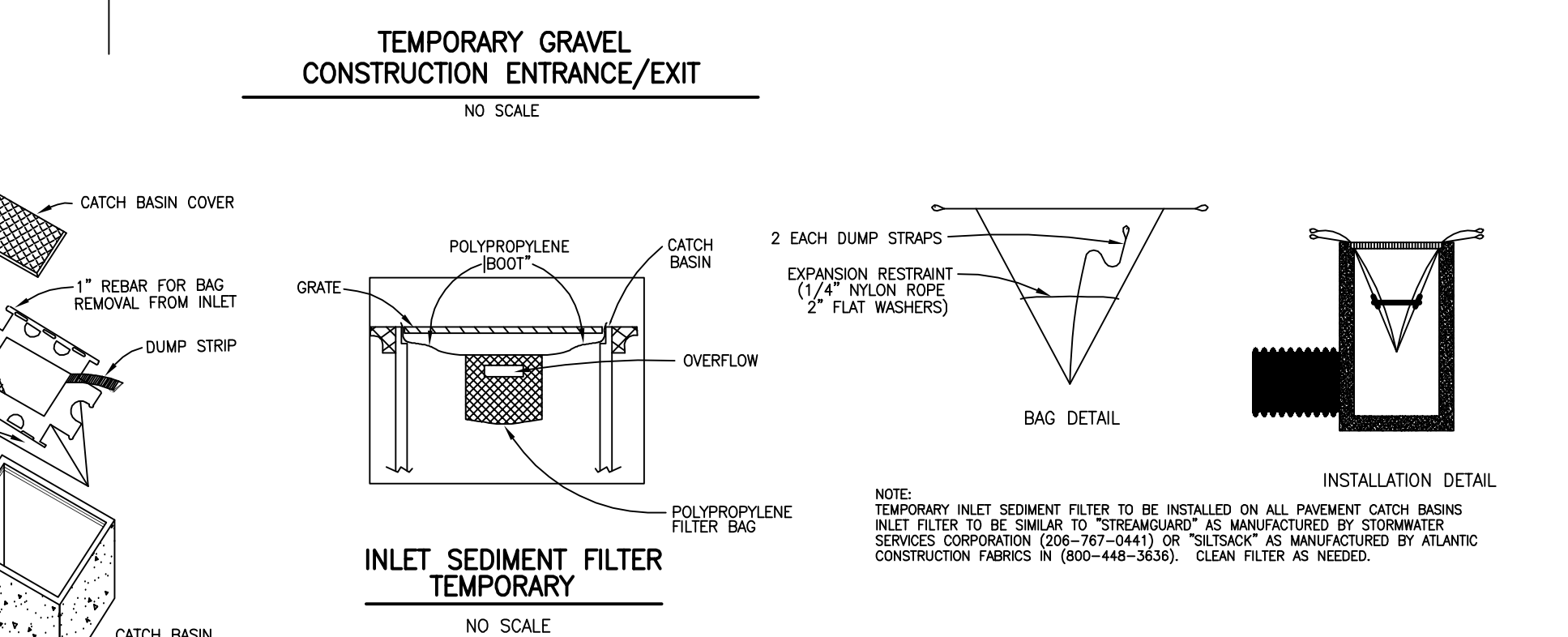
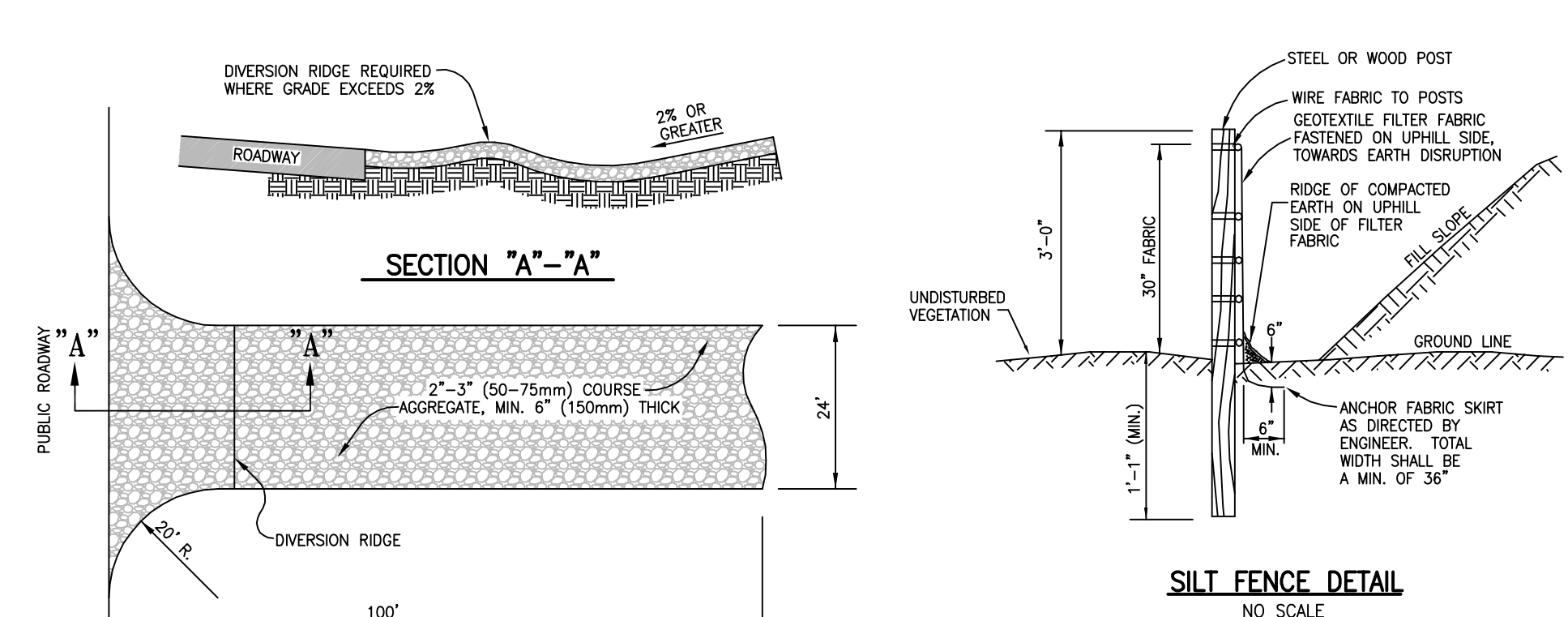
#11-14-100-011
 PUNCH & PAT INVESTMENTS, LLC
 6300 W. GRAND RIVER
 BRIGHTON, MI 48114

PARCEL 2
 BOSS SURVEY #95132
 (DATED 06-09-95)
 BOSS SURVEY #04545
 (DATED 11-10-04)

PROP. DETENTION BASIN #3
 REQUIRED VOLUME = 3,827 C.F.
 PROVIDED VOLUME = 4,052 C.F. RETENTION BASIN

PROPOSED OFFICE BUILDING
 (SEE ARCHITECTURAL PLANS
 FOR BLDG. DESIGN)

PROP. FOREBAY
 PROP. DETENTION BASIN #2
 REQUIRED VOLUME = 5,047 C.F.
 PROVIDED VOLUME = 27,661 C.F.



CONTROLS & MEASURES POST CONSTRUCTION SEQUENCE

ACTIVITY	WEEKLY	MONTHLY	AS REQUIRED
MAINTAIN LANDSCAPING, REPLACE MULCH	X	X	X
CLEAN INLETS		X	X
COLLECT LITTER	X	X	X
SWEEP PARKING LOT		X	X

CONTROLS & MEASURES NARRATIVE

ACTIVITY	DESCRIPTION
MAINTAIN LANDSCAPING, REPLACE MULCH	COLLECT GRASS, TREE, AND SHRUB CLIPPINGS, DISPOSE IN APPROVED CONTAINER, REPLACE DEAD SOD, TREES AND SHRUBS.
CLEAN INLETS	REMOVE LITTER, SEDIMENT, AND DEBRIS. DISPOSE OF IN APPROVED LANDFILL.
COLLECT LITTER	DISPOSE OF WITH INLET DEBRIS.
SWEEP PARKING LOT	REMOVE MUD, DIRT, GREASE AND OIL WITH PERIODIC SWEEPING.
DUST CONTROL	SPRINKLE WATER AS NEEDED.

CONSTRUCTION SEQUENCE

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

1 DAY 1. INSTALL SILT FENCE AS SHOWN ON PLANS.	1. INSTALL SILT FENCE AS SHOWN ON PLANS.
5 DAYS 2. ROUGH GRADE AND INSTALL STORM DRAINAGE.	2. ROUGH GRADE AND INSTALL STORM DRAINAGE.
1 DAY 3. INSTALL INLET PROTECTION ON STORM INLETS.	3. INSTALL INLET PROTECTION ON STORM INLETS.
4 DAYS 4. INSTALL PAVEMENT.	4. INSTALL PAVEMENT.
4 DAYS 5. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOD AS APPLICABLE.	5. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOD AS APPLICABLE.
3 DAYS 6. FINE GRADE AND SEED OR SOD DISTURBED AREAS.	6. FINE GRADE AND SEED OR SOD DISTURBED AREAS.
1 DAY 7. REMOVE ALL EROSION CONTROL STRUCTURES.	7. REMOVE ALL EROSION CONTROL STRUCTURES.
1 DAY 8. REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE.	8. REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE.

SOIL EROSION CONTROL MEASURES

NO.	STRUCTURE	DESCRIPTION
1	STRIPPING & STOOPING TOPSOIL	TOPSOIL MAY BE STOCKPILED ALONG BORROW AREAS TO ACT AS A DIVERSION SPOOPE SHOULD BE TEMPORARILY SEED
7	HYDRO SEEDING	EFFECTIVE ON LARGE AREAS MAJOR TRACING AGENT USED TO PROVIDE IMMEDIATE PROTECTION UNTIL GRASS IS ROOTED SHOULD INCLUDE PREPARED TOPSOIL BED
8	SODDING	PROVIDES IMMEDIATE PROTECTION CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH EASY TO PLACE, MAY BE REPAIRED IF DAMAGED SHOULD INCLUDE PREPARED TOPSOIL BED
12	COMPACTION	HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS VULNERABLE TO EROSION
13	RP-SIP, PUBLIC GRADING	USE WHERE REVISION IS NOT FEASIBLY ESTABLISHED EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS PERMITS RUNOFF TO INFILTRATE SOIL REDUCES PAVED FLOW AT SYSTEM OUTLETS
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THIS MINIMIZING EROSION FORMS CONSTRUCTION TRAILS IN WINDY WEATHER MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS
15	FRIMING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VELOCITY IRREGULAR SURFACE WILL HELP SLOW VELOCITY
16	CURB & OUTLET	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGE
34	SEDIMENT BASIN	TRAPS SEDIMENT RELIEVES RUNOFF AT NON-EROSIVE RATES CONTROLS RUNOFF AT SYSTEM OUTLETS CAN BE VISUAL MONITORED
35	SEEDING	SYSTEM REMAINS COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS ON ACCEPTABLE CONCENTRATIONS OF RUNOFF CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION USE CATCH BASINS TO COLLECT SEDIMENT
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR PALES. EASY TO CONSTRUCT AND LOCATE, AS NECESSARY. (SEE DETAIL SHEET)

P = PERMANENT T = TEMPORARY
 TOTAL DISTURBED AREA = 3.97 ACRES

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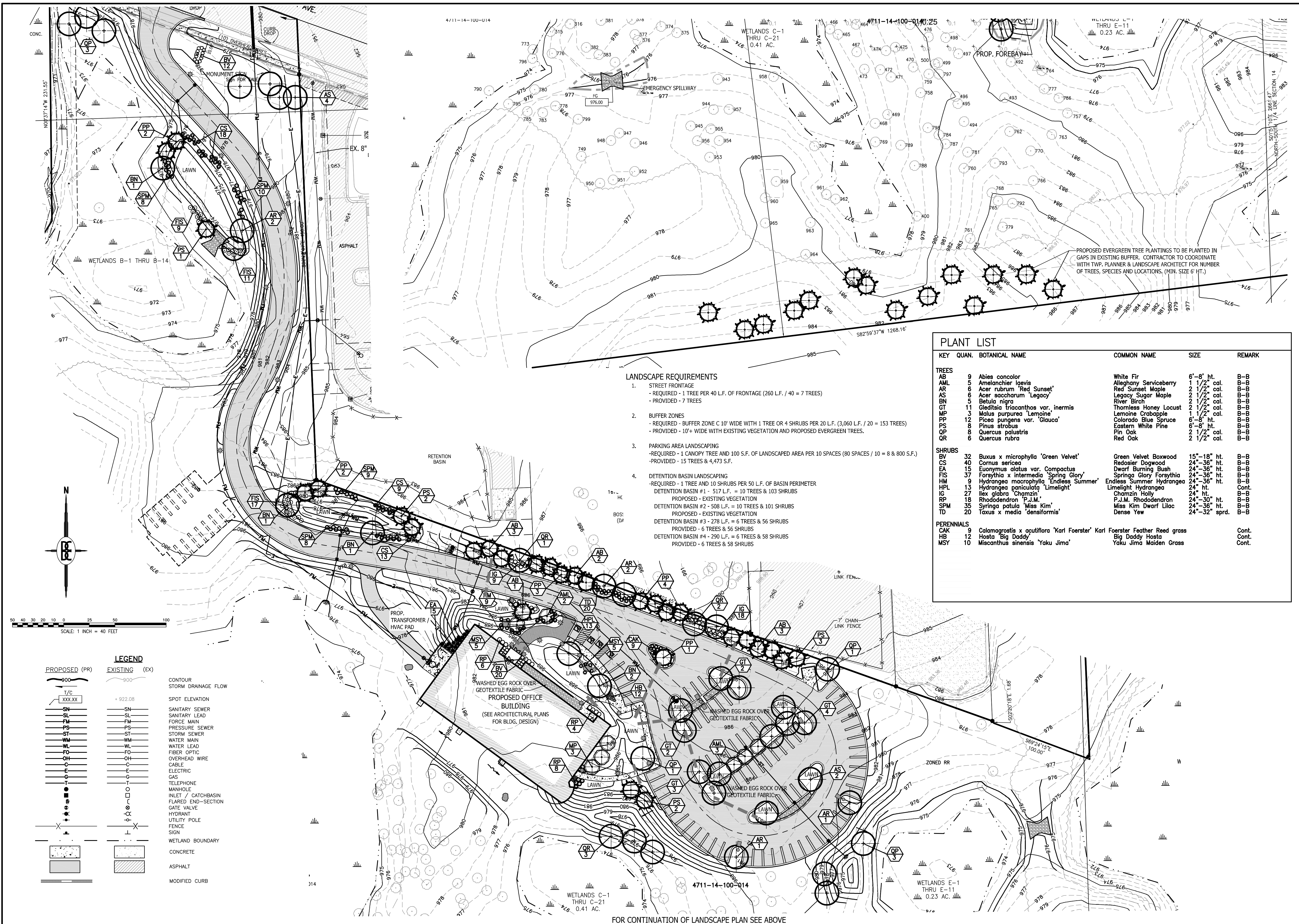
PROJECT: DAKKOTA OFFICE BUILDING
 PREPARED FOR: DAKKOTA INTEGRATED SYSTEMS, INC.
 1875 HOLLOWAY DRIVE
 HOLT, MI 48842
 (517) 594-6500

TITLE: SOIL EROSION CONTROL PLAN

NO.	ID	TWP.	REVIEW PER	DATE
1				2-25-13

DESIGNED BY: TD
 DRAWN BY: TD
 CHECKED BY: TD

SCALE: 1" = 40'
 JOB NO.: 12-183
 DATE: 2-6-13
 SHEET NO.: 5



LANDSCAPE REQUIREMENTS

- STREET FRONTAGE**
- REQUIRED - 1 TREE PER 40 L.F. OF FRONTAGE (260 L.F. / 40 = 7 TREES)
- PROVIDED - 7 TREES
- BUFFER ZONES**
- REQUIRED - BUFFER ZONE C 10' WIDE WITH 1 TREE OR 4 SHRUBS PER 20 L.F. (3,060 L.F. / 20 = 153 TREES)
- PROVIDED - 10'+ WIDE WITH EXISTING VEGETATION AND PROPOSED EVERGREEN TREES.
- PARKING AREA LANDSCAPING**
- REQUIRED - 1 CANOPY TREE AND 100 S.F. OF LANDSCAPED AREA PER 10 SPACES (80 SPACES / 10 = 8 & 800 S.F.)
- PROVIDED - 15 TREES & 4,473 S.F.
- DETENTION BASIN LANDSCAPING**
- REQUIRED - 1 TREE AND 10 SHRUBS PER 50 L.F. OF BASIN PERIMETER
DETENTION BASIN #1 - 517 L.F. = 10 TREES & 103 SHRUBS
PROPOSED - EXISTING VEGETATION
DETENTION BASIN #2 - 508 L.F. = 10 TREES & 101 SHRUBS
PROPOSED - EXISTING VEGETATION
DETENTION BASIN #3 - 278 L.F. = 6 TREES & 56 SHRUBS
PROVIDED - 6 TREES & 56 SHRUBS
DETENTION BASIN #4 - 290 L.F. = 6 TREES & 58 SHRUBS
PROVIDED - 6 TREES & 58 SHRUBS

PLANT LIST

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
TREES					
AB	9	<i>Abies concolor</i>	White Fir	6'-8' ht.	B-B
AM	5	<i>Amelanchier laevis</i>	Allegheny Serviceberry	1 1/2' cal.	B-B
AR	5	<i>Acer rubrum 'Red Sunset'</i>	Red Sunset Maple	2 1/2' cal.	B-B
AS	6	<i>Acer saccharum 'Legacy'</i>	Legacy Sugar Maple	2 1/2' cal.	B-B
BN	5	<i>Betula nigra</i>	River Birch	2 1/2' cal.	B-B
GT	11	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honey Locust	2 1/2' cal.	B-B
MP	3	<i>Malus purpurea 'Lemoine'</i>	Lemoine Crabapple	1 1/2' cal.	B-B
PP	12	<i>Picea pungens var. 'Glauca'</i>	Colorado Blue Spruce	6'-8' ht.	B-B
PS	8	<i>Pinus strobus</i>	Eastern White Pine	6'-8' ht.	B-B
QR	6	<i>Quercus palustris</i>	Pin Oak	2 1/2' cal.	B-B
			<i>Quercus rubra</i>	2 1/2' cal.	B-B
SHRUBS					
BV	32	<i>Buxus x microphylla 'Green Velvet'</i>	Green Velvet Boxwood	15"-18" ht.	B-B
CS	40	<i>Cornus sericea</i>	Redosier Dogwood	24"-36" ht.	B-B
EA	15	<i>Euonymus alatus var. Compactus</i>	Dwarf Burning Bush	24"-36" ht.	B-B
FIS	37	<i>Forsythia x intermedia 'Spring Glory'</i>	Spring Glory Forsythia	24"-36" ht.	B-B
HM	9	<i>Hydrangea macrophylla 'Endless Summer'</i>	Endless Summer Hydrangea	24"-36" ht.	B-B
HPL	13	<i>Hydrangea paniculata 'Limelight'</i>	Limelight Hydrangea	24" ht.	Cont.
IG	27	<i>Ilex glabra 'Chamin'</i>	Chamin Holly	24" ht.	B-B
RP	18	<i>Rhododendron 'P.J.M.'</i>	P.J.M. Rhododendron	24"-30" ht.	B-B
SP	35	<i>Syringa patula 'Miss Kim'</i>	Miss Kim Dwarf Lilac	24"-36" ht.	B-B
TD	20	<i>Taxus x media 'densiformis'</i>	Dense Yew	24"-32' sprd.	B-B
PERENNIALS					
CAK	9	<i>Calamagrostis x acutiflora 'Karl Foerster'</i>	Karl Foerster Feather Reed grass		Cont.
HB	12	<i>Hosta 'Big Daddy'</i>	Big Daddy Hosta		Cont.
MSY	10	<i>Miscanthus sinensis 'Yaku Jima'</i>	Yaku Jima Maiden Grass		Cont.

LEGEND

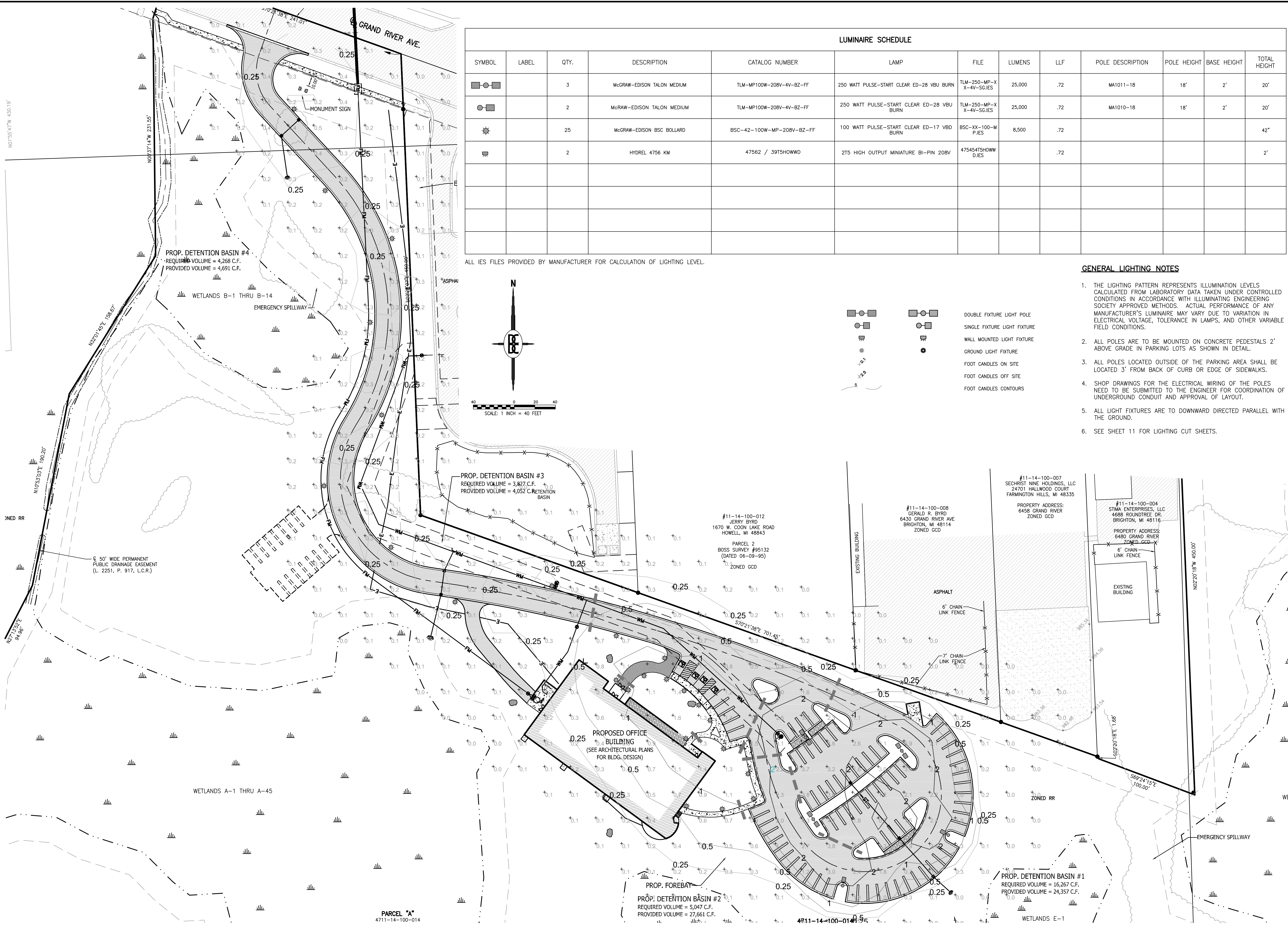
		CONTOUR
		STORM DRAINAGE FLOW
		SPOT ELEVATION
		SANITARY SEWER
		SANITARY LEAD
		FORCE MAIN
		PRESSURE SEWER
		STORM SEWER
		WATER MAIN
		WATER LEAD
		FIBER OPTIC
		OVERHEAD WIRE
		CABLE
		ELECTRIC
		GAS
		TELEPHONE MANHOLE
		INLET / CATCHBASIN
		FLARED END-SECTION
		GATE VALVE
		HYDRANT
		UTILITY POLE
		FENCE
		SIGN
		WETLAND BOUNDARY
		CONCRETE
		ASPHALT
		MODIFIED CURB

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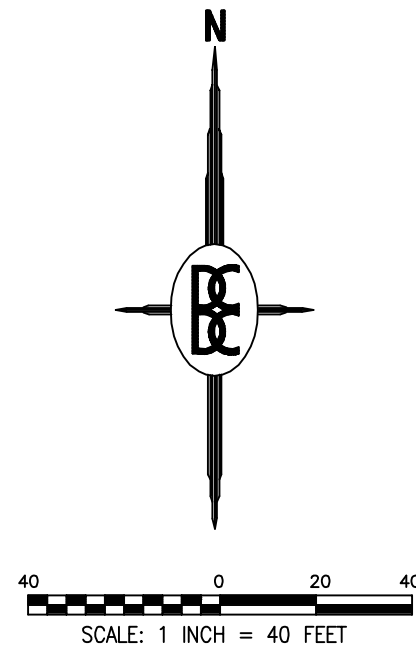
PROJECT: DAKOTA OFFICE BUILDING
PREPARED FOR: DAKOTA INTEGRATED SYSTEMS, INC.
1875 HOLLOWAY DRIVE
HOLT, MI 48842
(517) 594-6500

DESIGNED BY:	TD
DRAWN BY:	TD
CHECKED BY:	
SCALE	1" = 40'
JOB NO.	12-183
DATE	2-6-13
SHEET NO.	6



LUMINAIRE SCHEDULE												
SYMBOL	LABEL	QTY.	DESCRIPTION	CATALOG NUMBER	LAMP	FILE	LUMENS	LLF	POLE DESCRIPTION	POLE HEIGHT	BASE HEIGHT	TOTAL HEIGHT
		3	McGRAW-EDISON TALON MEDIUM	TLM-MP100W-208V-4V-BZ-FF	250 WATT PULSE-START CLEAR ED-28 VBU BURN	TLM-250-MP-X X-4V-SG-IES	25,000	.72	MA1011-18	18'	2'	20'
		2	McGRAW-EDISON TALON MEDIUM	TLM-MP100W-208V-4V-BZ-FF	250 WATT PULSE-START CLEAR ED-28 VBU BURN	TLM-250-MP-X X-4V-SG-IES	25,000	.72	MA1010-18	18'	2'	20'
		25	McGRAW-EDISON BSC BOLLARD	BSC-42-100W-MP-208V-BZ-FF	100 WATT PULSE-START CLEAR ED-17 VBD BURN	BSC-XX-100-M P-IES	8,500	.72				42"
		2	HYDREL 4756 KM	47562 / 39TSHOWWD	2T5 HIGH OUTPUT MINIATURE BI-PIN 208V	475454TSHOWW D-IES		.72				2'

ALL IES FILES PROVIDED BY MANUFACTURER FOR CALCULATION OF LIGHTING LEVEL.



- DOUBLE FIXTURE LIGHT POLE
- SINGLE FIXTURE LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- GROUND LIGHT FIXTURE
- FOOT CANDLES ON SITE
- FOOT CANDLES OFF SITE
- FOOT CANDLES CONTOURS

GENERAL LIGHTING NOTES

- THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
- ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2' ABOVE GRADE IN PARKING LOTS AS SHOWN IN DETAIL.
- ALL POLES LOCATED OUTSIDE OF THE PARKING AREA SHALL BE LOCATED 3' FROM BACK OF CURB OR EDGE OF SIDEWALKS.
- SHOP DRAWINGS FOR THE ELECTRICAL WIRING OF THE POLES NEED TO BE SUBMITTED TO THE ENGINEER FOR COORDINATION OF UNDERGROUND CONDUIT AND APPROVAL OF LAYOUT.
- ALL LIGHT FIXTURES ARE TO DOWNWARD DIRECTED PARALLEL WITH THE GROUND.
- SEE SHEET 11 FOR LIGHTING CUT SHEETS.

THE DESIGN AND THE LAYOUT OF THE LUMINAIRE SCHEDULES IN THESE PLANS ARE BASED ON THE INFORMATION PROVIDED TO THE ENGINEER. THE ENGINEER IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND THE LAYOUT OF THE LUMINAIRE SCHEDULES. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE LOCATION OF LIGHT FIXTURES OR THE LOCATION OF LIGHT FIXTURES.

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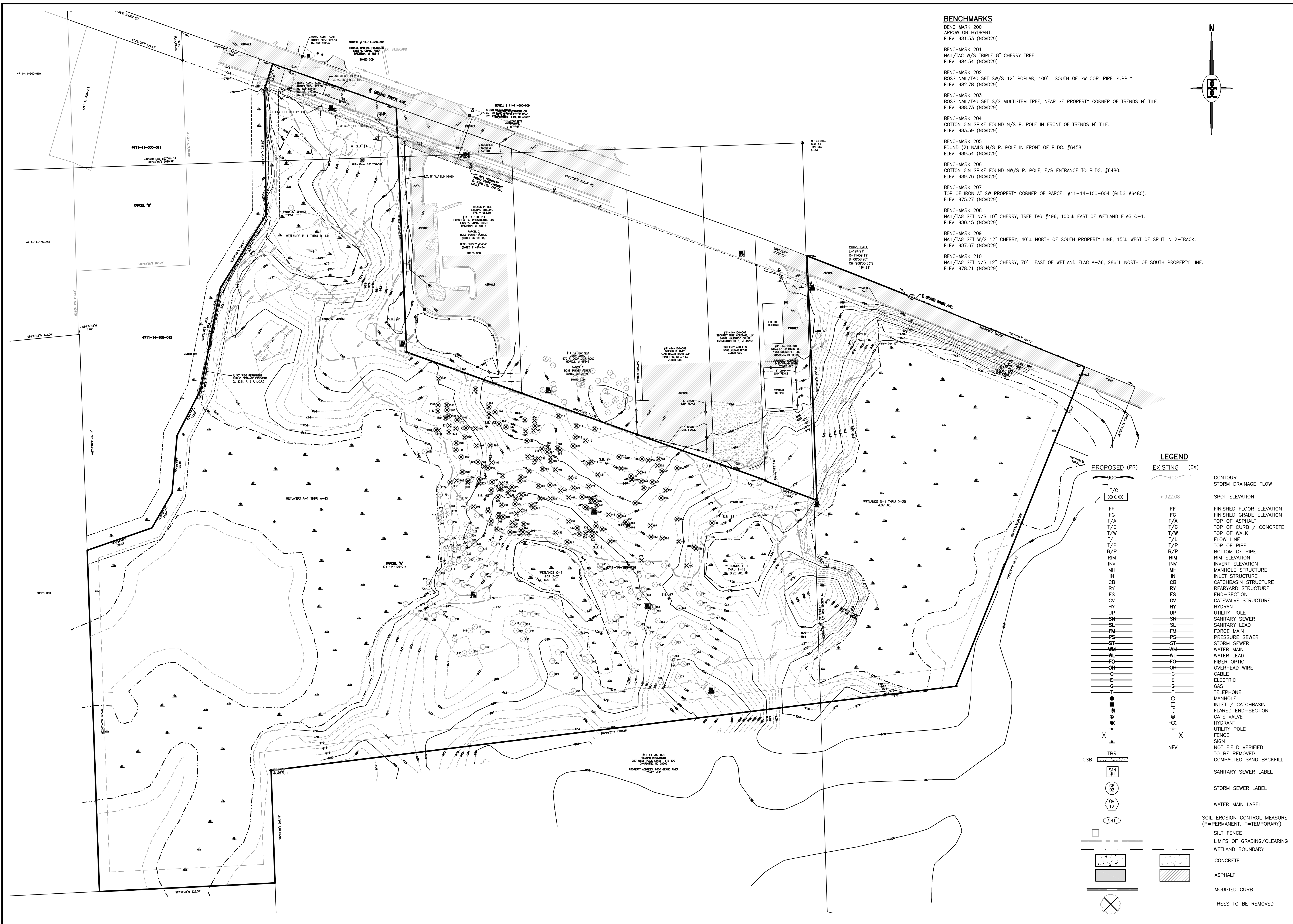
PROJECT: DAKOTA OFFICE BUILDING
PREPARED FOR: DAKOTA INTEGRATED SYSTEMS, INC.
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HOLT, MI 48842
(517) 594-6500

TITLE: LIGHTING PLAN

NO.	BY	TWP.	REVIEW PER	DATE
1	TD			2-25-13

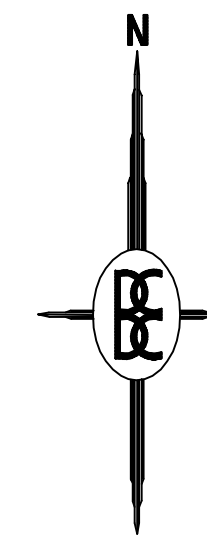
DESIGNED BY: TD
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SCALE: 1" = 40'
JOB NO. 12-183
DATE 2-6-13
SHEET NO. 7



BENCHMARKS

- BENCHMARK 200
ARROW ON HYDRANT.
ELEV: 981.33 (NGVD29)
- BENCHMARK 201
NAIL/TAG W/S TRIPLE 8" CHERRY TREE.
ELEV: 984.34 (NGVD29)
- BENCHMARK 202
BOSS NAIL/TAG SET SW/S 12" POPLAR, 100'± SOUTH OF SW COR. PIPE SUPPLY.
ELEV: 982.78 (NGVD29)
- BENCHMARK 203
BOSS NAIL/TAG SET S/S MULTISTEM TREE, NEAR SE PROPERTY CORNER OF TRENDS N' TILE.
ELEV: 988.73 (NGVD29)
- BENCHMARK 204
COTTON GIN SPIKE FOUND N/S P. POLE IN FRONT OF TRENDS N' TILE.
ELEV: 983.59 (NGVD29)
- BENCHMARK 205
FOUND (2) NAILS N/S P. POLE IN FRONT OF BLDG. #6458.
ELEV: 989.34 (NGVD29)
- BENCHMARK 206
COTTON GIN SPIKE FOUND NW/S P. POLE, E/S ENTRANCE TO BLDG. #6480.
ELEV: 989.76 (NGVD29)
- BENCHMARK 207
TOP OF IRON AT SW PROPERTY CORNER OF PARCEL #11-14-100-004 (BLDG #6480).
ELEV: 975.27 (NGVD29)
- BENCHMARK 208
NAIL/TAG SET N/S 10" CHERRY, TREE TAG #496, 100'± EAST OF WETLAND FLAG C-1.
ELEV: 980.45 (NGVD29)
- BENCHMARK 209
NAIL/TAG SET W/S 12" CHERRY, 40'± NORTH OF SOUTH PROPERTY LINE, 15'± WEST OF SPLIT IN 2-TRACK.
ELEV: 987.67 (NGVD29)
- BENCHMARK 210
NAIL/TAG SET N/S 12" CHERRY, 70'± EAST OF WETLAND FLAG A-36, 286'± NORTH OF SOUTH PROPERTY LINE.
ELEV: 978.21 (NGVD29)



THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE DATA SHOWN ON THESE DRAWINGS AND FOR OBTAINING ALL NECESSARY PERMITS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.

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PROPOSED (PR)	EXISTING (EX)	DESCRIPTION
900	900	CONTOUR
T/C	XXXXXX	SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
FG	FG	FINISHED GRADE ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
B/P	B/P	BOTTOM OF PIPE
RM	RM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARWARD STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
○	○	MANHOLE
□	□	INLET / CATCHBASIN
⊕	⊕	FLARED END-SECTION
⊙	⊙	GATE VALVE
⊗	⊗	HYDRANT
⊘	⊘	UTILITY POLE
⊙	⊙	FENCE
⊙	⊙	SIGN
⊙	⊙	NOT FIELD VERIFIED
⊙	⊙	TO BE REMOVED
⊙	⊙	COMPACTED SAND BACKFILL
CSB	CSB	SANITARY SEWER LABEL
SN	SN	STORM SEWER LABEL
CB	CB	WATER MAIN LABEL
OV	OV	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
54T	54T	SILT FENCE
---	---	LIMITS OF GRADING/CLEARING
---	---	WETLAND BOUNDARY
---	---	CONCRETE
---	---	ASPHALT
---	---	MODIFIED CURB
⊗	⊗	TREES TO BE REMOVED

PROJECT: DAKOTA OFFICE BUILDING
 PREPARED FOR: DAKKOTA INTEGRATED SYSTEMS, INC.
 1875 HOLLOWAY DRIVE
 HOLT, MI 48842
 (517) 594-6500

TITLE: TOPOGRAPHIC SURVEY & DEMOLITION PLAN

NO.	BY	DATE	REVISION PER
1	TD	2-25-13	

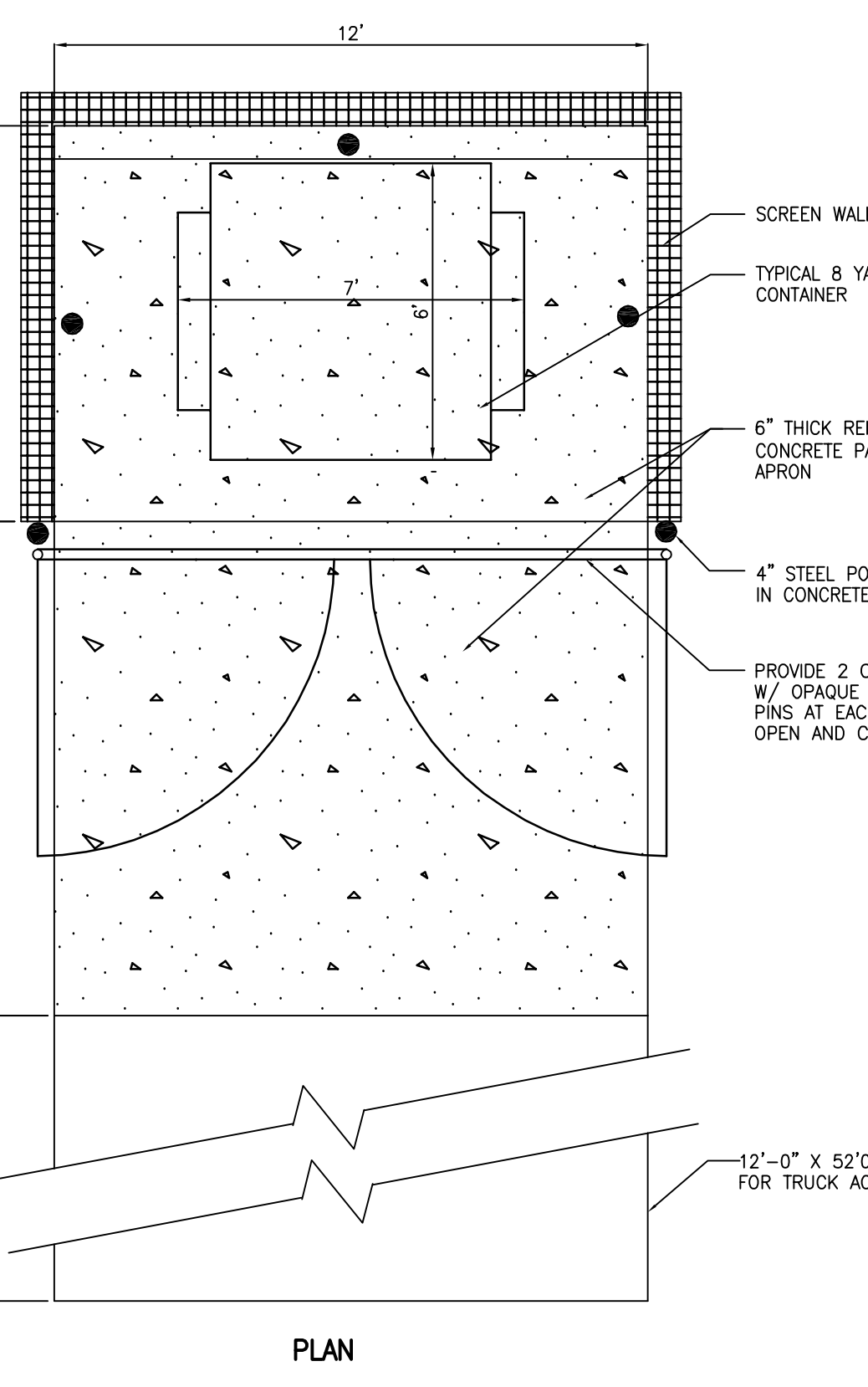
DESIGNED BY: TD
 DRAWN BY: TD
 CHECKED BY:
 SCALE: 1" = 75'
 JOB NO. 12-183
 DATE 11-26-12
 SHEET NO. 8

**LIVINGSTON COUNTY SOIL EROSION PERMIT TEMPLATE
TEMPORARY CONTROLS AND SEQUENCE**

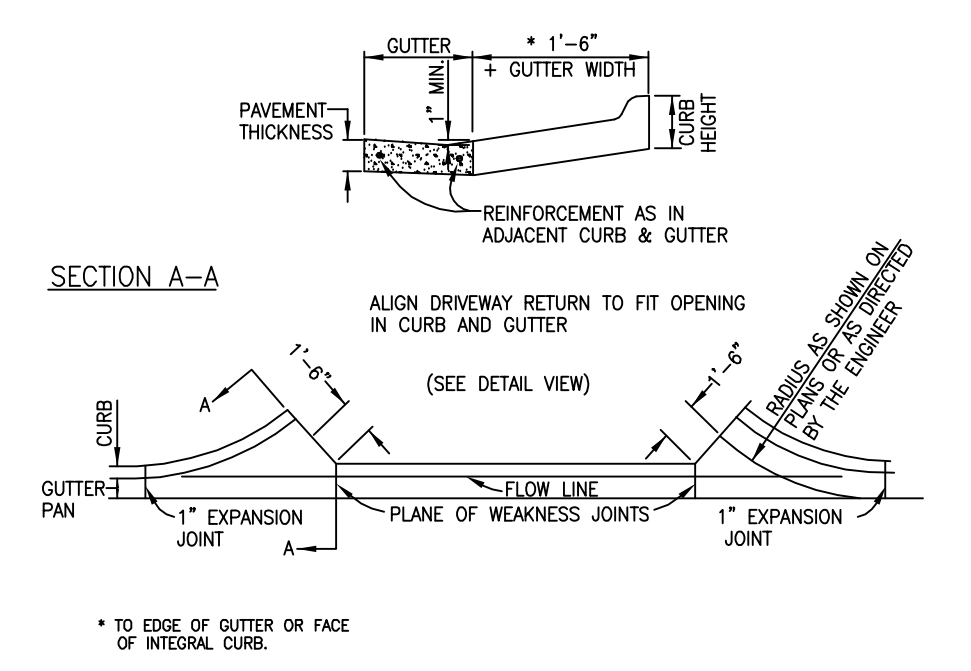
- NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
 - IN ACCORDANCE WITH PUBLIC ACT NO. 53, OF 1974 THE PERMIT HOLDER SHALL CALL MISS DIG FOR STAKING AND LOCATING OF UTILITIES, AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK.
- PERMITTING STANDARDS
- (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. UNLESS OTHERWISE SPECIFIED, CRUSHED ROCK TO REDUCE THE TRACKING OF SOIL ONTO THE PUBLIC TRAFFIC AREAS. SEE DETAIL ITEMS BELOW.
 - 36" M.D.O.T. SPECIFICATION TYPE SILT FABRIC FENCE AS SHOWN ON PLANS SHALL BE PLACED AND MAINTAINED ALONG PERIMETER ON ALL LOW LYING AREAS OF THE CONSTRUCTION SITE TO FILTER RUNOFF BEFORE LEAVING PROJECT SITE.
 - ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
 - PLAN DOES DENOTE A DETAILED EROSION CONTROL DEVICE TO RESTRICT TRACKING OF MATERIAL ONTO THE HIGHWAY. STONE DIAPERS SHALL BE INSTALLED AT ALL INGRESS/EGRESS AREAS OF THE SITE PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. DIAPERS SHALL BE OF CRUSHED STONE AND SHALL HAVE A MINIMUM LENGTH OF 100' LINEAL FEET.
- RETENTION PONDS
- RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
 - DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND STONE FILTER SYSTEM, WITH TRASH SCREEN. OUTLET FLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DIKES SHALL HAVE A MINIMUM OF ONE (1) FOOT OF FREEBOARD. AN EMERGENCY SPILLWAY SHALL BE CONSTRUCTED TO THE FREEBOARD LEVEL.
 - THE EMERGENCY SPILLWAY FROM THE DETENTION POND SHALL BE SLOTTED AND PEGGED, OR RIP RAPPED, 15 FEET PAST THE TOE OF THE SLOPE OF THE BERM.
 - DIKES AND BERMS SHALL BE FREE OF ALL ORGANIC MATTER.
 - RETENTION/DETENTION PONDS SHALL BE FENCED WITH A 4" CHAIN LINK FENCE, INCLUDING A 12" ACCESS GATE FOR MAINTENANCE UNLESS MINIMUM 5 FT. HORIZONTAL TO 1 FT. VERTICAL SIDE SLOPES ARE PROVIDED. THE FENCE SHALL BE INSTALLED AT THE OUTER PORTION OF THE BERM, TO ALLOW FOR MAINTENANCE WORK TO BE DONE INSIDE THE FENCE.
 - ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ONSITE DURING THE EXCAVATING STAGE. TOPSOIL PILES SHALL BE SEEDED AND MULCHED, OR MATTED WITH STRAW IN THE NON-GROWING SEASON, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.
 - SOIL EROSION CONTROLS SHALL BE MONITORED DAILY BY THE ON-SITE ENGINEER, OR CONTRACTOR, WHICHEVER CASE APPLIES.
- SLOPES AND DITCHES
- ON SITE DITCHES SHALL BE OF THE FLAT BOTTOM TYPE MINIMUM WIDTH OF 2' WITH A MINIMUM OF 3 HORIZONTAL TO 1 VERTICAL SIDE SLOPES. 3:1.
 - DITCHES WITH STEEP SLOPES WILL NEED FLOW CHECKS TO PREVENT SCOURING OF THE DITCH BOTTOM. THESE SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR INSPECTOR.
 - SLOPES IN EXCESS OF 3 HORIZONTAL TO 1 VERTICAL SHALL NOT BE USED EXCEPT WITH A MECHANICAL DEVICE SUCH AS A RETAINING WALL, TERRACING, OR OTHER PRIOR APPROVED DEVICE.
- STORM DRAINS
- ALL STORM WATER STRUCTURES, CATCH BASINS AND/OR MANHOLES, IF BLOCK, SHALL BE PLASTERED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURES. GROUTING AND POINTING WILL BE NECESSARY AFTER CASTING AND STRUCTURE JOINT TO PREVENT LEAKAGE AND THE RESULTING SOIL MOVEMENT, AROUND THE STRUCTURE.

- ALL STORM DRAINAGE PIPE 30" IN DIAMETER OR LARGER SHALL BE POINTED, AT THE JOINTS ON THE INSIDE WITH MORTAR, AFTER BACKFILLING.
 - ALL STORM DRAIN OUTLETS THAT DO NOT EMPTY INTO THE RETENTION/DETENTION POND SHALL HAVE A TEMPORARY 5'X10'X3' SUMP INSTALLED AT THE TERMINATION OF THE STORM SEWER. UPON COMPLETION OF THE STABILIZATION WORK THE SUMP AREA SHALL BE FILLED AND RIP RAPPED WITH COBBLE STONE. SILT TRAPS SHALL BE INSPECTED AFTER EACH STORM.
 - STORM WATER OUTLETS DO DENOTE RIP RAP. ALL OUTLETS SHALL BE RIP RAPPED OVER KEVED FILTER FABRIC WITH A MINIMUM OF 15 SO YARDS OF 6" OR LARGER COBBLE STONE.
 - RIP RAP AS NOTED ON THE PLAN SHALL BE OF A FUNNEL SHAPE CONSTRUCTION, WIDTH SHALL INCREASE AS DISTANCE FROM THE OUTLET POINT INCREASES AT A 3:1 RATIO.
 - RIP RAP SHALL BE OF COBBLE STONE, 6" IN DIAMETER OR LARGER. GROUTING MAY BE NECESSARY, AND SHALL BE A MINIMUM OF 6" IN DEPTH WITH THE COBBLE SET IN THE CEMENT SLURRY.
 - STORM WATER OUTLET IS IN NEED OF A SPLASH BLOCK WHICH IS NOT NOTED ON THE PLAN. INSTALL SPLASH BLOCK IF SLOPE OF THE PIPE IS 4% OR GREATER.
 - IT WILL BE NECESSARY FOR THE DEVELOPER TO HAVE THE STORM DRAINAGE LINES CLEANED PRIOR TO FINAL INSPECTION BY THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IF REQUIRED, THIS WORK SHALL BE DONE BY A PROFESSIONAL SEWER CLEANING FIRM AND CERTIFIED IN WRITING BY THE PROJECT ENGINEER. ALL SUMPS AND TEMPORARY SILT TRAPS SHALL ALSO BE CLEANED AT THIS TIME.
- STABILIZATION
- ALL UNIMPROVED DISTURBED AREAS SHALL BE RE-TOP SOILED, WITH A MINIMUM OF 3" OF MATERIAL, SEEDED, MULCHED AND TACKED WITHIN 15 DAYS OF THE COMPLETION OF THE MASSIVE EARTH DISRUPTION. IN THE NON-GROWING SEASON STRAW MATTING WILL SURFACE. HYDROSEEDING WILL BE AN ACCEPTABLE ALTERNATE FOR MULCHING. EXTREME CARE SHOULD BE EXERCISED IN SPRING AND FALL PERIODS AS A FROST WILL BREAK THE END OF THE HYDROSEEDING, WHICH WILL AFFECT THE EFFECTIVENESS OF THIS PROCEDURE.
 - IN THE NON-GROWING SEASON, TEMPORARY STABILIZATION OF MASSIVELY EXPOSED AREAS FOR WINTER STABILIZATION SHALL BE DONE WITH STRAW MATTING.
 - PERMIT FEES DURING THE WINTER PERIOD OF NON-CONSTRUCTION, (DECEMBER 1 THROUGH MARCH 31), SHALL NOT BE IMPOSED IF THE PERMIT HOLDER TEMPORARILY STABILIZES THE EXPOSED AREAS WITH STRAW MATTING, AND OTHER APPROVED CONTROLS, AND OBTAINS A WINTER STABILIZATION CERTIFICATE FROM THIS OFFICE.
 - PERIODIC INSPECTIONS WILL BE MADE THROUGHOUT THE COURSE OF THE PROJECT. IT WILL BE THE RESPONSIBILITY OF THE MANAGERS OF THE PROJECT TO CONTACT THIS OFFICE FOR THE FINAL INSPECTION AT THE END OF THE PROJECT.
 - THIS COMMERCIAL PERMIT IS VALID FOR THE MASS EARTH MOVEMENT, THE INSTALLATION OF ROADS, DRAINS, AND UTILITIES AND IS NOT FOR ANY SINGLE FAMILY RESIDENCE. ALL RESIDENTIAL BUILDERS WILL NEED TO SECURE WAIVERS AND/OR PERMITS AS NECESSARY FOR EACH LOT IN THIS DEVELOPMENT AT THE TIME APPLICATION FOR SINGLE FAMILY RESIDENCE IS MADE.
 - THE ISSUING BUILDING DEPARTMENT SHALL NOT ISSUE THE CERTIFICATE OF OCCUPANCY UNTIL THE FINAL INSPECTION LETTER FROM THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE HAS BEEN OBTAINED.
 - PER THE LIVINGSTON COUNTY DRAIN COMMISSIONER THE SEEDING, FERTILIZER AND MULCH MINIMUM QUANTITIES SHALL BE AS FOLLOWS:
TOP-SOIL 3" IN DEPTH 218 LBS. PER ACRE
GRASS SEED 150 LBS. PER ACRE
FERTILIZER 3" IN DEPTH 1.5 TO 2 TONS PER ACRE (ALL STRAW MULCH NET BINDING, ETC.)
HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%, IN SUCH CASES STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER.

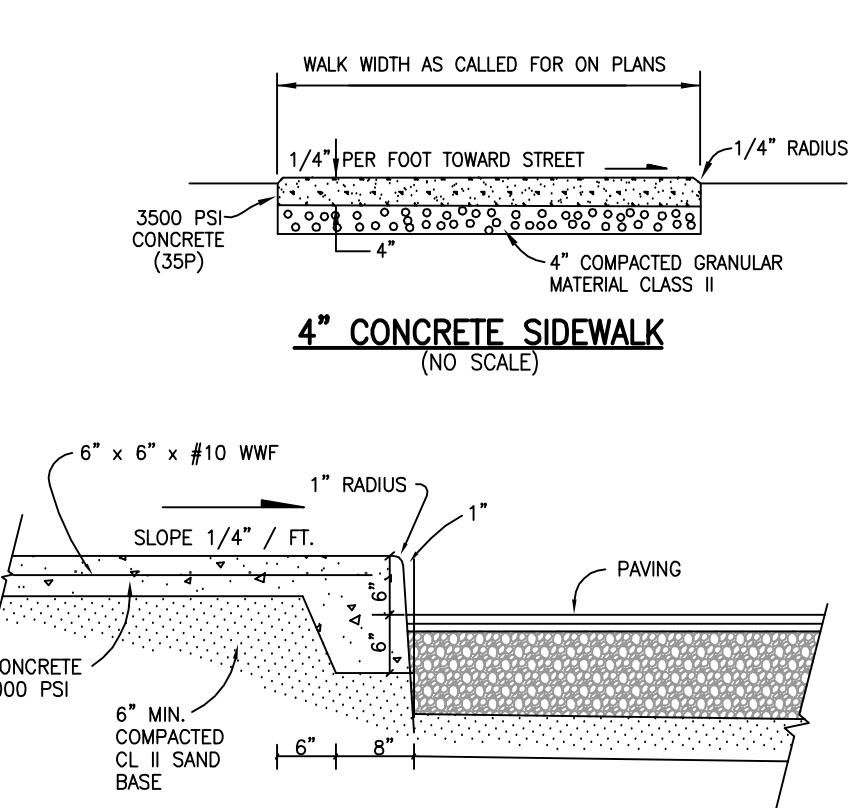
STRUCTURE FRAMES & COVERS					
COVER	TYPE	USE	MANUFACTURER OR EQUAL		TYPE OF COVER OR GRATE
			EAST JORDAN	MEYMAH	
A	MH	ALL	7120	R-1415	SANITARY-SELF SEALING STORM-VENTED
B	CB & INLET	TYPE B2 CURB	1085	R-3038-A	
K	CB & INLET	TYPE C & B CURB	7045	R-3031-B	FLAT GRATE WITH VERT. 4" OPEN THROAT
C	CB & INLET	VALLEY CURB	7065	R-3034-B	
D	CB & INLET	PARKING LOTS	1020-MI	R-2560-D	FLAT GRATE
E	CB & INLET	LAWN AREA OR DITCH	1020-01		BEHVEY GRATE 4" HIGH



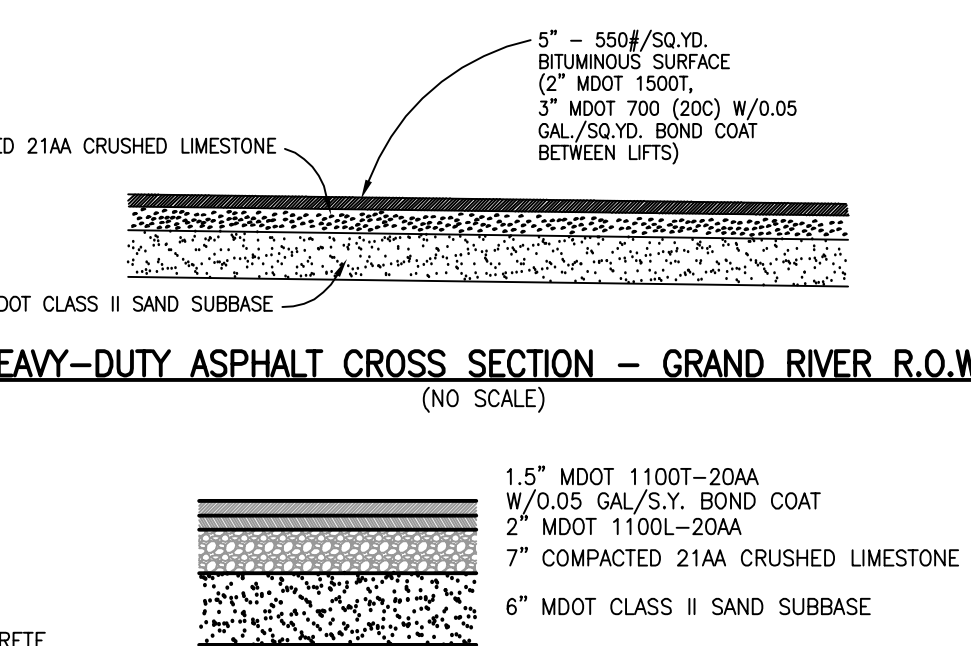
DUMPSTER ENCLOSURE DETAIL
(NO SCALE)



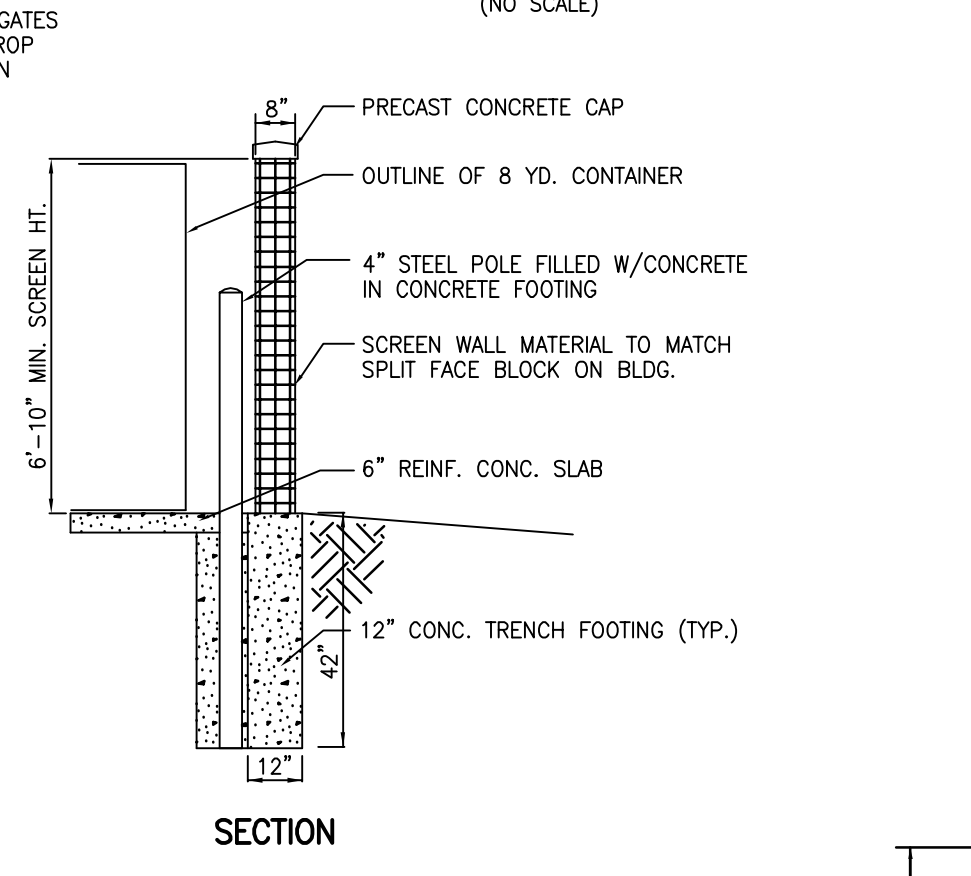
CONCRETE DRIVEWAY OPENING - MDOT STANDARD II-42, DETAIL 'M'
(NO SCALE)



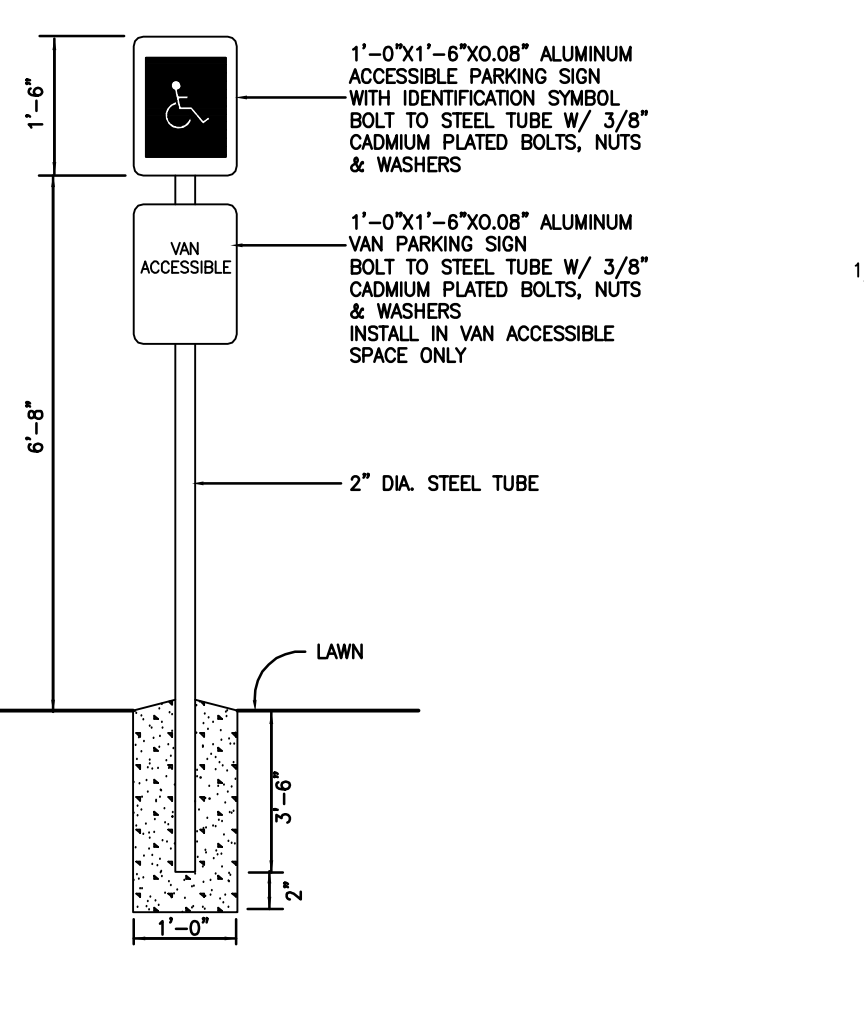
INTEGRAL CONCRETE WALK / CURB DETAIL
(NO SCALE)



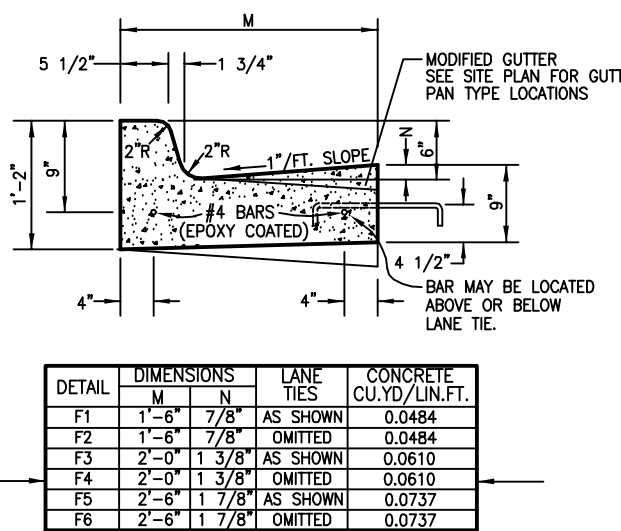
HEAVY-DUTY ASPHALT CROSS SECTION - GRAND RIVER R.O.W.
(NO SCALE)



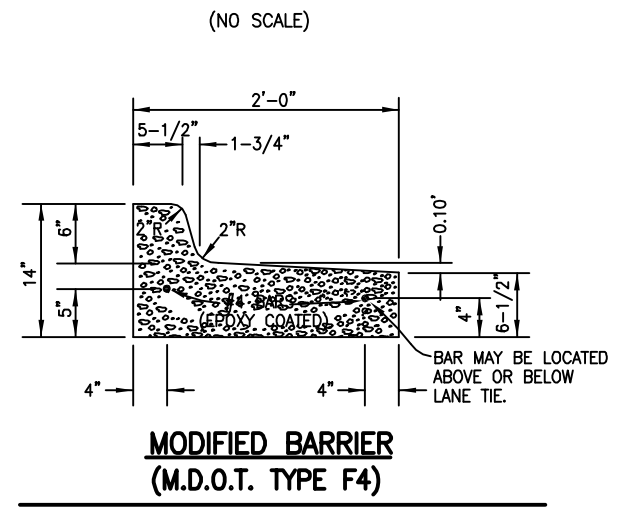
ASPHALT SECTION
(NO SCALE)



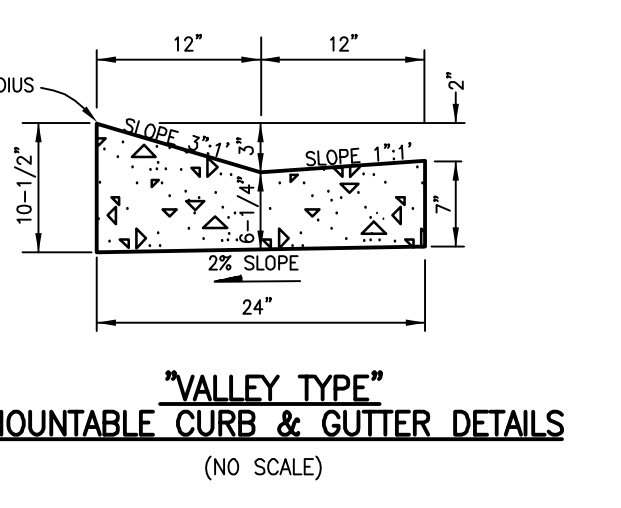
HANDICAP PARKING SIGN DETAIL
(NO SCALE)



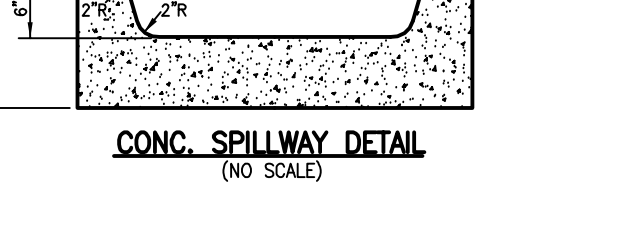
CONCRETE CURB & GUTTER
TYPE E
(NO SCALE)



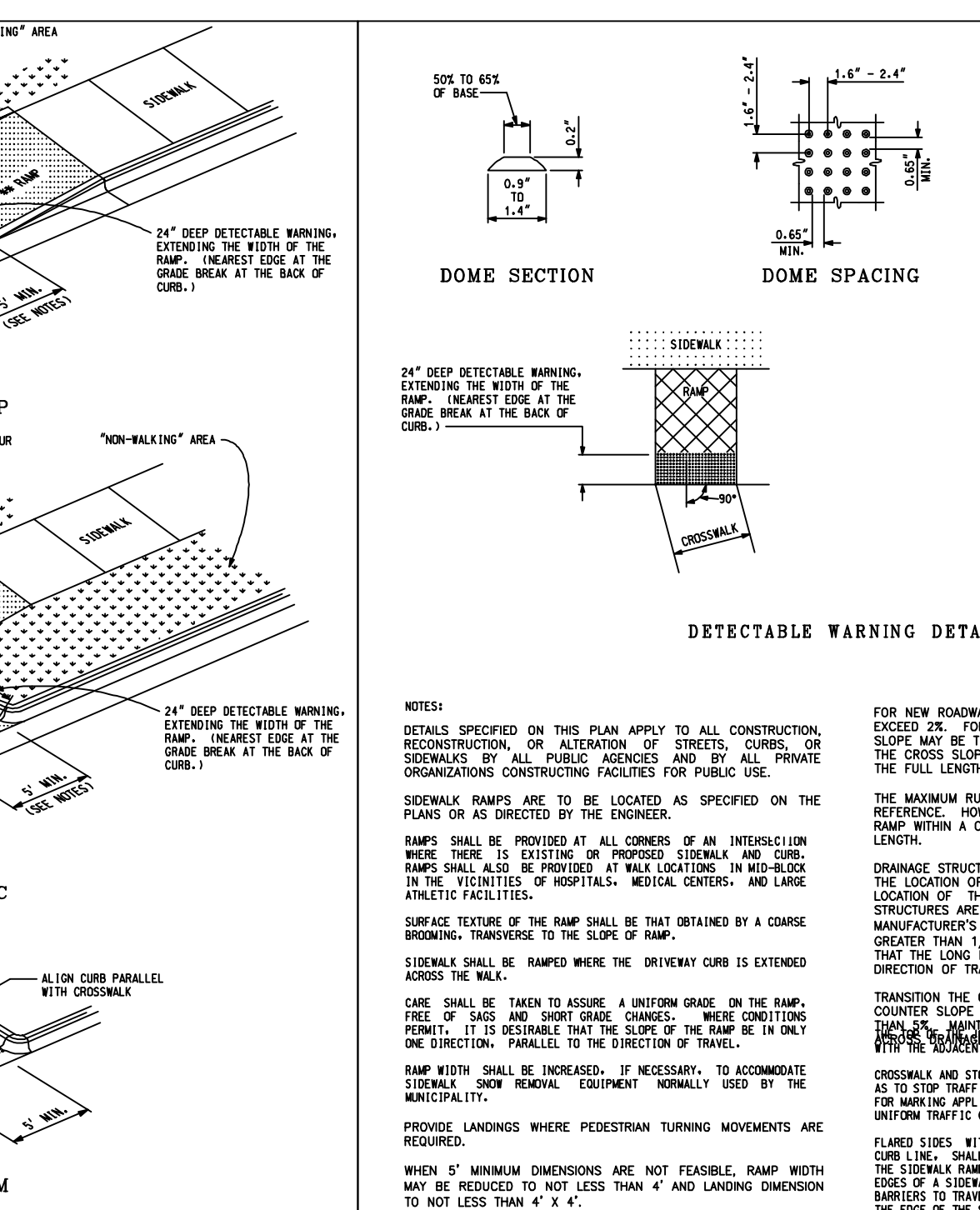
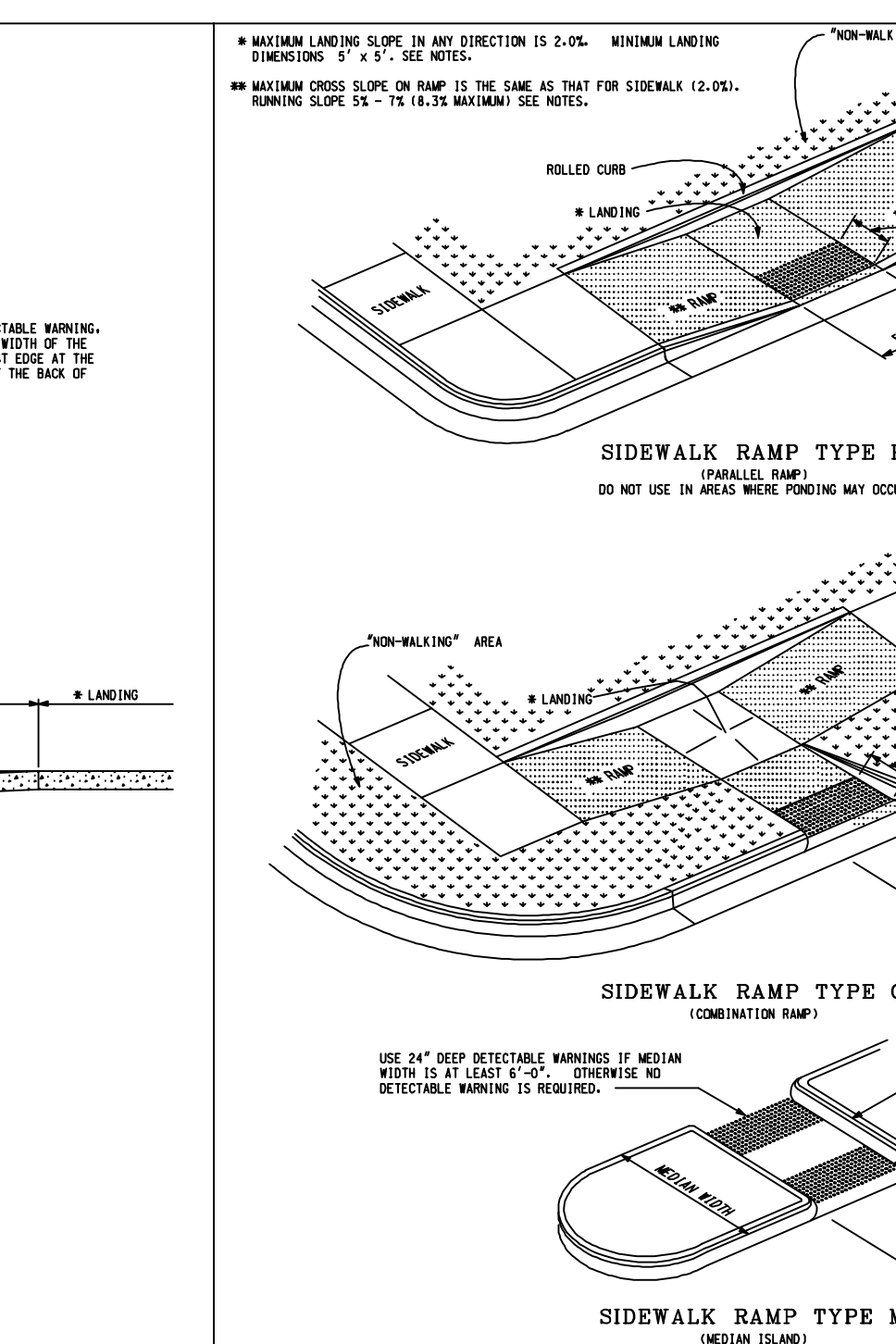
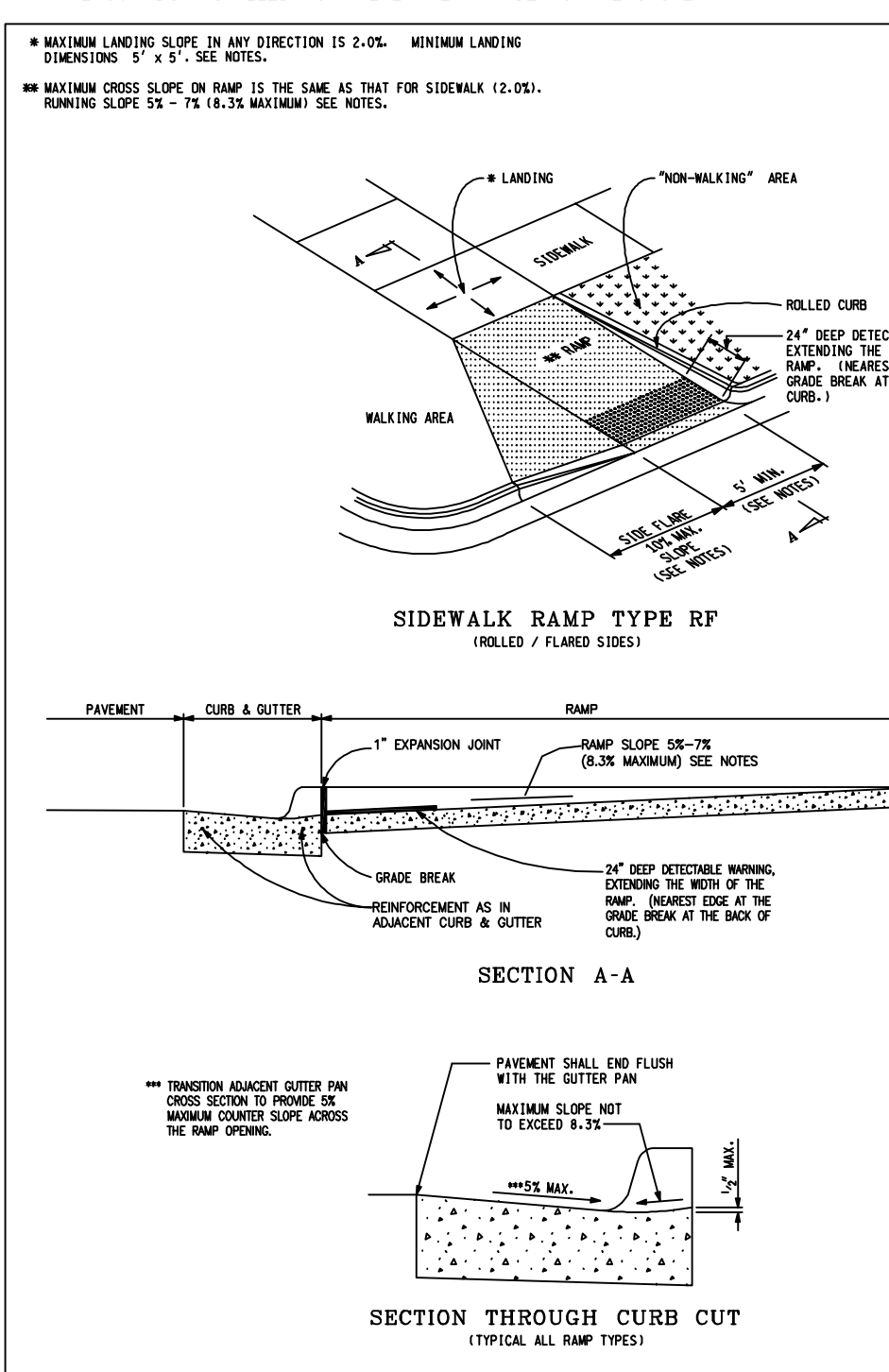
MODIFIED BARRIER
(M.D.O.T. TYPE F4)
(NO SCALE)



'VALLEY TYPE' MOUNTABLE CURB & GUTTER DETAILS
(NO SCALE)



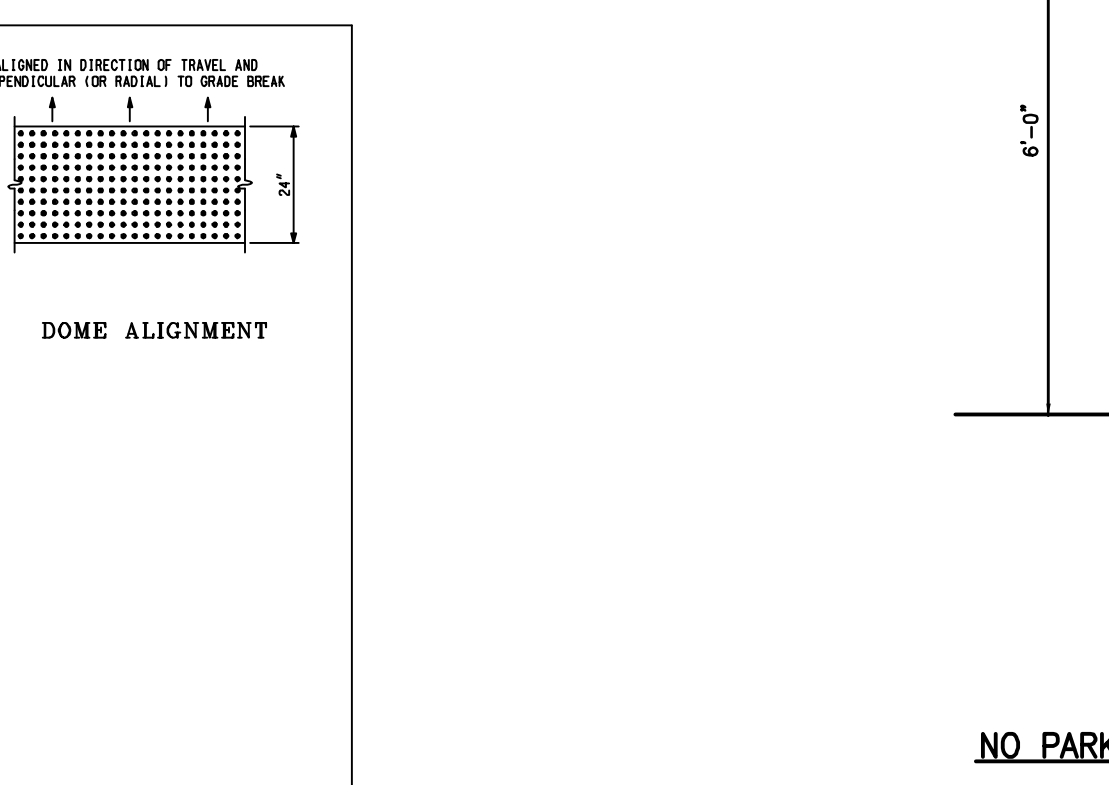
CONC. SPILLWAY DETAIL
(NO SCALE)



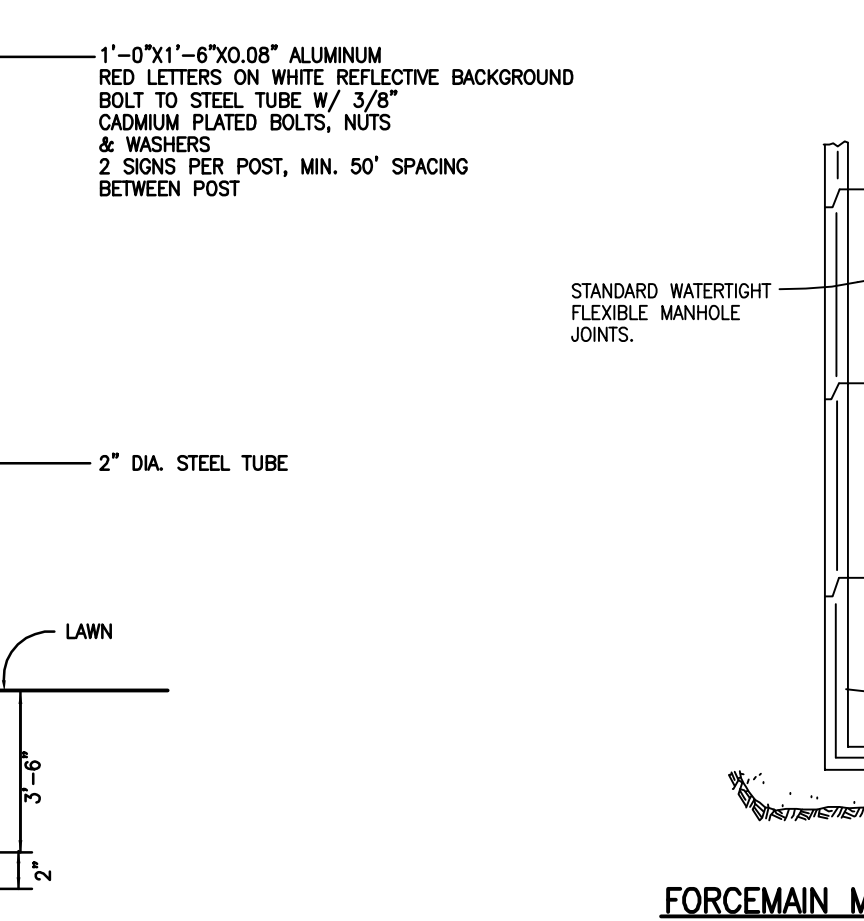
**MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARDS PLAN FOR
SIDEWALK RAMP AND
DETECTABLE WARNING DETAILS**
9-10-2010 7-28-2010 R-28-G SHEET 1 OF 1
J.S.K.K. APPROVE PLAN DATE

**MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARDS PLAN FOR
SIDEWALK RAMP AND
DETECTABLE WARNING DETAILS**
9-10-2010 7-28-2010 R-28-G SHEET 2 OF 1
J.S.K.K. APPROVE PLAN DATE

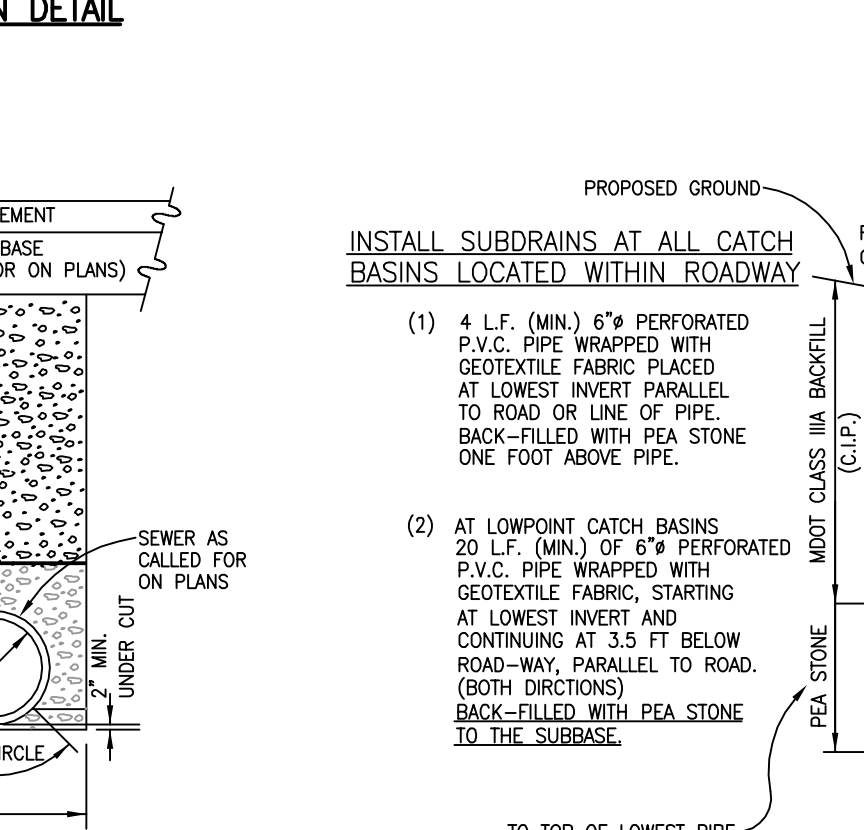
**MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARDS PLAN FOR
SIDEWALK RAMP AND
DETECTABLE WARNING DETAILS**
9-10-2010 7-28-2010 R-28-G SHEET 3 OF 1
J.S.K.K. APPROVE PLAN DATE



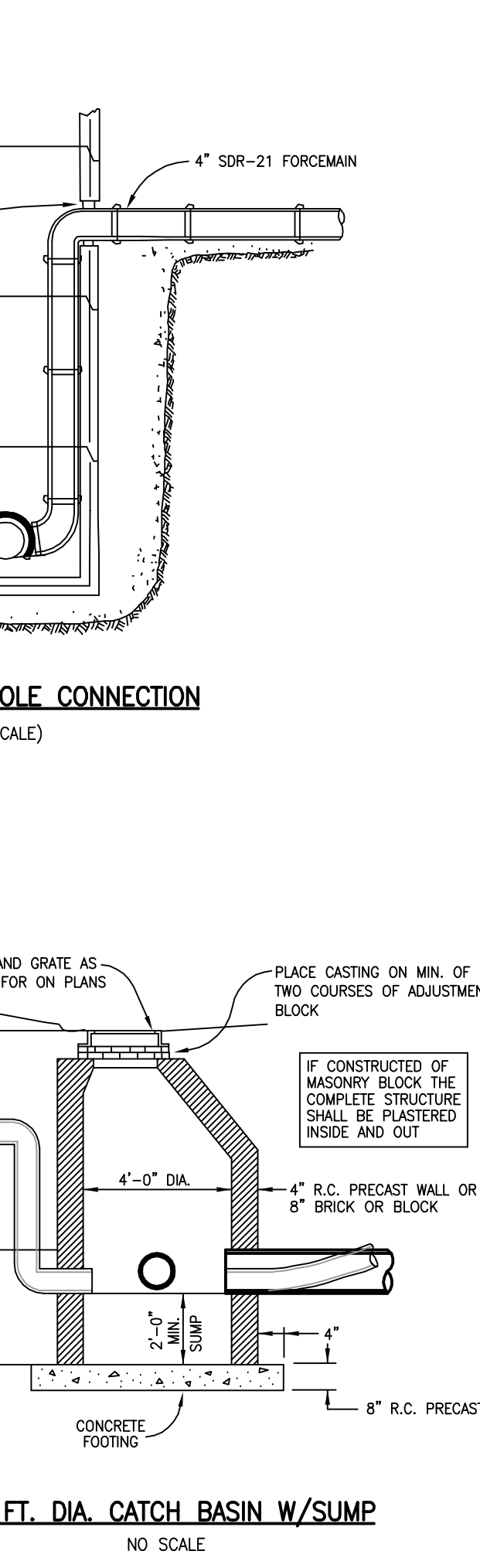
DETECTABLE WARNING DETAILS



FORCE MAIN MANHOLE CONNECTION
(NO SCALE)



SEWER UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED
(REF. MDOT DETAIL W-830)
NO SCALE



4 FT. DIA. CATCH BASIN W/SUMP
NO SCALE

BOSS ENGINEERING ARCHITECTS
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: boss@bosseng.com)
3121 E. GRAND RIVER AVE.
HOLT, MI 48842
(810) 246-6735 FAX (517) 548-1670

PROJECT: DAKOTA OFFICE BUILDING
PREPARED FOR: DAKOTA INTEGRATED SYSTEMS, INC.
1875 HOLLOWAY DRIVE
HOLT, MI 48842
(517) 594-6500

TITLE: CONSTRUCTION NOTES & DETAILS

NO.	BY	DATE	REVISION PER
1	TD	2-25-13	
2	TD		
3	TD		
4	TD		
5	TD		
6	TD		
7	TD		
8	TD		
9	TD		
10	TD		

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE: 1" = 75'
JOB NO. 12-183
DATE: 2-6-13
SHEET NO. 9

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND SHOWING ON THESE DRAWINGS THE LOCATION AND DEPTH OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND SHOWING ON THESE DRAWINGS THE LOCATION AND DEPTH OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND SHOWING ON THESE DRAWINGS THE LOCATION AND DEPTH OF ALL UTILITIES.

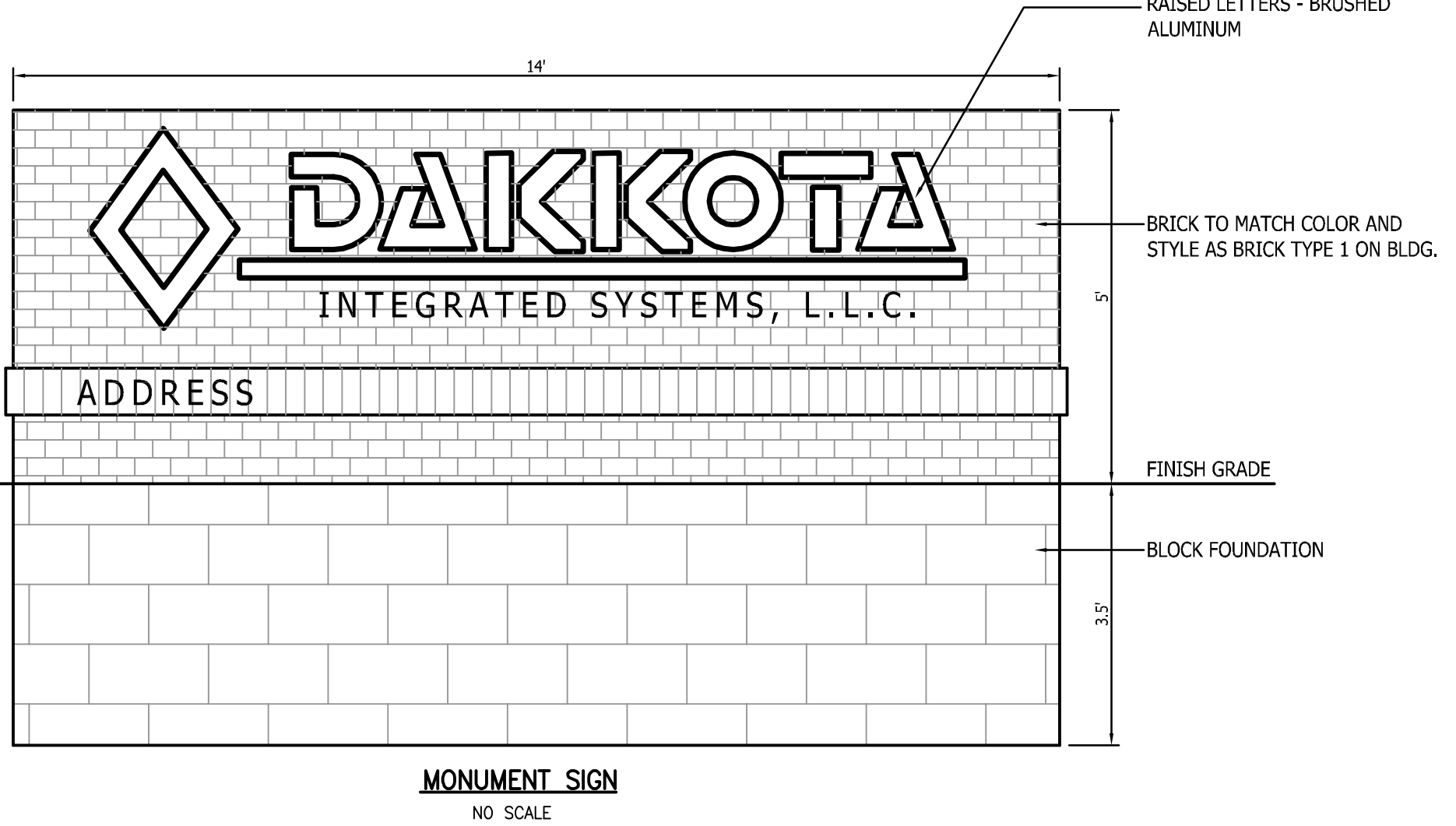
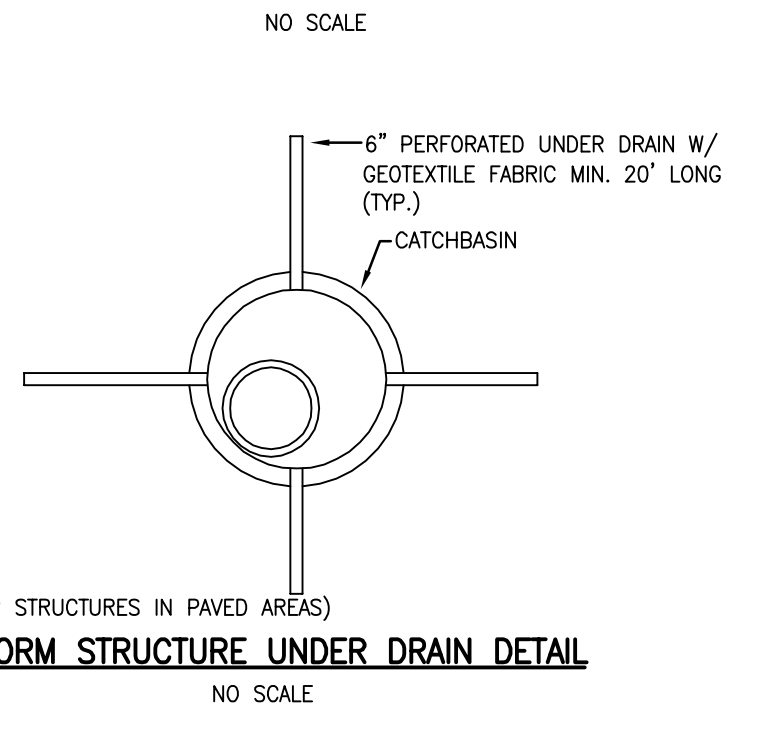
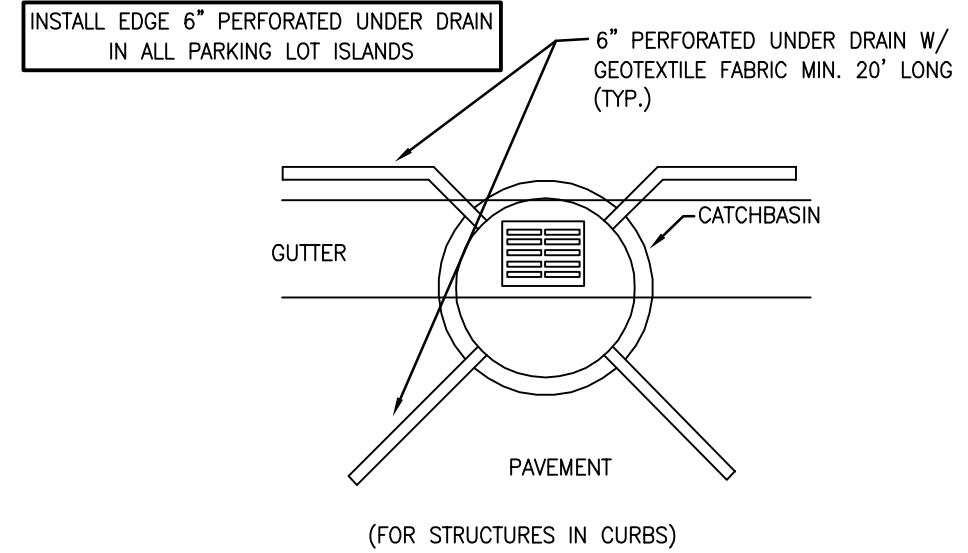
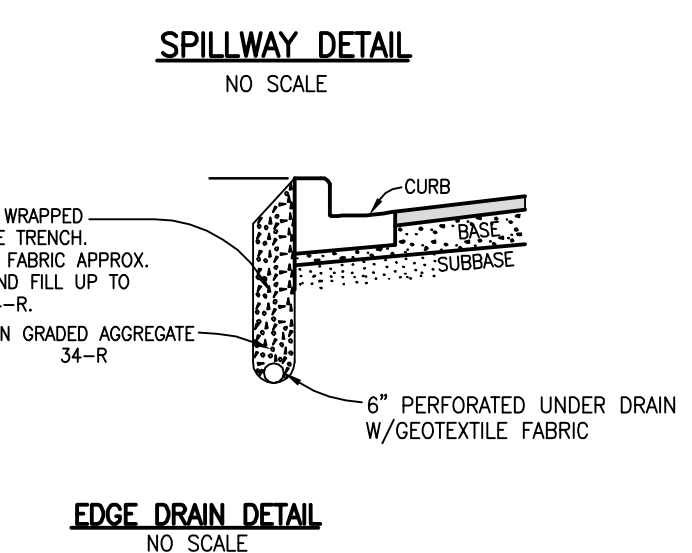
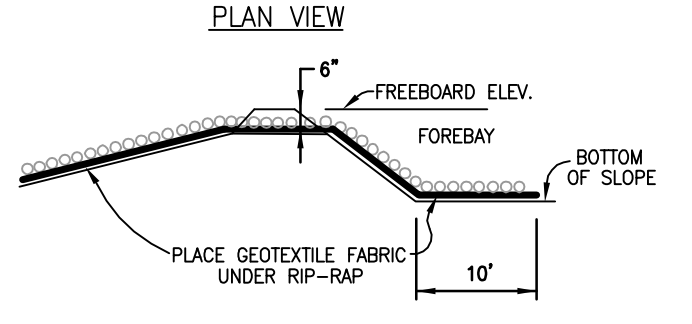
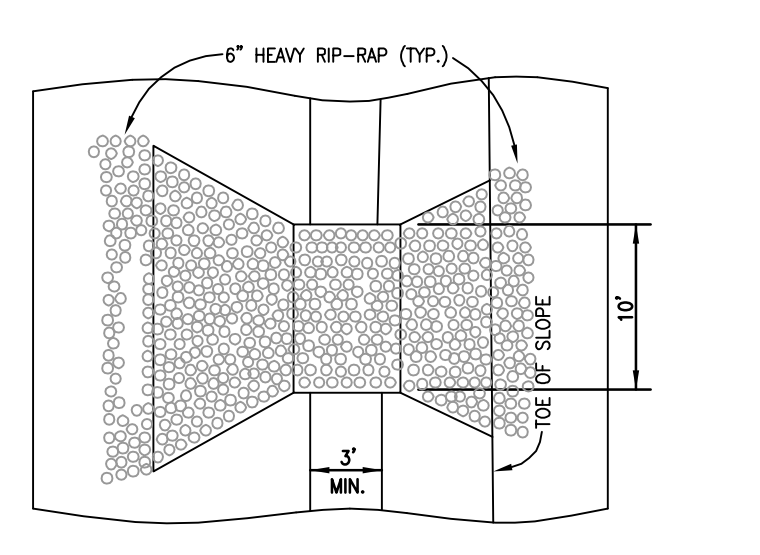
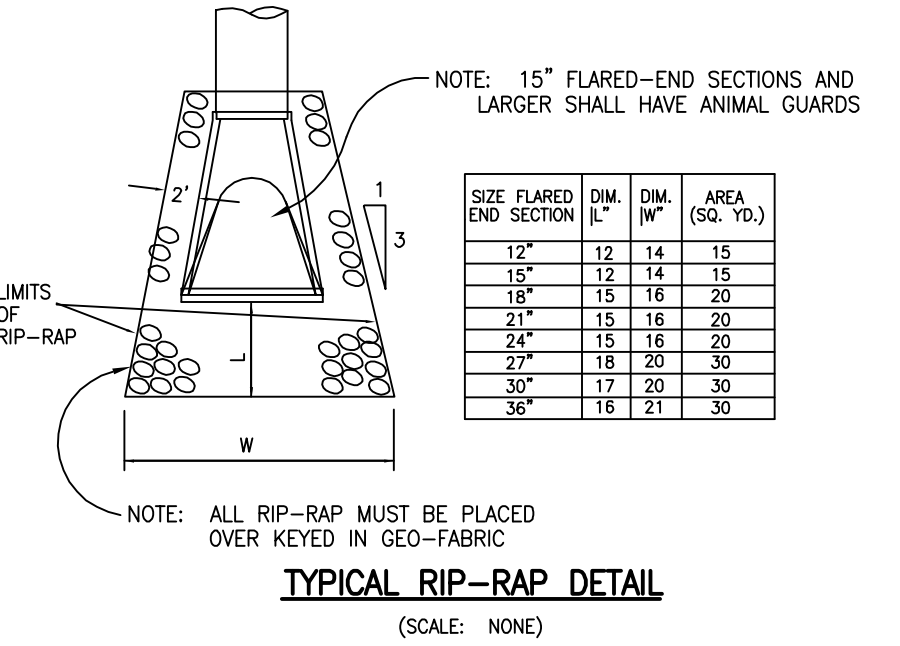
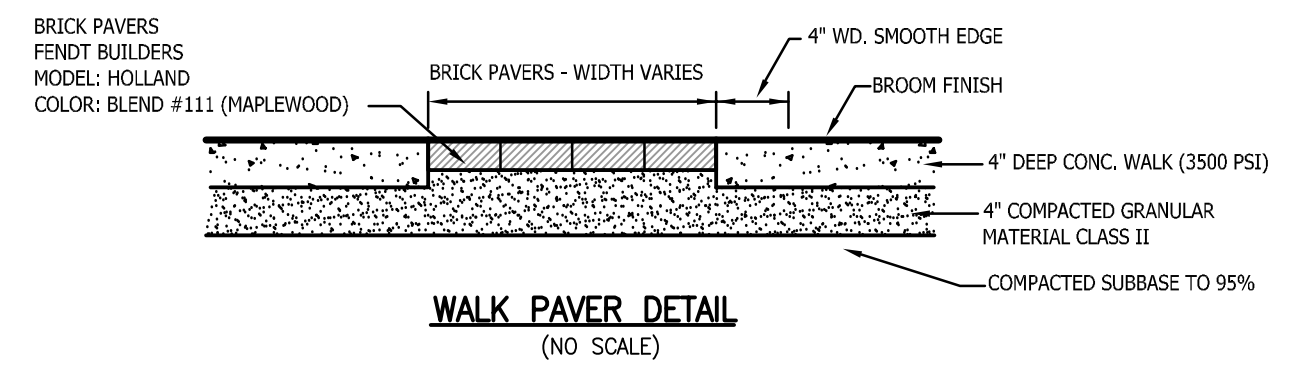
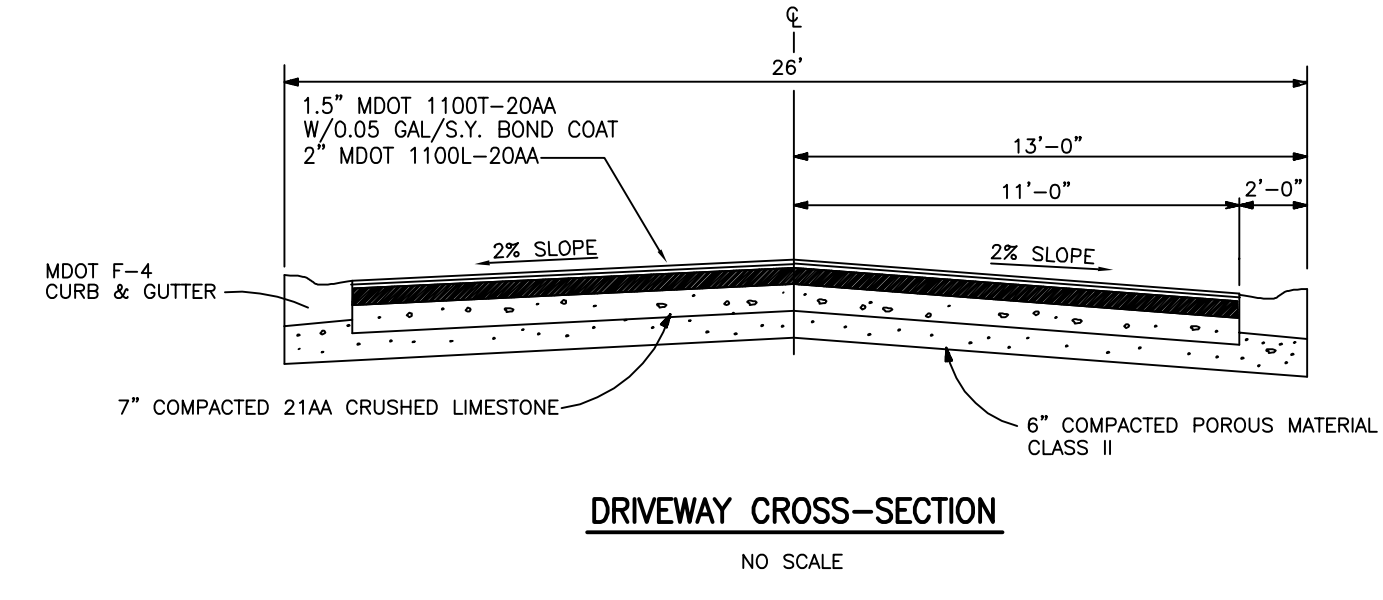
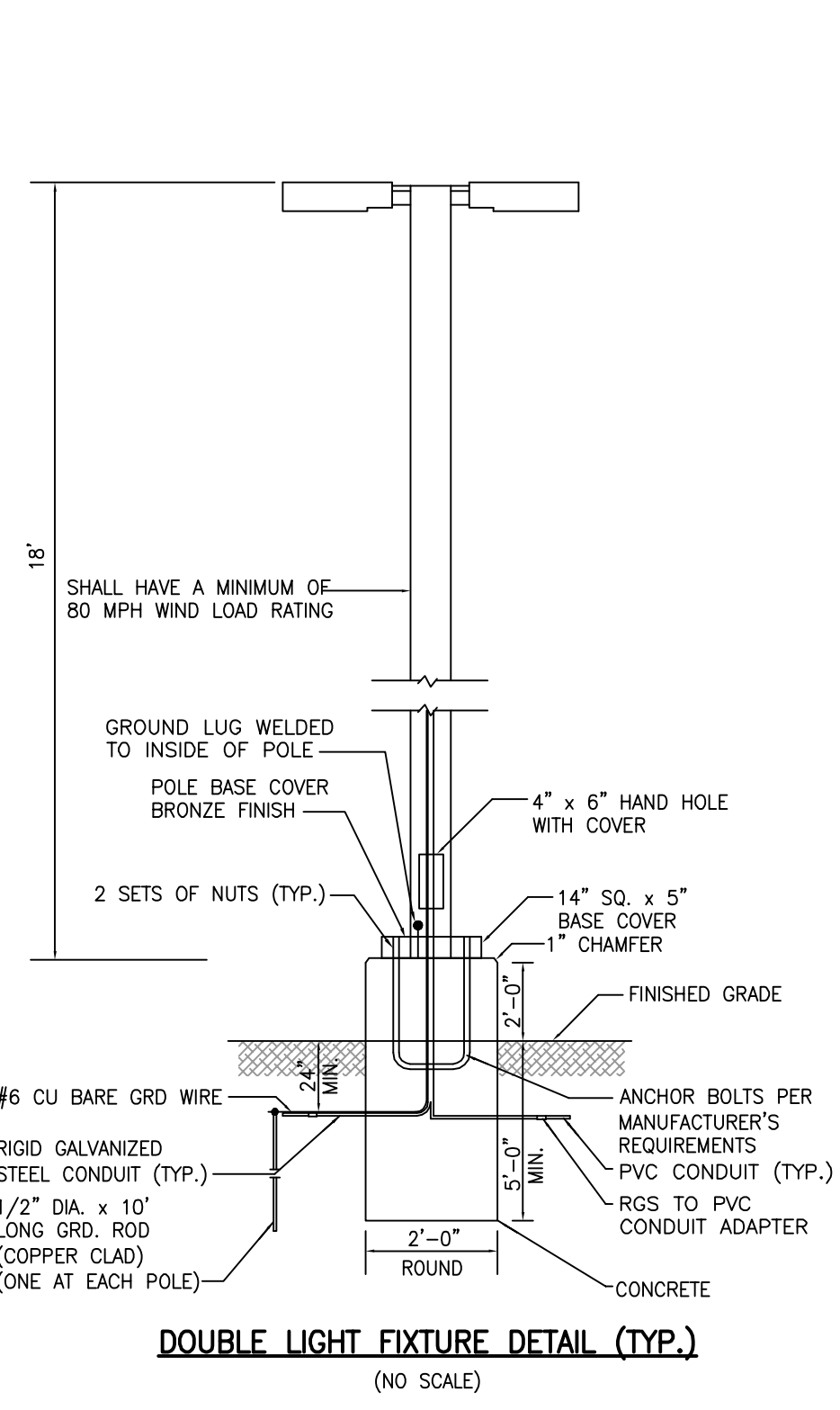
BOSS ENGINEERING
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(E-MAIL: bossengr.com)
3121 E. GRAND RIVER AVE.
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1875 HOLLOWAY DRIVE
HOLT, MI 48842
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TITLE: CONSTRUCTION NOTES & DETAILS
DATE: 2-25-13
DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE: 1" = 75'
JOB NO. 12-183
DATE: 2-6-13
SHEET NO. 10

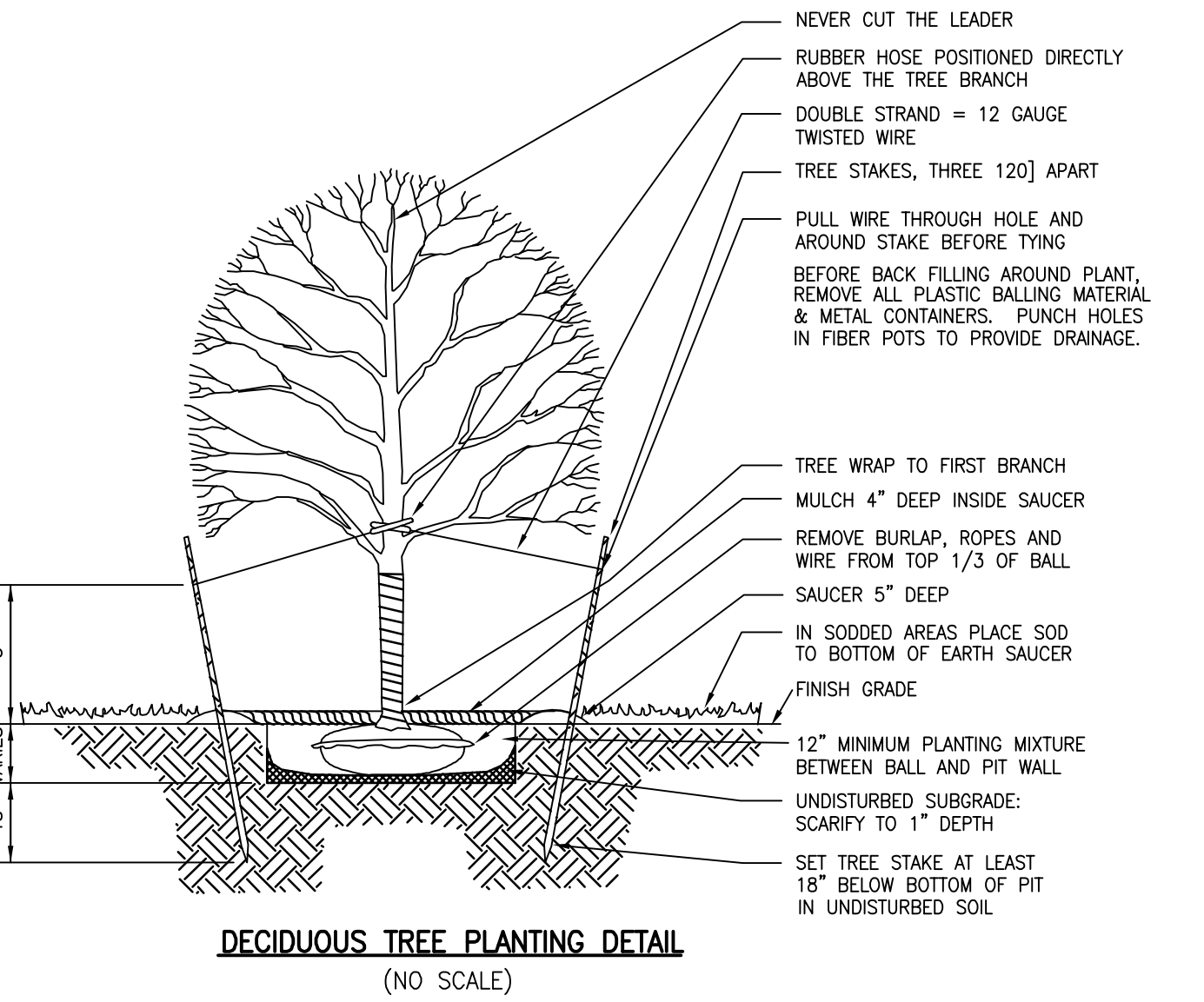
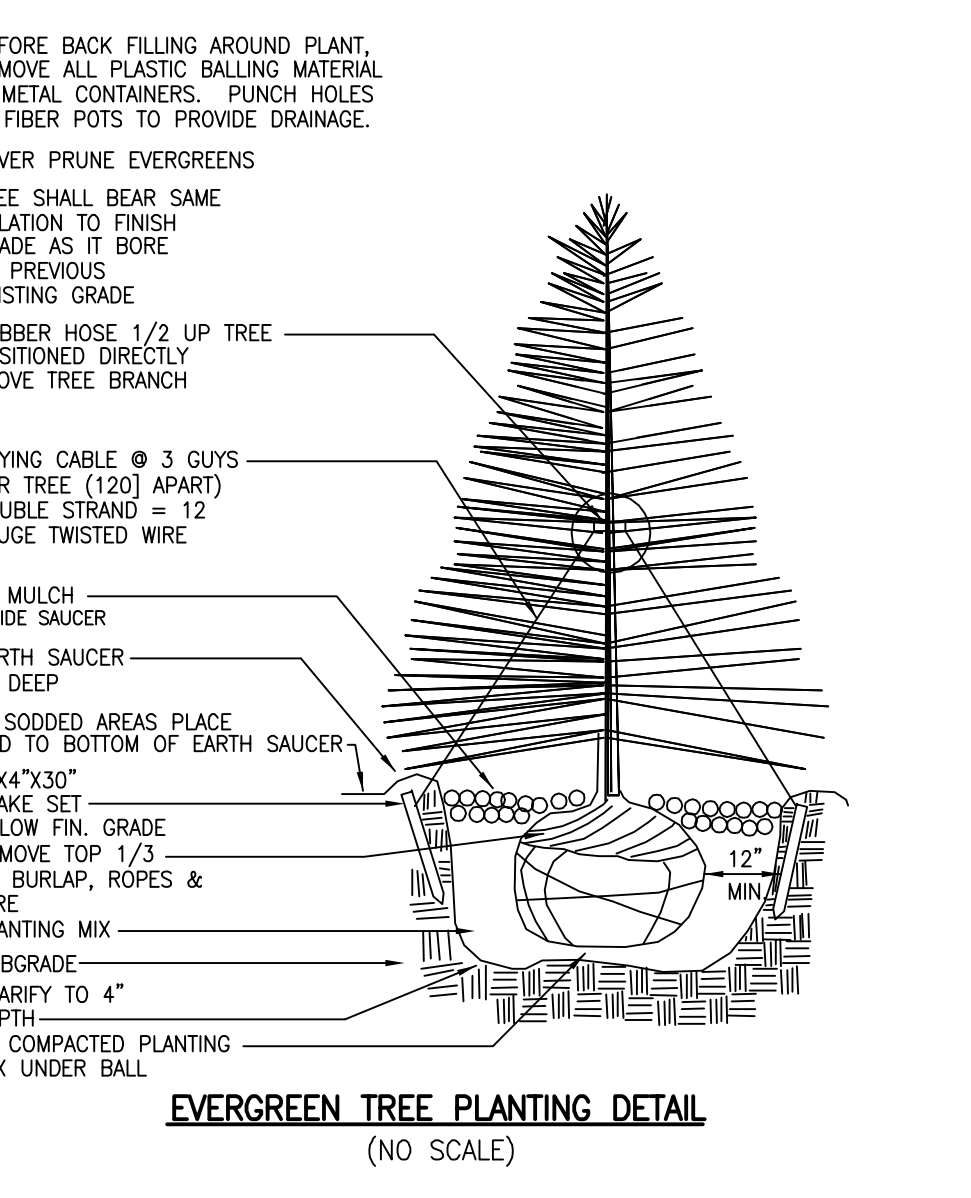
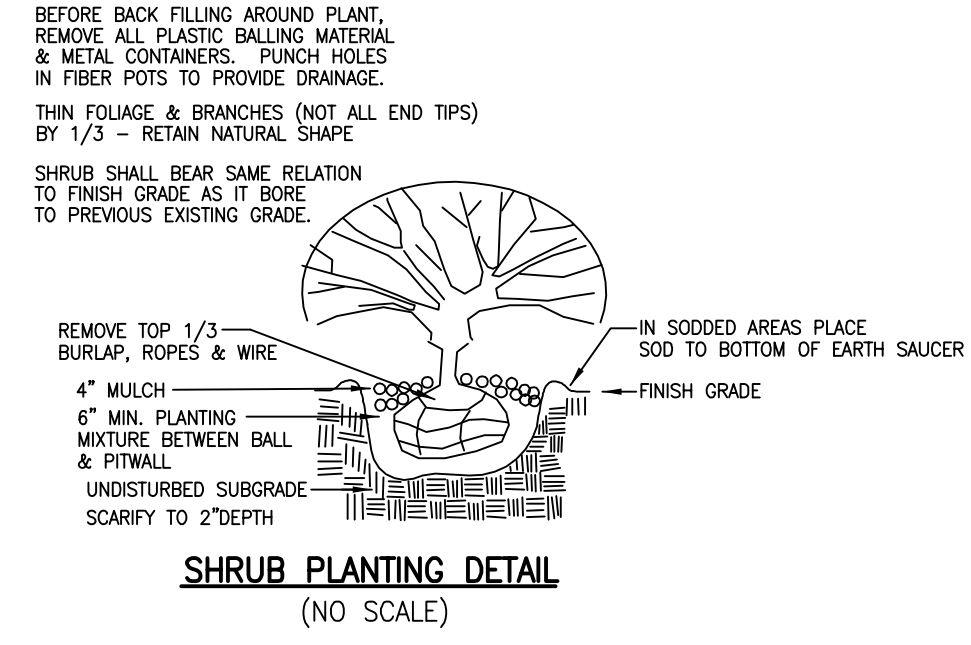
GENERAL LANDSCAPE NOTES:

- ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY AND SHALL BE NURSERY GROWN. ALL SIZES AND MEASUREMENTS SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ALL PLANT MATERIAL SHALL BE OF SELECTED SPECIMEN QUALITY AND HAVE A NORMAL HABIT OF GROWTH. ALL PLANT MATERIAL IS SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED STOCK OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT AND SECURELY WRAPPED AND BOUND.
- ALL PLANT BEDS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND OTHER EXTRANEOUS OBJECTS AND POOR SOILS TO A MINIMUM DEPTH OF 12 INCHES AND BACKFILLED TO GRADE WITH PLANTING MIX (SEE BELOW).
- PLANTING MIXTURE SHALL CONSIST OF 4 PARTS TOPSOIL FROM ON SITE, 1 PART PEAT, AND 5 POUNDS OF SUPERPHOSPHATE PER CUBIC YARD OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED TO A UNIFORM CONSISTENCY.
- ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE MULCHED WITH A 4 INCH LAYER OF SHREDDED BARK MULCH.
- ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
- THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED, IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL REQUIREMENTS.
- EDGING, WHERE NOTED ON THE PLANS, SHALL BE BLACK ALUMINUM EDGING, 3/16" X 4". INSTALL PER MANUFACTURER'S INSTRUCTIONS. ALL EDGING SHALL BE INSTALLED IN STRAIGHT LINES OR SMOOTH CURVES WITHOUT IRREGULARITIES.
- SOD SHALL BE DENSE, WELL ROOTED TURF, FREE OF WEEDS. IT SHALL BE COMPRISED OF A BLEND OF AT LEAST TWO KENTUCKY BLUEGRASSES AND ONE FESCUE. IT SHALL HAVE A UNIFORM THICKNESS OF 3/4 INCH, AND CUT IN UNIFORM STRIPS NOT LESS THAN 10 INCHES BY 18 INCHES. SOD SHALL BE KEPT MOIST AND LAID WITHIN 36 HOURS AFTER CUTTING.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ALL SODDED AREAS THAT BROWN OUT OR HAVE NOT FIRMLY KNITTED TO THE SOIL BASE WITHIN A PERIOD OF ONE MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
SEED MIXTURE SHALL BE AS FOLLOWS:
KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES):
ADELPHI, RUGBY, GLADE OR PARADE 30%
RUBY RED OR DAWSON RED FINE FESCUE 30%
ATLANTA RED FESCUE 20%
PENNFINE PERENNIAL RYE 20%
THE ABOVE SEED MIXTURE SHALL BE SOWN AT A RATE OF 250 POUNDS PER ACRE. PRIOR TO SEEDING, THE TOPSOIL LAYER SHALL BE FERTILIZED WITH A COMMERCIAL FERTILIZER WITH A 10-20-10 ANALYSIS:
10% NITROGEN: A MINIMUM OF 25% FROM A UREA-FORMALDEHYDE SOURCE
20% PHOSPHATE
10% POTASH: SOURCE TO BE POTASSIUM SULFATE OR POTASSIUM NITRATE.
THE FIRST FERTILIZER APPLICATION SHALL BE AT A RATE OF 10 POUNDS OF BULK FERTILIZER PER 1000 SQUARE FEET.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ANY PART OF THE AREA THAT FAILS TO SHOW A UNIFORM GERMINATION SHALL BE RESEEDED AND SUCH RESEEDING SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDED AREAS RESULTING FROM EROSION SHALL BE REPAIRED BY THE CONTRACTOR.
- ALL AREAS OF THE SITE SCHEDULED FOR SEEDING OR SODDING SHALL FIRST RECEIVE A 4 INCH LAYER OF CLEAN, FRIABLE TOPSOIL. THIS SOIL SHALL BE DISCED AND SHALL BE GRADED IN CONFORMANCE WITH THE GRADING PLAN.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES AND TO INFORM THE LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO COMMENCING LANDSCAPING.
- ALL PLANT MATERIALS SHALL BE FREE OF WEEDS, INSECTS AND DISEASE.
- ALL LANDSCAPE AREAS ARE TO BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM



STORM SEWER DESIGN COMPUTATIONS

FROM	TO	DRAIN AREA	ACRES	AREA IMPERV	AREA PERV	RUNOFF COEFF	EQUIV. AREA A * C	INTEN-SITY I	TIME OF CONC. Tc	ADD'L RUNOFF Q	RUNOFF (CFS) Q	PIPE LENGTH (LF)	PIPE DIA. (IN)	VELOCITY FLOWING FULL (FPS)	HYDRAULIC GRADIENT SLOPE %	ACTUAL SLOPE USED	MANNING FLOW CAPACITY	MANNING'S VELOCITY (FT/SEC)	TIME (MIN)	HG ELEV UPPER END	HG ELEV LOWER END	RIM ELEV UPPER END	INVERT UPPER END	INVERT LOWER END
CB03	CB02	C	0.56	0.43	0.13	0.74	0.413	4.38	15.00		1.81	72	12	2.30	0.26%	0.32%	2.02	2.57	0.47	977.46	977.28	983.85	976.64	976.41
CB02	CB01	B	0.15	0.11	0.04	0.71	0.107	4.32	15.47		2.27	50	12	2.89	0.40%	0.32%	2.02	2.57	0.32	977.28	977.08	981.60	976.41	976.25
CB01	ES01	A	0.43	0.39	0.04	0.83	0.359	4.29	15.79		3.81	22	15	3.10	0.35%	0.24%	3.17	2.59	0.14	977.08	977.00	980.00	976.05	976.00
ES03	CB05	G	0.29	0	0.29	0.20	0.058	4.38	15.00		0.25	21	12	0.32	0.01%	0.32%	2.02	2.57	0.14	977.08	977.01	976.28	976.28	976.21
CB05	CB04	F	0.19	0.12	0.07	0.64	0.122	4.36	15.14		0.79	24	12	1.00	0.05%	0.32%	2.02	2.57	0.16	977.01	976.93	980.00	976.21	976.13
CB04	ES02	E	0.15	0.15	0	0.90	0.135	4.34	15.29		1.37	42	12	1.75	0.15%	0.32%	2.02	2.57	0.27	976.93	976.00	980.00	976.13	976.00
CB07	CB06	I	0.61	0.13	0.48	0.35	0.213	4.38	15.00		0.93	24	12	1.19	0.07%	0.32%	2.02	2.57	0.16	976.09	976.08	977.05	974.45	974.38
CB06	ES04	H	0.29	0.13	0.16	0.51	0.149	4.36	15.16		1.58	40	12	2.01	0.20%	0.32%	2.02	2.57	0.26	976.08	976.00	977.05	974.38	974.25

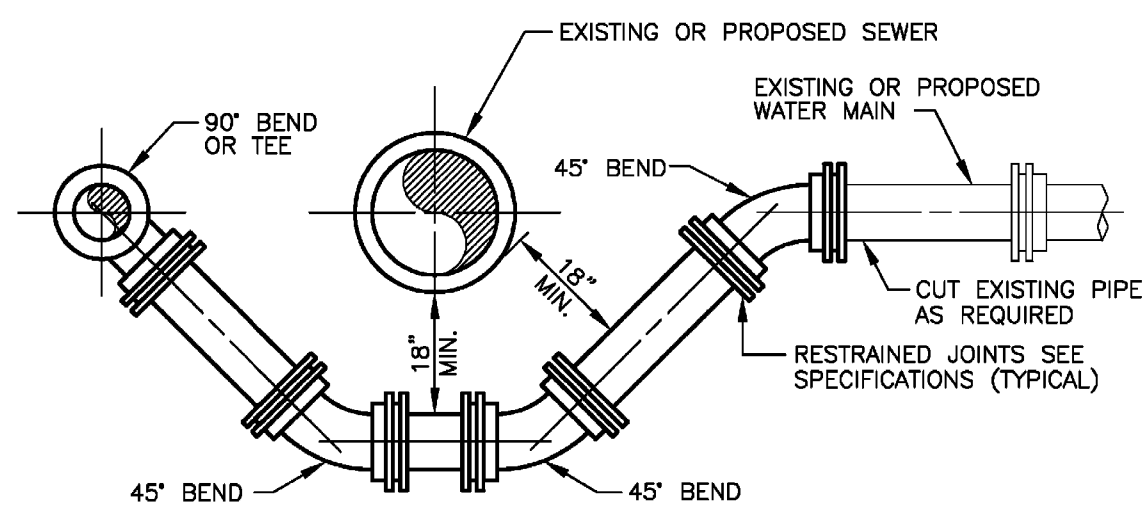


PIPE RESTRAINT SCHEDULE
GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED DUCTILE IRON PIPE

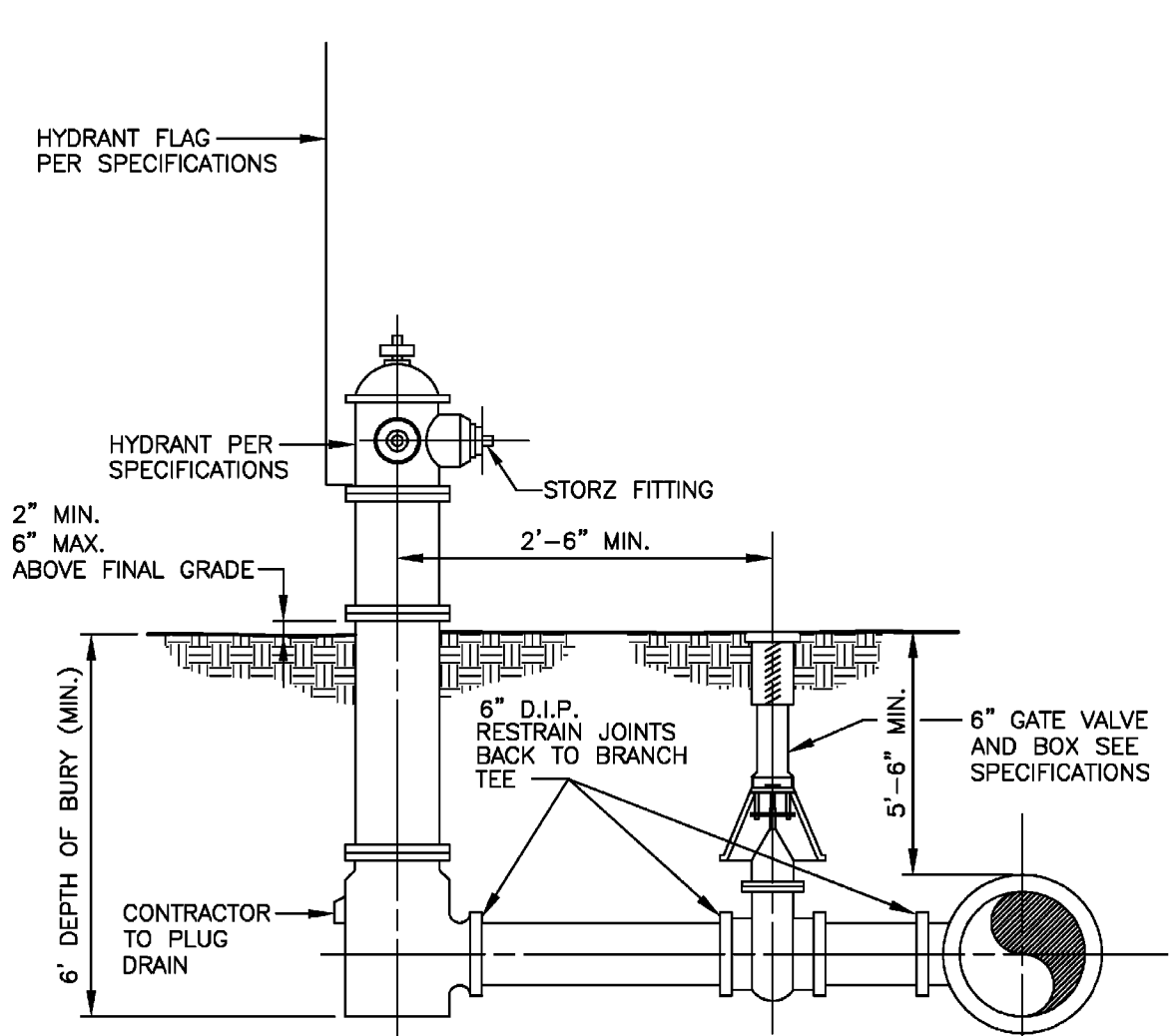
PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTION)*
4	13	5	3	1	40	--	--
6	19	8	4	2	58	31	--
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	85	168
36	84	35	17	8	281	84	188

- LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
- IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
- THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER). FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY.
- THE VALUES PROVIDED OF RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM.
- IF TE RODS ARE USED, USE FOUR RODS MINIMUM AND ADD 1/8-INCH TO BAR DIAMETER AS CORROSION ALLOWANCE.

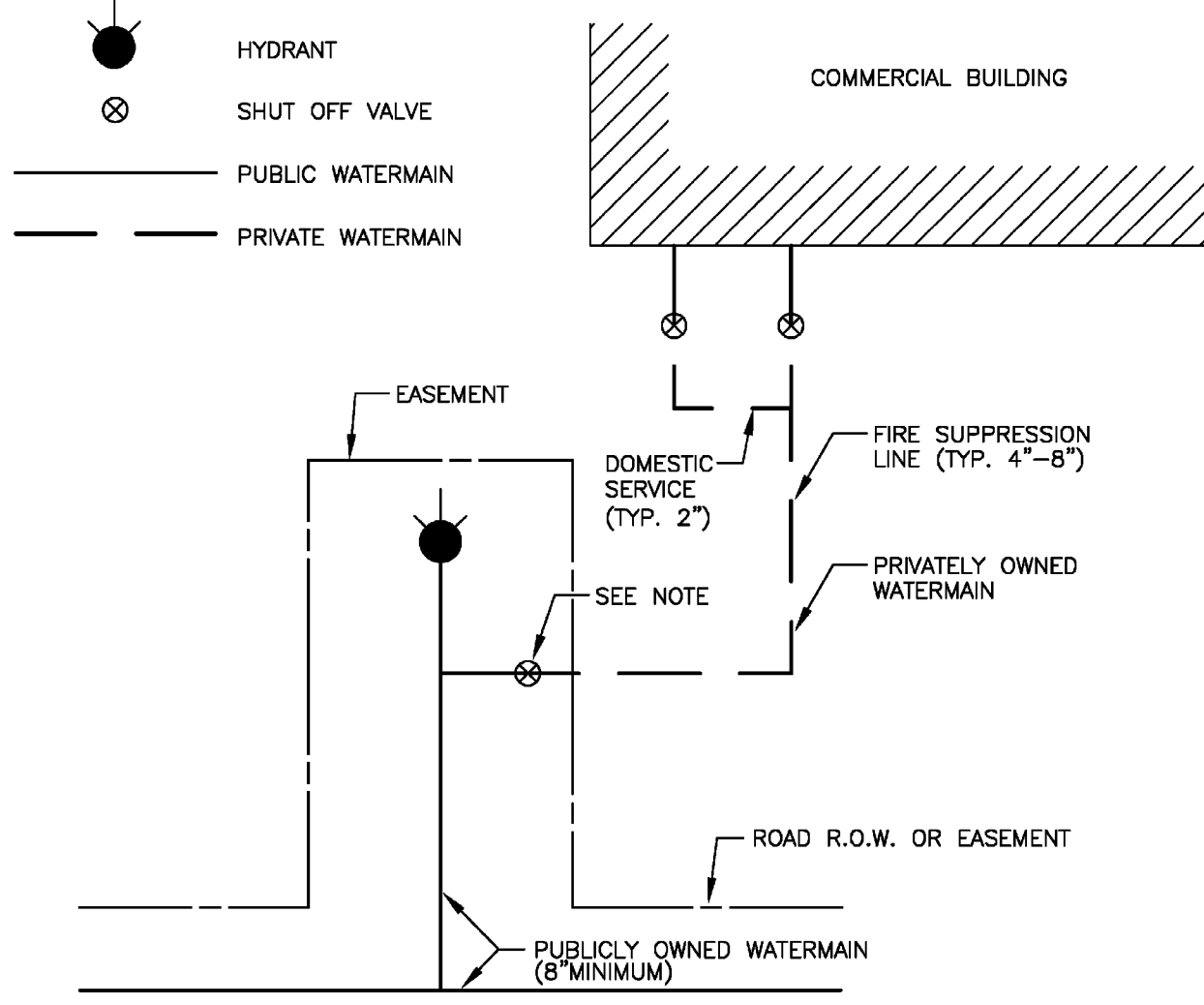
5. SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.
BASED UPON:
INTERNAL PRESSURE: 180
PIPE DEPTH: 5
BEDDING CLASS: TYPE 4
SOIL TYPE: GOOD SAND
SAFETY FACTOR: 2



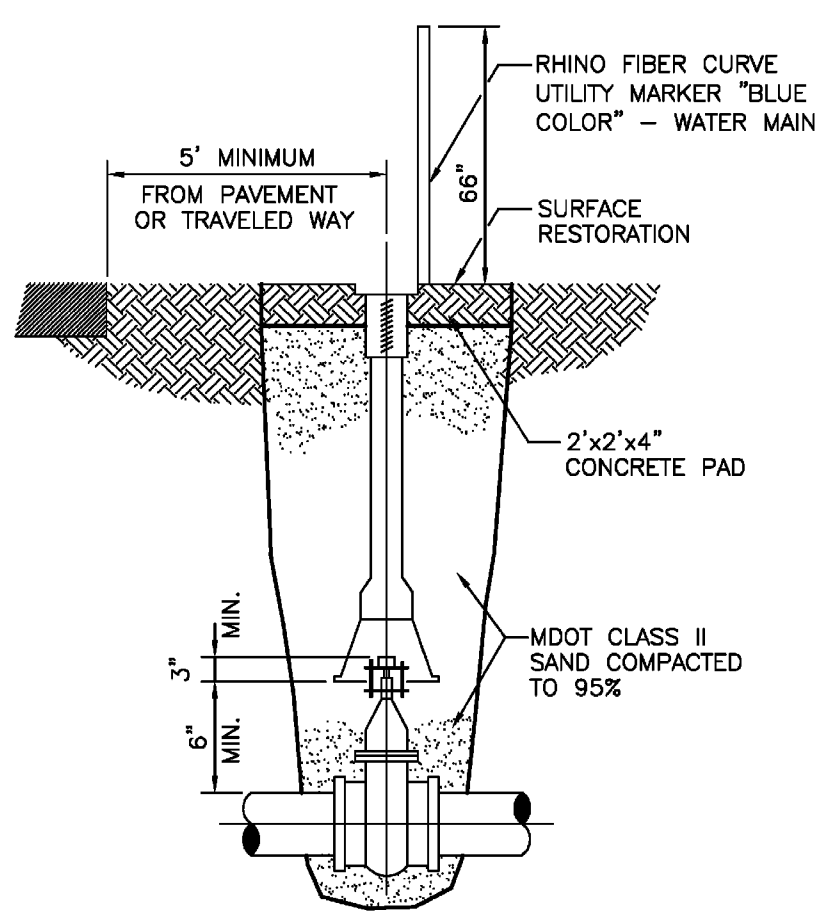
WATER MAIN RELOCATION



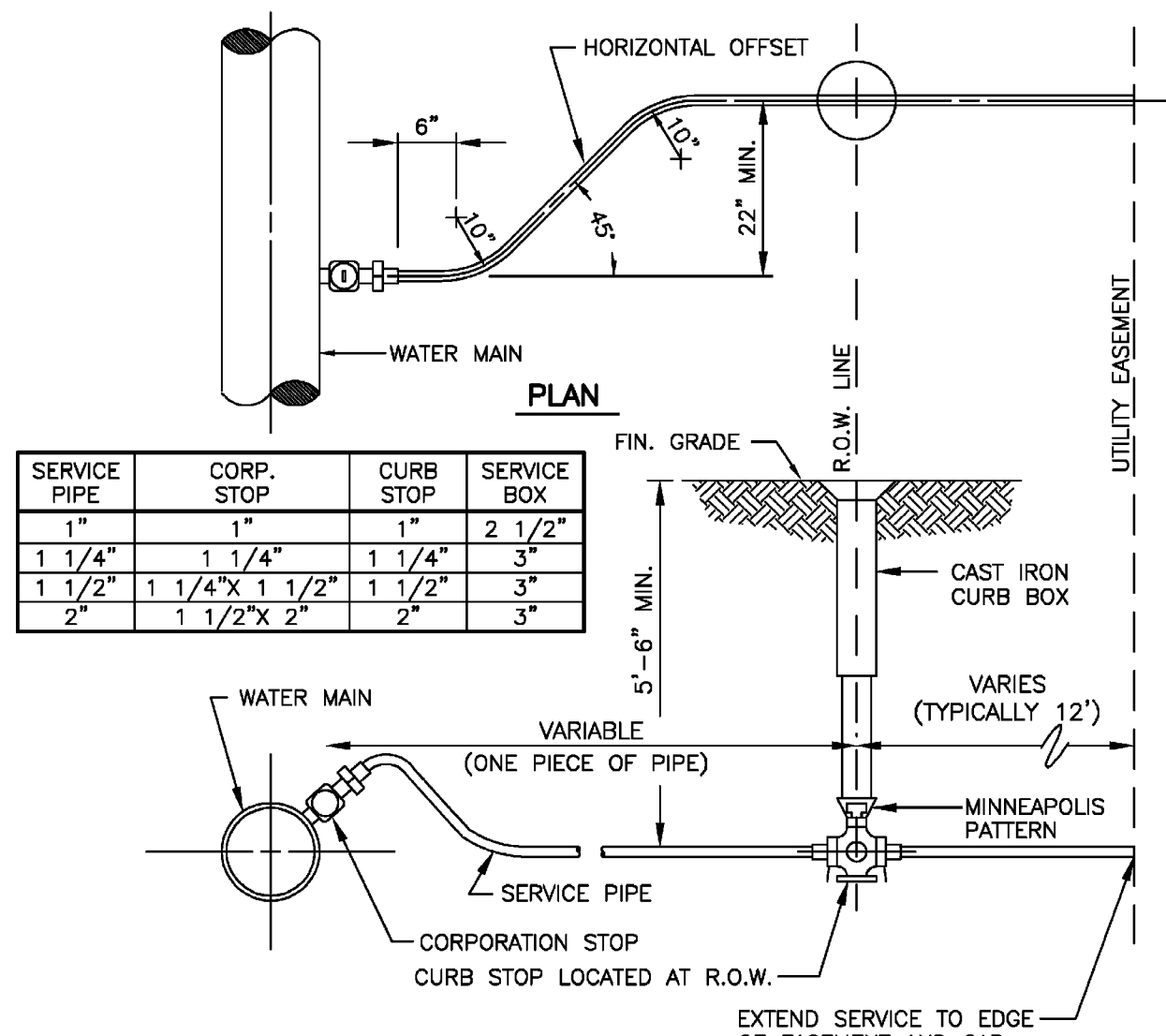
FIRE HYDRANT ASSEMBLY



COMMERCIAL BUILDING WATER SERVICE LAYOUT

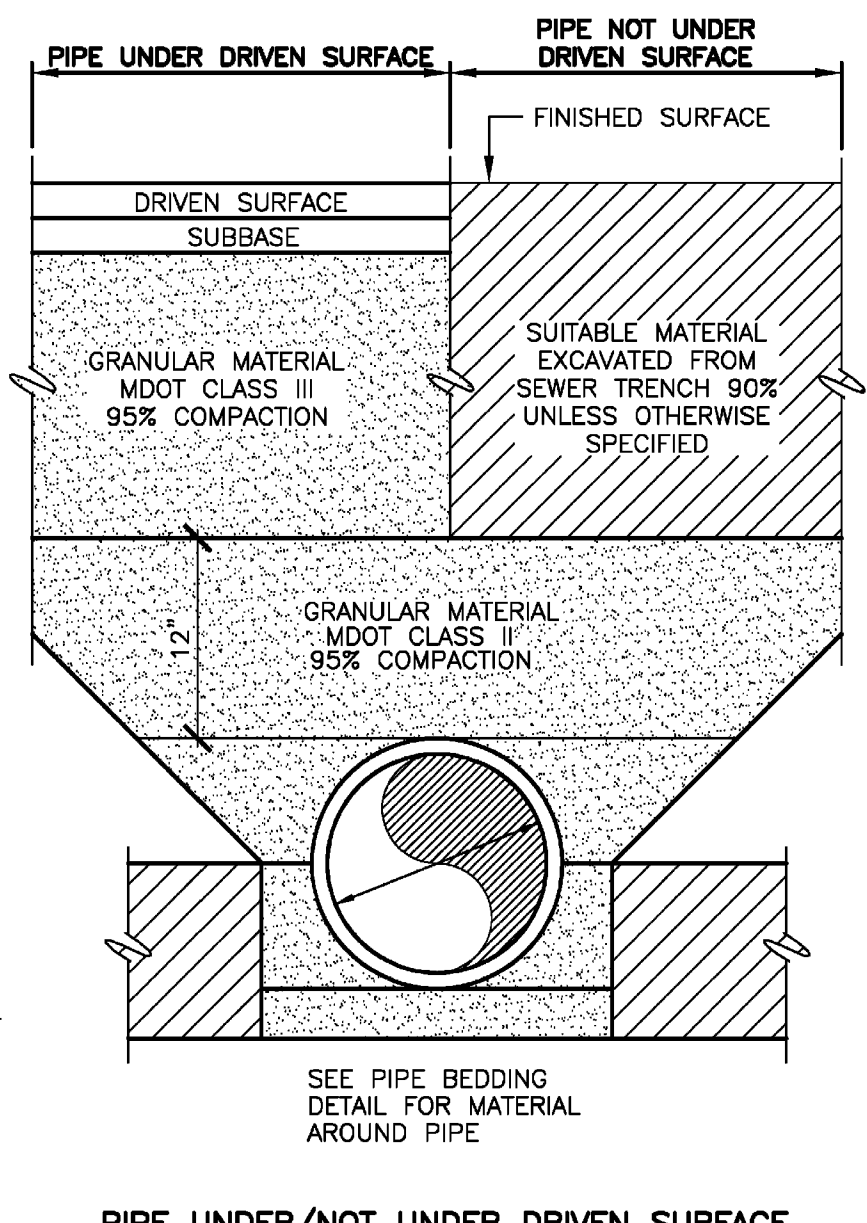
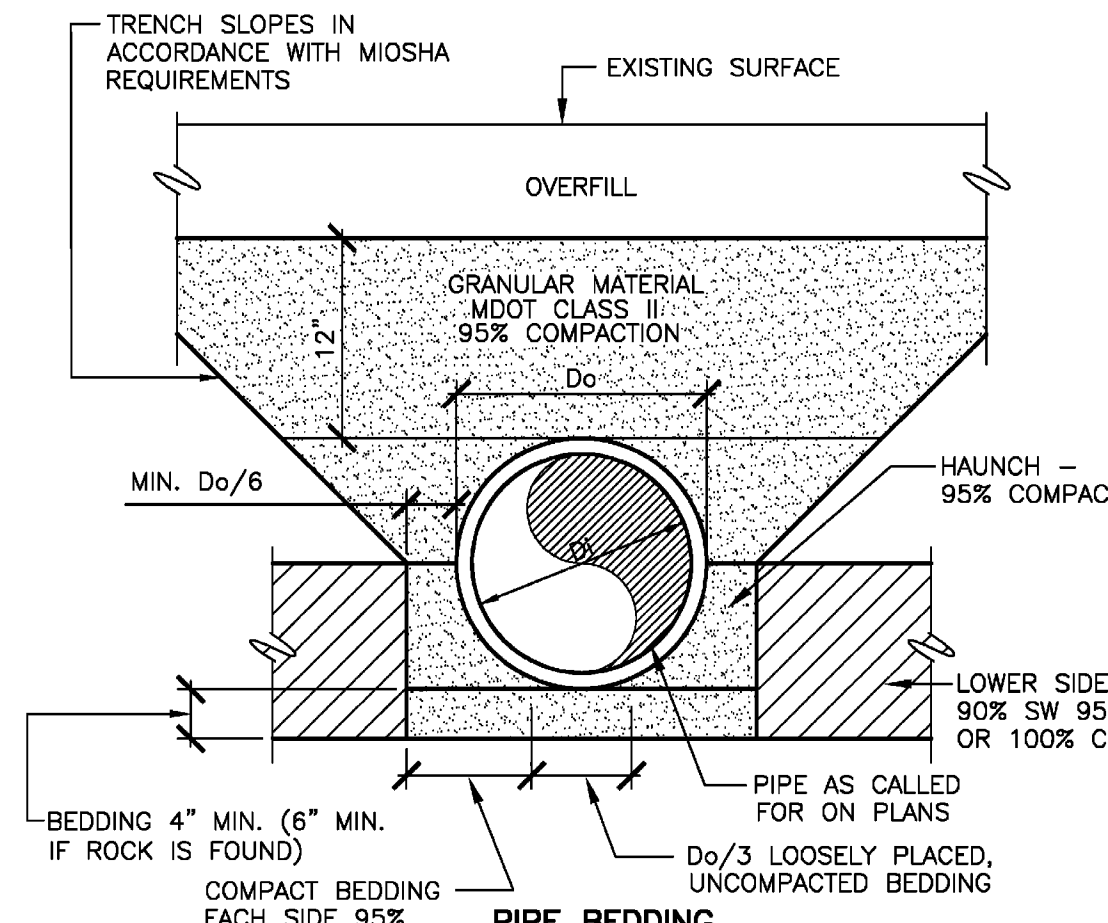


GATE VALVE AND BOX

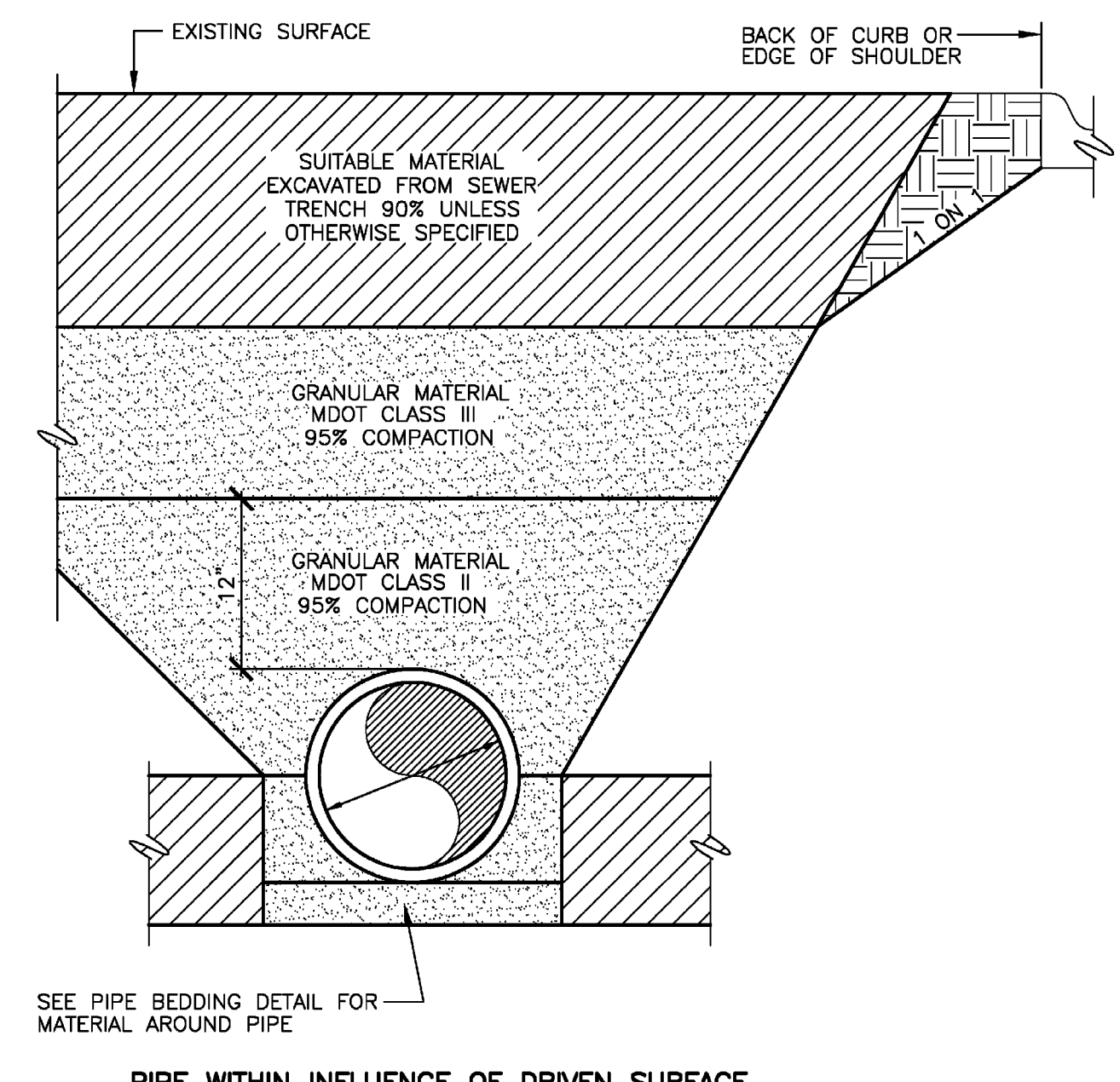


WATER SERVICE LATERAL

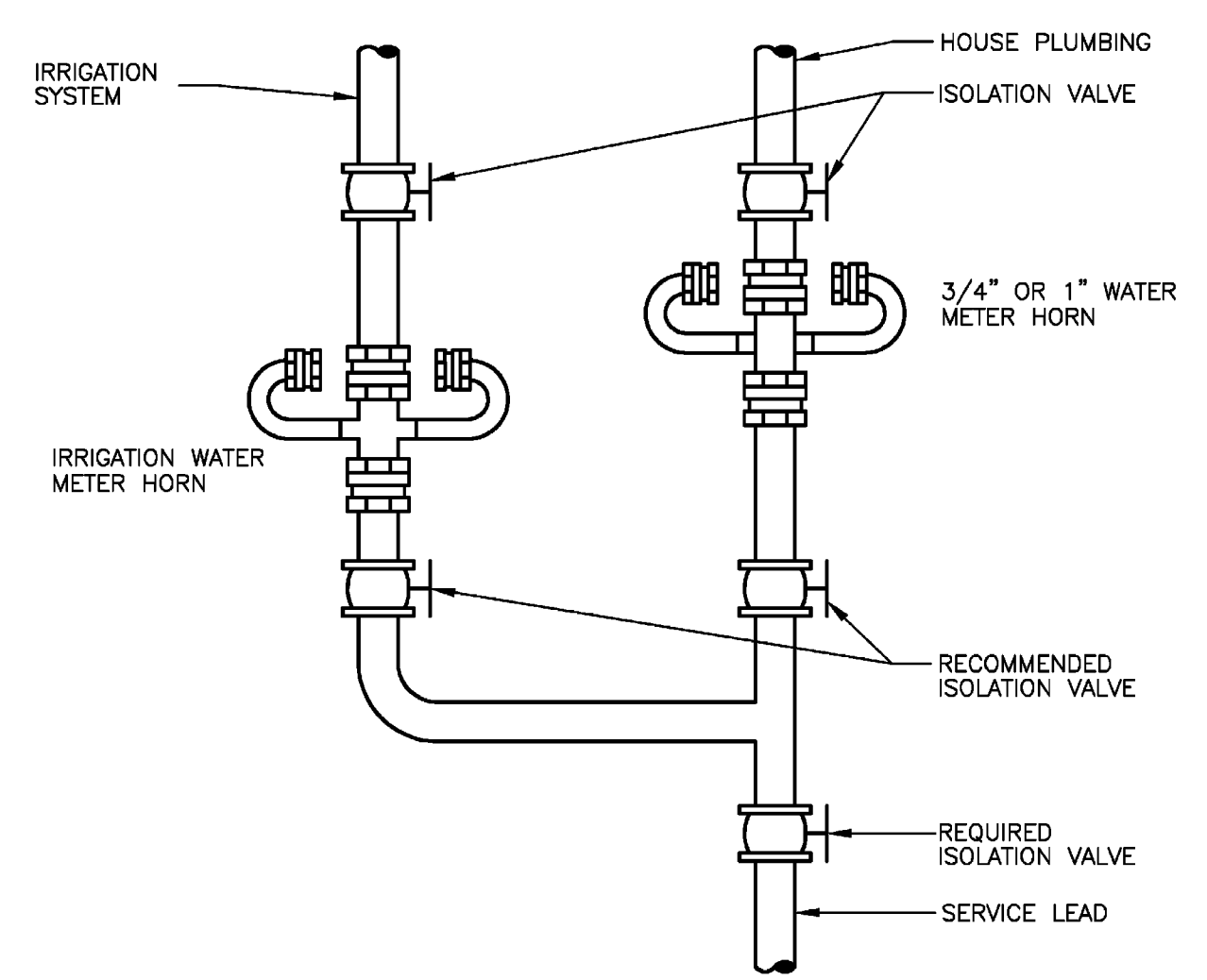
- NOTES:**
- COMPACTION PRESENTED AS MINIMUM STANDARD PROCTOR VALUES.
 - MATERIALS AROUND THERMOPLASTIC PIPE WITH DIAMETER < 6 INCHES SHALL PASS 0.5 INCH SIEVE, MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.
 - MATERIALS AROUND HDPE PIPE TO BE MDOT 6A OR 21AA.
 - DRIVEN SURFACE IS DRIVEWAY, PARKING AREA, ROAD BED OR SHOULDER.



TRENCH EXCAVATION & PIPE BEDDING



PIPE WITHIN INFLUENCE OF DRIVEN SURFACE



TYPICAL METER HORN INSTALLATION

NOTE:
ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).

MARION HOWELL GENOVA OCEOLA
Sewer and Water Authority
WATER MAIN STANDARD DETAILS

PROJECT: **DAKOTA OFFICE BUILDING**
PREPARED FOR: **DAKOTA INTEGRATED SYSTEMS, INC.**
1875 HOLLOWAY DRIVE
HOLT, MI 48842
(517) 594-6500

NO	ID	DATE	TWP. REVIEW	REVISION PER
1		2-25-13		

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE 1" = 75'
JOB NO. 12-183
DATE 2-6-13
SHEET NO. 12

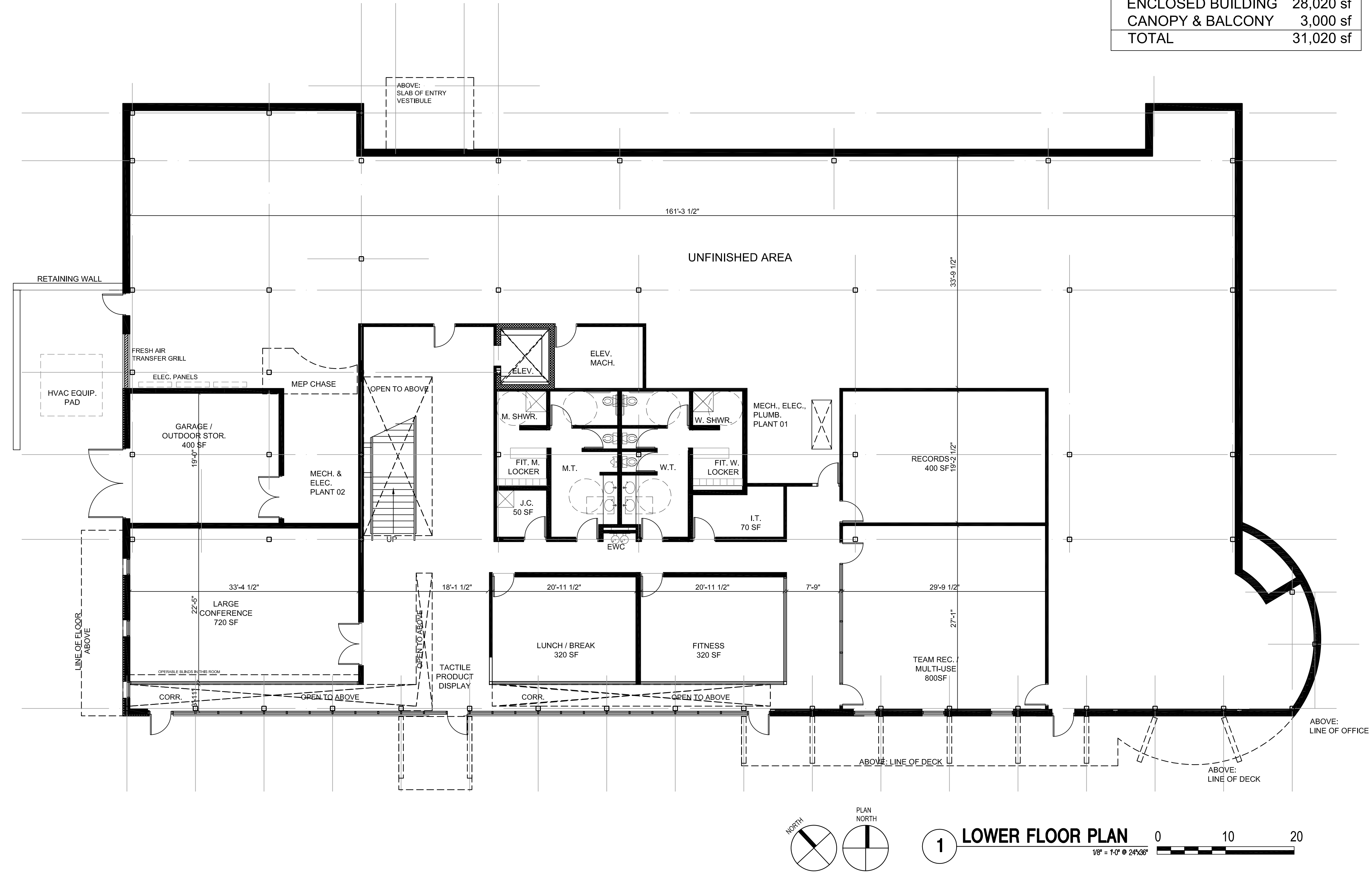
BOSS ENGINEERING
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: bosseng.com)
3121 E. GRAND RIVER AVE.
HONELL, MI 48843
(800) 246-6735 FAX (517) 548-1670

THE DRAWING AND ALL PARTS OF THE SAME, INCLUDING ALL UTILITY LOCATIONS, SHALL BE SHOWN ON THESE DRAWINGS AND ONLY APPROVED BY THE ENGINEER. NO GUARANTEE IS MADE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING UTILITY LOCATIONS AND DEPTHS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES ARE FOUND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES ARE FOUND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES ARE FOUND.

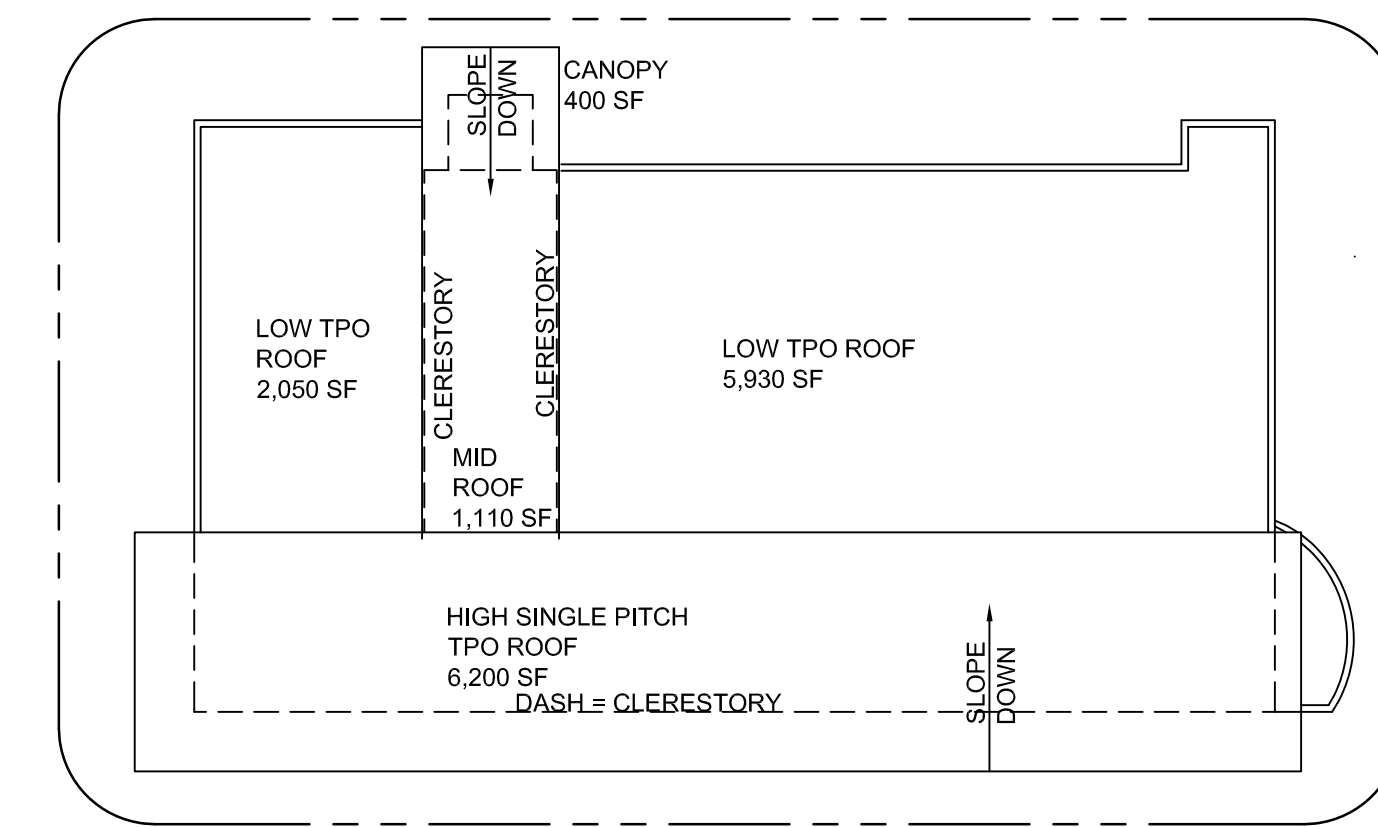


Wednesday, July 15, 2008 11:30:22 AM DRAWING: L:\Cad\dmh\DWG\dwg\std.dwg

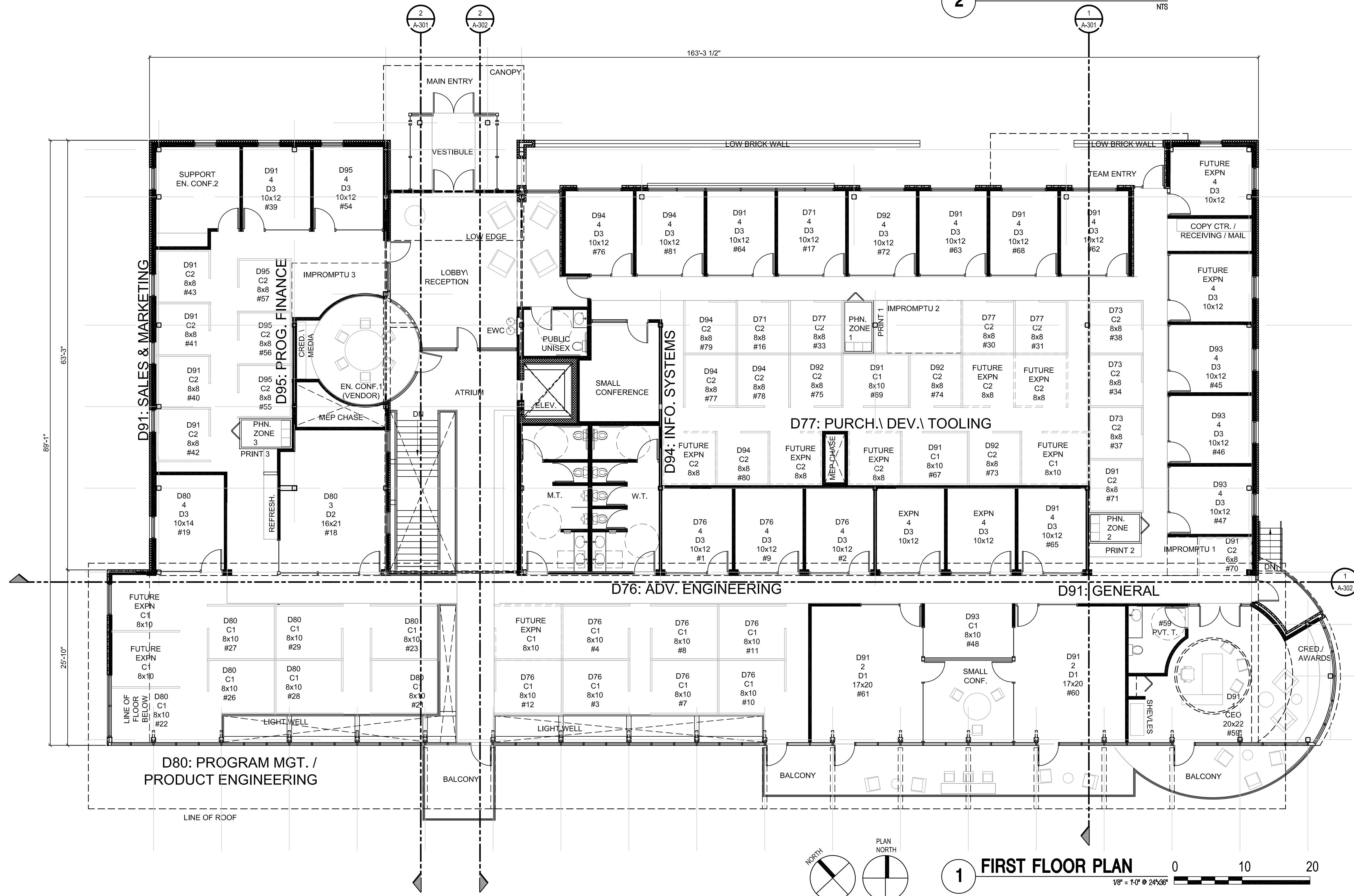
BUILDING AREAS	
LOWER LEVEL AREAS	
FINISHED	6,460 sf
UNFINISHED	7,360 sf
UNDER CANOPY	815 sf
LOWER TTL	14,635 sf
MAIN LEVEL AREAS	
INTERIOR	14,200 sf
BALCONY	650 sf
UNDER CANOPY	1,535 sf
MAIN TTL	16,385 sf
ENCLOSED BUILDING 28,020 sf	
CANOPY & BALCONY	3,000 sf
TOTAL	31,020 sf



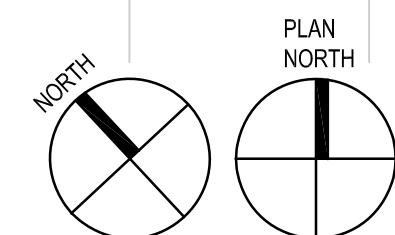
1 **LOWER FLOOR PLAN**
1/8" = 1'-0" @ 24"x36"



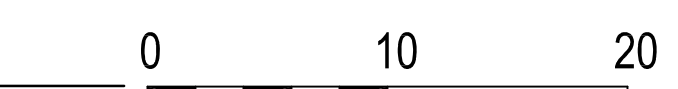
2 SCHEMATIC ROOF PLAN

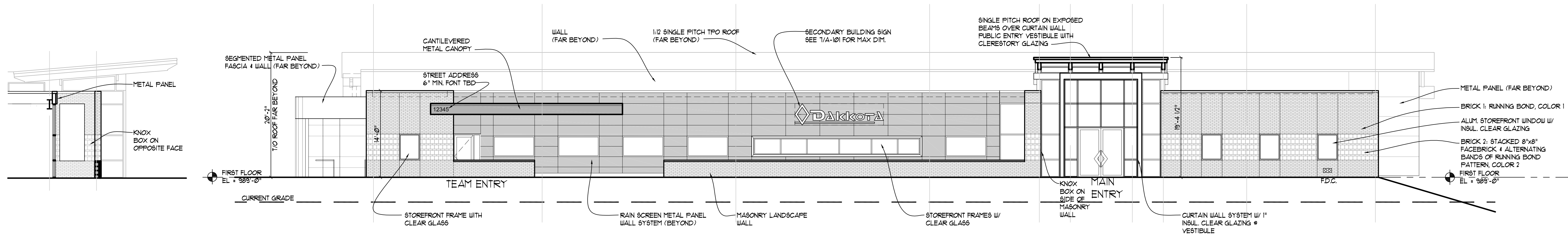


1 FIRST FLOOR PLAN



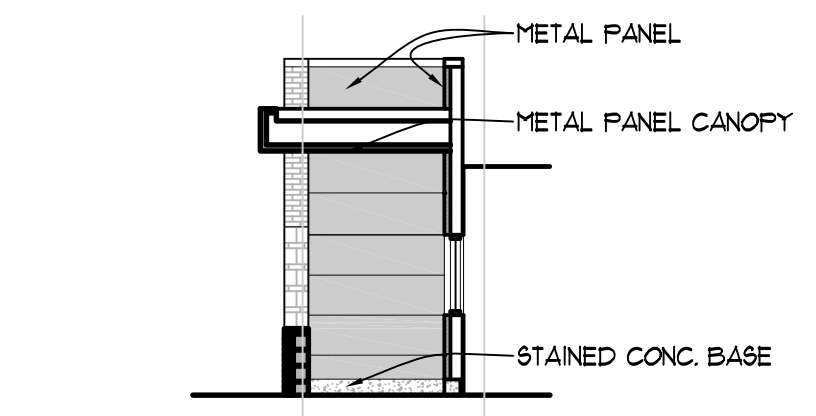
1/8" = 1'-0" @ 24x36"



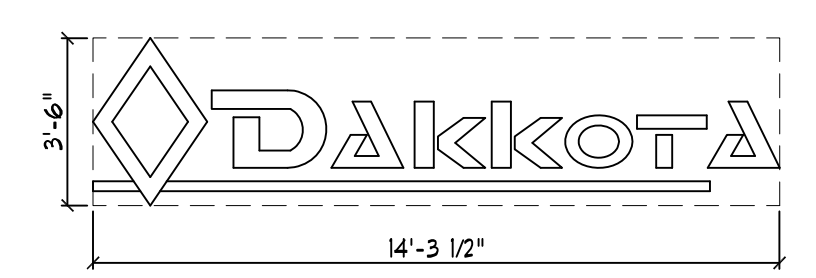


5 SE ELEVATION
MAIN ENTRY 1/8" = 1'-0" @ 24x36"

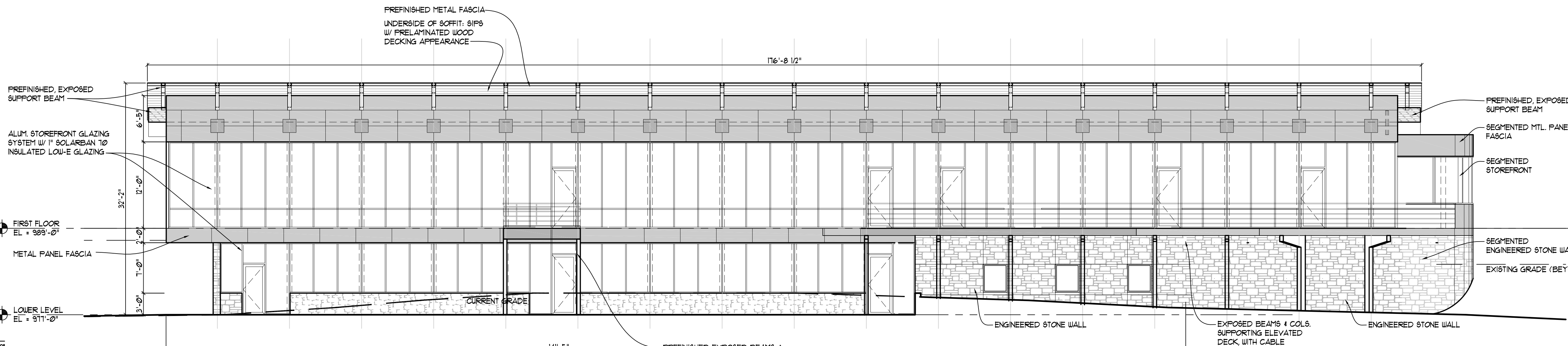
1 NORTHEAST (FRONT) ELEVATION
1/8" = 1'-0" @ 24x36"



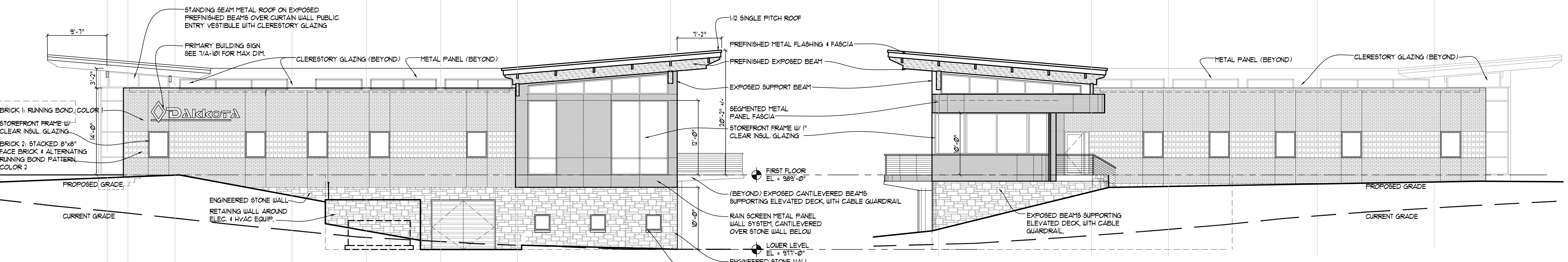
6 NW ELEVATION
TEAM ENTRY 1/8" = 1'-0" @ 24x36"



7 DAKKOTA SIGN: 49.9 SF
2 LOCATIONS 1/4" = 1'-0" @ 24x36"



2 SOUTHWEST (REAR) ELEVATION
1/8" = 1'-0" @ 24x36"



3 NORTHWEST ELEVATION
1/8" = 1'-0" @ 24x36"

4 SOUTHEAST ELEVATION
1/8" = 1'-0" @ 24x36"

Memo

To: Planning Commissioners
From: Kelly VanMarter, Planning Director
Date: 1/11/2013
Re: Aspen Glen Site Plan Approval Extension

Dear Commissioners,

The site plan and impact assessment for the development known as "Aspen Glen" was originally granted approval in 2005. They have been granted 7 subsequent extensions as shown on the attached spreadsheet. As indicated in the attached letter from the petitioner, this project has not proceeded due to economic conditions. There have been no changes to the ordinance or master plan that would impact this project therefore staff recommends approval of the one-year extension.

Sincerely,

Kelly VanMarter
Planning Director

ASPEN GLEN SITE PLAN EXTENSIONS

DATE	TYPES OF APPROVAL
9/26/2005	Original approval by Planning Commission
10/17/2005	Approval of Board of Trustees
10/17/2006	Planning Commission
10/17/2007	Administrative
10/17/2008	Administrative
1/12/2009	Planning Commission
1/12/2010	Plannning Commission
1/12/2011	Administrative
1/14/2012	Administrative

December 17, 2012

GENOA TOWNSHIP

DEC 20 2012

RECEIVED

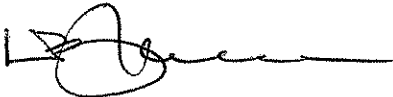
Genoa Township
Kelly VanMarter, Planning Coordinator
2911 Door Rd.
Brighton, MI. 48116

Dear Mrs. VanMarter,

I am requesting a one year extension on my site plan permit on the property located at the Northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad, Sec 6, known as Aspen Glen. I am making this request due to continued economic conditions.

Please contact me if you have questions or concerns. Thank you for your consideration.

Sincerely,



David Zimmerman, President
Bayfield of Howell Inc.
54255 Foss Rd.
Macomb, MI. 48042
586-506-3622
E-mail address: bayfieldz@comcast.net



Site Plan Approval Extension

Genoa Charter Township
2911 Dorr Road, Brighton, Michigan 48116
Phone: (810) 227-5225, Fax: (810) 227-3420
www.genoa.org

2011-2012
2012-2013

Project Information:

Project Name: Aspen Glen **Property Address:** Chilson Road **Parcel No.:** 11-06-400-015

Owner Name: Bayfield of Howell **Address:** 54255 Foss Road, Macomb, 48042 **Phone:** 586-506-3622

Applicant Name: same as owner **Address:** **Phone:**

Type of Approval: Site Plan **Date of PC Approval:** 9/26/05 **Date of Board Approval:** 10/17/05

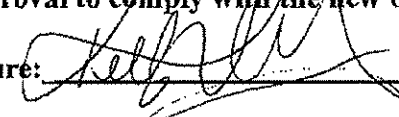
Valid Period for Original Approval: 10/17/05-10/17/06. PC extension granted on 10/16/06 through 10/17/07. Staff granted extensions in 2007 and 2008 good through 10/17/09. PC granted reapproval on 1/12/09 and 1/11/10 good through 1/11/11.

Extension Record:

#1. **Date written application for an extension is filed:** 1/10/11 **Zoning Administrator Determination:**

Approval - there have been no changes to the Zoning Ordinance that would affect the site plan.
This extension is valid through: 1/11/12

Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

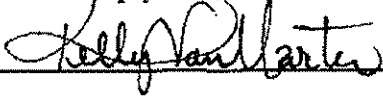
Signature: 

Date: 1/24/2011

#2. **Date written application for an extension is filed:** 1/10/12 **Zoning Administrator Determination:**

Approval - there have been no changes to the Zoning Ordinance that would affect the site plan.
This extension is valid through: 1/11/2013

Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: 

Date: 1/11/2012

NOTE - NEXT YEAR WILL REQUIRE P.C. APPROVAL

January 10, 2012

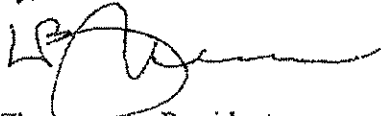
Genoa Township
Kelly VanMarter, Planning Coordinator
2911 Door Rd.
Brighton, MI. 48116

Dear Mrs. VanMarter,

I am requesting a one year extension on my site plan permit on the property located at the Northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad, Sec 6, know as Aspen Glen. I appreciate the ease at which you have approved these extensions in the past.

Thank you for all your help.

Sincerely,



David Zimmerman, President
Bayfield of Howell Inc.
54255 Foss Rd.
Macomb, MI. 48042
586-506-3622
E-mail address: bayfieldz@comcast.net

Memo

To: Planning Commissioners
From: Kelly VanMarter, Planning Director
Date: 1/7/2010
Re: Aspen Glen Site Plan Approval Extension

Dear Commissioners,

The site plan and impact assessment for the development known as "Aspen Glen" was originally granted approval on September 26, 2005 by the Planning Commission and October 17, 2005 by the Board of Trustees. Subsequently, the Planning Commission granted a one-year extension through 10/17/07, staff granted an extension through 10/17/08, and last year, the Planning Commission granted an additional extension through 1/12/10. As indicated in the attached letter from the petitioner, this project has not proceeded due to economic conditions. There have been no changes to the ordinance or master plan that would impact this project therefore staff recommends approval of the one-year extension.

Sincerely,

Kelly VanMarter
Planning Director

vacuum the vehicles, but that would be the extent of it. Shop vacs are utilized for the cleaning.

Dean Tengel indicates he'd like to see the drawings redone to provide for the western access/easement area. He feels with there being no potential use for the asphalted area on the north side of the property, that the asphalt should be removed. Petitioner feels that the cross-access agreement with the neighbor to the west has expired. Dean Tengel would like the petitioner to re-think the parking area to provide for the access, which would eliminate a few parking spaces. The access agreement has not expired according to Kelly VanMarter. The petitioner agrees to do an easement somewhere on the west property line.

Dean Tengel advises petitioner that they should show the sidewalks on their plans so they can place it where they'd like before the adjacent properties do so. James Mortensen indicates that he thinks they should be on the plan, as well. Petitioner agrees to install windows on the façade facing Dorr Road and add them to the concept plan.

The petitioner indicates there are drains in the mechanical room, but the cleaning solutions, oils, etc., will not be stored in that room. The petitioner will state that in the impact statement.

James Mortensen requests language be included in the environmental impact statement that all vehicles used in the business and employee transportation will be properly licensed, registered and in good working order. No other vehicles will be stored on the property.

Planning Commission disposition of petition

- A. Recommendation of Environmental Impact Assessment.
- B. Disposition of Site Plan.

Motion by James Mortensen to table the Site Plan and Environmental Impact Assessment at the request of the petitioner. Support by Dean Tengel. Motion carried unanimously.

OPEN PUBLIC HEARING #2...Request for an extension for site plan and impact assessment approval for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. (Aspen Glen).

Planning Commission disposition of petition.

- A. Disposition of approval extension of the site plan and impact assessment from 1-11-10 thru 1-11-11.

Motion by James Mortensen to approve the extension of the site plan and impact assessment. Support by John McManus. Motion carried unanimously.

Administrative Business:

- *Planners report presented by LSL Planners*

January 6, 2010

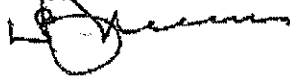
Genoa Township
Kelly VanMarter, Planning Coordinator
2911 Door Rd.
Brighton, MI. 48116

Dear Mrs. VanMarter,

We are requesting a one year extension on our site plan permit on the property located at the Northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad, Sec 6, known as Aspen Glen. We are making this request due to economic conditions.

Please contact us if you have questions or concerns. Thank you for your consideration.

Sincerely,



David Zimmerman, President
Bayfield of Howell Inc.
54255 Foss Rd.
Macomb, MI. 48042
586-506-3622
E-mail address: bayfield2@comcast.net

Memo

To: Planning Commissioners
From: Kelly VanMarter, Planning Director
Date: 1/8/2009
Re: Aspen Glen Site Plan Approval Extension



Dear Commissioners,

The site plan and impact assessment for the development known as "Aspen Glen" was originally granted approval on September 26, 2005 by the Planning Commission and October 17, 2005 by the Board of Trustees. The Planning Commission granted a one-year extension through 10/17/07 and staff granted an additional extension good through 10/17/08.

As amended August 24, 2007, Section 18.09 of the Genoa Charter Township Zoning Ordinance allows administrative approval of site plan, impact assessment and special land use extensions each year for two (2) years. After two (2) years, additional extensions require Planning Commission approval. As indicated in the attached letter from the petitioner, this project has not proceeded due to economic conditions. There have been no changes to the ordinance or master plan that would impact this project therefore staff recommends approval of the one-year extension. Due to the delay in placement of this item on an agenda, I recommend approval be granted from the date of the meeting.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kelly VanMarter", is written over a horizontal line.

Kelly VanMarter
Planning Director

1-12-09 Approved PC Minutes

in the State, County and Township. Support by Dean Tengle. **Motion carried unanimously.**

OPEN PUBLIC HEARING # 2... Request for an extension for site plan and impact assessment approval for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. (Aspen Glen).

Kelly VanMarter advises the Planning Commission that petitioner would be traveling several hours to attend the meeting, so they will not be here.

Planning Commission disposition of petition

- A. Disposition of approval extension for the site plan and impact assessment from 1-12-09 thru 1-12-10.

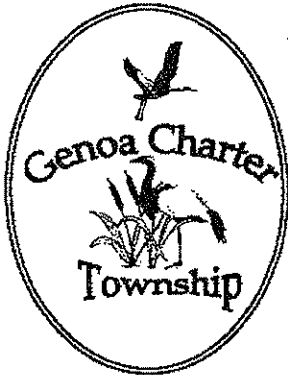
Motion by James Mortensen to extend the site plan and impact assessment from 1/12/09 through 1/12/10 due to the current economic conditions in the State, County and Township. Support by Barbara Figurski. **Motion carried unanimously.**

OPEN PUBLIC HEARING #3... Review of special use application and sketch plan for an existing contractors yard with outdoor storage located at 1150 Victory Drive, Howell, Sec. 5, petitioned by TJ Mark LLC.

James Barnwell appeared before the Planning Commission on behalf of the petitioner. A sketch plan was presented. Residential property is to the west of the property. Industrial is to the north, south and east. He believes the proposed area is conducive to outdoor storage.

Petitioner proposes to place planting along the west side of the property for a screen. There is an existing six foot berm. The existing storage area will be re-graded and the remaining area will have top soil and grass seed applied. Three canopy trees and shrubs are needed for the front of the site. An additional eight canopy trees and 10 evergreen trees will need to be placed in the rear buffer zone (west side) to be in compliance. The Planning Commission may consider a reduction in landscaping on the sides because a storage yard is located to the north and south side of this site. Petitioner agrees to meet the requirements as it relates to the west side.

Jeff Purdy discusses 11/24/08 review letter. The gravel surfacing of the outdoor storage is discussed. The creation of dust must be taken into consideration. Currently, pipe material is stored at this location. Photographs taken today of the site were provided to the Commission for review.



Site Plan Approval Extension

Genoa Charter Township
2911 Dorr Road, Brighton, Michigan 48116
Phone: (810) 227-5225, Fax: (810) 227-3420
www.genoa.org

Project Information:

Project Name: Aspen Glen **Property Address:** Chilson Road **Parcel No.:** 11-06-400-015

2007-2008
2008-2009

Owner Name: Bayfield of Howell **Address:** 54255 Foss Road, Macomb, 48042 **Phone:** 586-506-3622

Applicant Name: same as owner **Address:** **Phone:**

Type of Approval: Site Plan **Date of PC Approval:** 9/26/05 **Date of Board Approval:** 10/17/05

Valid Period for Original Approval: 10/17/05-10/17/06. **Extension Granted on** 10/16/06 through 10/17/07

Extension Record:

#1. **Date written application for an extension is filed:** 9/27/07 **Zoning Administrator Determination:**

- Approval - there have been no changes to the Zoning Ordinance that would affect the site plan. This extension is valid through:** 10/17/08
- Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.**

Signature: [Handwritten Signature]

Date: 9/28/07

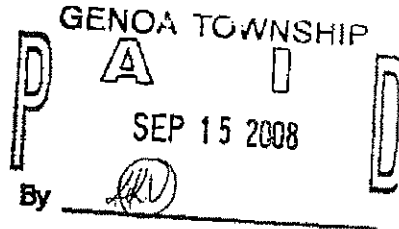
#2. **Date written application for an extension is filed:** 9/12/08 **Zoning Administrator Determination:**

- Approval - there have been no changes to the Zoning Ordinance that would affect the site plan. This extension is valid through:** 10/17/09
- Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.**

Signature: [Handwritten Signature]

Date: 9/16/08

September 12, 2008



Genoa Township
Kelly VanMarter, Planning coordinator
2911 Door Rd
Brighton, Mi 48116

Dear Mrs VanMarter

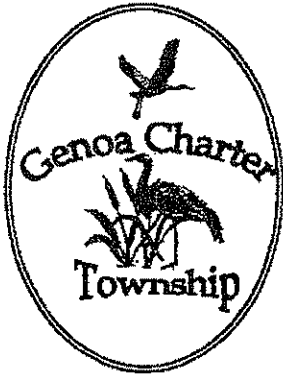
We are requesting a one year extension on our site plan permit on the property located at the Northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad, Sec 6 known as Aspen Glen. We are requesting this due to economic conditions.

Please contact us if you have questions or concerns. Thank you for your consideration.

Regards,

A handwritten signature in black ink, appearing to read "David Zimmerman".

David Zimmerman, President
Bayfield of Howell Inc.
54255 Foss Rd
Macomb, Mi 48042
586-506-3622 or 586-749-5289



Site Plan Approval Extension

Genoa Charter Township
2911 Dorr Road, Brighton, Michigan 48116
Phone: (810) 227-5225, Fax: (810) 227-3420
www.genoa.org

Project Information:

Project Name: Aspen Glen **Property Address:** Chilson Road **Parcel No.:** 11-06-400-015

Owner Name: Bayfield of Howell **Address:** 54255 Foss Road, Macomb, 48042 **Phone:** 586-506-3622

Applicant Name: same as owner **Address:** **Phone:**

Type of Approval: Site Plan **Date of PC Approval:** 9/26/05 **Date of Board Approval:** 10/17/05

Valid Period for Original Approval: 10/17/05-10/17/06. Extension Granted on 10/16/06 through 10/17/07

Extension Record:

#1. **Date written application for an extension is filed:** **Zoning Administrator Determination:**

- Approval - there have been no changes to the Zoning Ordinance that would affect the site plan. This extension is valid through:
- Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: _____

Date: _____

#2. **Date written application for an extension is filed:** 9/27/07 **Zoning Administrator Determination:**

- Approval - there have been no changes to the Zoning Ordinance that would affect the site plan. This extension is valid through: 10/17/08
- Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: Kelly VanHarter

Date: 10/01/07

September 27, 2007

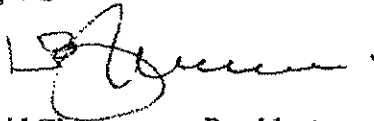
Genoa Township
Kelly VanMarter, Planning Coordinator
2911 Door Rd
Brighton, Mi 48116

Dear Mrs VanMarter

We are requesting a one year extension for our site plan permit for the project on Chilson Road called Aspen Glen. We are requesting this due to economic conditions.

Thank you for your consideration.

Regards

A handwritten signature in black ink, appearing to read 'David Zimmerman', with a stylized flourish at the end.

David Zimmerman, President
Bayfield of Howell, Inc
54255 Foss Rd
Macomb, Mi 48042
586-506-3622 or 586-749-5289

GENOA TOWNSHIP

SEP 11 REC'D

RECEIVED

September 8, 2006

2006 -
2007

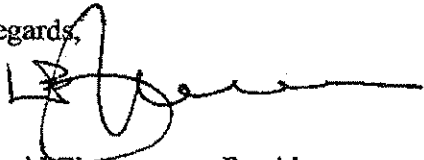
Genoa Township
Kelly VanMarter, Planning coordinator
2911 Door Rd
Brighton, Mi 48116

Dear Mrs VanMarter

We are requesting a one year extension on our site plan permit on the property located at the Northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad, Sec 6 known as Aspen Glen. We are requesting this due to economic conditions.

Please contact us if you have questions or concerns. Thank you for your consideration.

Regards,



David Zimmerman, President
Bayfield of Howell Inc.
54255 Foss Rd
Macomb, Mi 48042
586-506-3622 or 586-749-5289

and Kelly

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
WORK SESSION
OCTOBER 10, 2006
6:30 P.M.
AGENDA**

CALL TO ORDER: The meeting was called to order at 6:33 p.m. Present constituting a quorum for conducting business were: Chairman Don Pobuda, Teri Olson, Barbara Figurski, James Mortensen, Curt Brown. Tesha Humphriss was present on behalf of Tetra Tech. Jeff Purdy is present on behalf of LSL.

APPROVAL OF AGENDA: **Motion** by Barbara Figurski to approve agenda. Seconded by Teri Olson. Motion carried.

DISCUSSION: of Agenda items of the regular meeting of the Planning Commission.

DISCUSSION: of general items.

ADJOURNMENT: The work session of the Planning Commission was adjourned at 6:57 p.m.

**GENOA TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
OCTOBER 10, 2006
7:00 P.M.
AGENDA**

CALL TO ORDER: The public hearing was called to order at 7:03 p.m.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited and a moment of silence was observed.

APPROVAL OF AGENDA: **Motion** by Barbara Figurski to approve agenda. Second by Teri Olson. Motion carried.

CALL TO THE PUBLIC: (*Note: The Board will not begin any new business after 10:00 p.m.*)

OPEN PUBLIC HEARING # 1... Review of request for an extension of a site plan and environmental impact assessment for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. (Aspen Glen).

No representative of the petitioner is present. They contacted the Commission in writing asking for an extension due to economic issues.

Planning Commission disposition of petition

- A. Recommendation regarding impact assessment.
- B. Disposition of site plan.

Motion by James Mortensen that a recommendation be made to the Township Board that the request for extension for the impact assessment be granted for Aspen Glen Condominiums. Support by Barbara Figurski. **Motion carried unanimously.**

Motion by James Mortensen that site plan for Aspen Glen Condominiums be extended for one year. Support by Barbara Figurski. **Motion carried unanimously.**

OPEN PUBLIC HEARING # 2... Review of a special use application, site plan and impact assessment for an expansion of a special use to install an additional drive-thru lane located at 2235 E. Grand River, Sec. 6, petitioned by CVS Realty Corp. (06-17)

Terry Saylor is present on behalf of the petitioner. Chairman Pobuda indicates that the study was well prepared and thanks Mr. Saylor for his efforts. Mr. Saylor discusses the water basin size. The water basin was only sized to accommodate the current amount of pavement, rather than the amount of pavement contained in the proposed plan. Therefore, the plans have been updated to accommodate those changes. Additionally, the new plans address the lack of landscaping. The Z.B.A. will need to approve the wetlands setback.

Mr. Saylor has examined the traffic patterns in conjunction with the curb cut and finds that it is appropriate for existing traffic. He feels that the plans will not cause any change in traffic patterns significant enough to substantiate any changes in the curb cut.

Jeff Purdy indicates that a special land use permit would be necessary. Two special land use conditions are not complied with and will require variances from the Z.B.A. One is that drive-thru lanes are limited to one. The other is that there is a limit of two directional signs. Currently, four exist on the property and petitioner seeks one additional sign. This would be on the canopy. The reconfiguration of the driveway would violate the 25' foot setback from the wetland area. It shouldn't directly impact the wetland. One variance has already been granted in the past. The Z.B.A. would have to approve that.

**GENOA TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW**

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD

APPLICANT: Bayfield of Howell, Inc.

OWNER'S ADDRESS: 54255 Foss Road, Macomb Township, MI 48042

SITE ADDRESS: East side Chilson Road, North of C. & O. Railroad

TAX CODE NUMBER: 4711-06-400-015-201-47070

PHONE: (586) 749-5289

LOCATION AND BRIEF DESCRIPTION OF SITE:

27.8 acres of gently rolling undeveloped site in SE 1/4, Section 6, Genoa Township,
on East side of Chilson Road, zoned MDR and including Marion-Genoa County Drain
Branch No. 3

THE PROPERTY IS OWNED BY: Bayfield of Howell, Inc.

BRIEF STATEMENT OF PROPOSED USE:

Construction of New Residential Duplex Condominium Development with 96 units,
Private Roads, and Private Park areas

THE FOLLOWING BUILDINGS ARE PROPOSED:

48 Buildings with 2 units per Building. Each unit will have a full basement, 2 car garage,
with the base unit containing 2 bedrooms, 2 baths and 1,560 S.F. An optional second
floor loft with 476 S.F. will be available.

I hereby certify that all information and data attached to and made part of this application is true and accurate to the best of my knowledge and belief.

BY: 

ADDRESS: 54255 Foss Road, Macomb Township, MI 48042

Raymond J. Donnelly, RLS # 21563
ARCHITECT OR ENGINEER'S SIGNATURE

*AGENT (acting for owner) SIGNATURE

**A letter of Authorization from Property Owner is needed.*

FAX: 586-749-5289

GENOA TOWNSHIP

Regular Meeting

Oct. 17, 2005

MINUTES

Supervisor McCrie called the regular meeting of the Genoa Township Board to order at 6:30 p.m. The Pledge of Allegiance was then said. The following board members were present constituting a quorum for the transaction of business: Gary McCrie, Paulette Skolarus, Robin Hunt, Jean Ledford, Todd Smith, Jim Mortensen and Steve Wildman. Also present were Township Manager Michael Archinal and eight persons in the audience.

A Call to the Public was made with no response.

Approval of Consent Agenda:

Moved by Hunt, supported by Mortensen, to approve the consent agenda with the tabling of the contract with Pfeffer, Hanniford and Palka and the moving of Minutes of 10/05/05 to the regular agenda for review. The motion carried unanimously.

1. Payment of Bills.

2. Approval of Minutes: Oct. 3, 2005 Oct. 11, 2005

3. Request approval of a three-year contract with Pfeffer, Hanniford & Palka for services related to the annual audit of the township books as recommended by the Administrative Committee. (Tabled)

4. Request for approval of an amendment to the township investment policy practices as submitted by Hunt.

Approval of Regular Agenda:

Moved by Ledford, supported by Smith, to approve for consideration individual petitions as follows in the regular agenda. The motion carried unanimously.

5. Request for approval of the impact assessment (03/14/05) corresponding to the final site plan (09/07/05) for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6 petitioned by Bayfield Homes of Howell, Inc. (Aspen Glen), and discussed by the Planning Commission 09/26/05.

Moved by Hunt, supported by Smith, to approve the impact assessment corresponding to site plan conditioned upon the appropriate easement being acquired from the Gas Company prior to the issuance of a land use permit. The motion carried unanimously.

OPEN PUBLIC HEARING # 1... Review of impact assessment and final site plan for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. (05-26)

Planning Commission disposition of petition

- A. Recommendation regarding impact assessment.
- B. Recommendation regarding site plan.

Mr. David Zimmerman and Mr. Paul VanDorin of Bayfield of Howell, Inc., 54255 Foss Road, Macomb, MI 48042 was present to represent the petition.

Mr. Zimmerman stated that a few minor changes were made.

Mr. Borden reviewed his letter dated September 20, 2005.

1. Percentage of exterior building materials must be provided meeting the standards of Section 12.01.03.
2. Building Architecture and materials must be presented to the Planning Commission for approval.
3. We recommend that sidewalk connections be provided along the west side of Maple Point Lane and the south side of Oak Terrace Way.
4. The amount of park area provided has been reduced from that shown on the preliminary plan. Many of the park areas are small and fragmented and do not provide quality areas for recreation activities.
5. Agency approvals are required prior to final site plan approval.

Mr. Van Doren commented on the following:

The brick on the exterior of the building is about 90%. The side gables and front gable will be vinyl siding. Therefore approximately 10% of the building will be vinyl. They plan to comply with all of the other items noted.

Chairman Mortensen inquired about the Southwest Gas Storage letter dated September 15, 2005. Mr. Zimmerman stated that they are beginning preparation of the Amendment to the previously recorded Agreements that will modify the easement description of their access roadway, the wellhead and associated pipeline.

Ms. Humphriss reviewed her letter dated August 25, 2005.

1. The site is currently undergoing construction plans reviews with our office for the proposed water main, sanitary sewer, and private roads. The construction plans are in conformance with August 17th final site plan

- drawings. The Livingston County Drain Commissioner's Office is completing a drainage review of the construction plans.
2. The petitioner should provide finalized easement documents for the proposed utilities and road system, Exhibit B drawings should be submitted for our review and approval.

Mr. Zimmerman stated that these issues would be addressed.

The call to the public was made at 7:25 p.m. with no response.

Moved by Mortensen, seconded by Figurski to approve the review of impact assessment and final site plan for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. (05-26) subject to the following:

1. Appropriate easement needs to be obtained from Gas Company prior to land use permit.
2. The petitioner should provide finalized easement documents for the proposed utilities and road system; Exhibit B drawings should be submitted for review and approval.
3. The conditions for site plan approval in February 28, 2005 Planning Commission minutes should be complied with.

The motion carried unanimously.

OPEN PUBLIC HEARING # 2... Review of rezoning application, special use application, impact assessment and site plan for a request to rezone lots 5,6, &7 (11-13-103-005,006,007) on Genoa Business Park Drive in the Genoa One condo development. The request is to rezone from IND to OSD and for a proposed 85,000 sq. ft. medical office building, petitioned by Rand Construction Engineering. (05-27)

Planning Commission disposition of petition

- A. Recommendation regarding rezoning application
- B. Recommendation regarding special use
- C. Recommendation regarding impact assessment.
- D. Recommendation regarding site plan

John Eckstein, Architect, Lindhout Associates architects aia pc, 10465 Citation Drive, Brighton, MI 48116, Wayne M. Perry of Desine, Inc., 2183 Pless Drive, Brighton, MI, Dan Deter of Rand Construction Engineering 1270 Rickett Road, Brighton, MI 48116 Dianna Huckestein, Director of Group Development, Genoa Medical Development/Integrated Health Associates, 2100 Commonwealth, Suite 202 Ann Arbor, MI 48105 were present to represent the petition.

Moved by Skolarus, supported by Mortensen, to approve Amendment No. 2, establishing a base fee of \$149,200.00 annually. This agreement will run through Feb. 23, 2006. The motion carried unanimously.

Moved by Mortensen, supported by Wildman, to approve Amendment No. 3, establishing a base fee of \$429,167.44 annually. This agreement will run through Feb. 23, 2006. The motion carried unanimously.

4. Request for approval of the impact assessment corresponding to a preliminary site plan for a proposed 96-unit condominium development located at the north-east intersection of Chilson Road and the Chesapeake & Ohio Railroad line, in Sec. 6, petitioned by Bayfield Homes of Howell, Inc., as discussed by the Planning Commission 01/10/05.

Moved by Skolarus, supported by Ledford, to approve the impact assessment (revised 03/14/05) corresponding to the preliminary site plan with the following conditions:

1. Approval shall be obtained from the County Drain Commissioner regarding the proposed relocation of the drain easement and that the effected properties will be able to have 10' x 14' wide decks.
2. The Southwest Gas Storage Company must agree, in writing, to the site plan with regard to the road and utilities crossing their easements, with such written documentation being provided at the time of final Site Plan review.
3. The Southwest Gas Storage Company must agree, in writing, to vacate the access easement, which will be replaced by an easement by the developer to permit the gas company to have access to its wellhead, and such easement will be recorded by the time of final Site Plan submittal.
4. The conditions of the Howell Fire Marshall shall be met.
5. The proposed building materials reviewed by the Township Board this evening are acceptable. Brick will be used on 100% of the rear of the buildings and will cover the entire garage front of one garage of every duplex unit. The balance of the buildings will be vinyl siding and brick as depicted on the colored rendering.
6. The wellhead easement will be fenced.
7. Shrubbery and plantings in the detention pond, wellhead, and elsewhere will be shown on the final Site Plan and will be consistent with the Township Ordinance.
8. The Township Board allows the developer to substitute evergreens in 50% of the required greenbelt plantings.
9. The conditions noted in the Township Engineer's letter of January 4, 2005 will be complied with by the time of the construction plan submittal.
10. Three canopy trees will be added along Chilson Road for a total of 21 trees.
11. The roadways in front of Units #1 and #38 will be extended approximately two feet to provide more backing out space for vehicles.

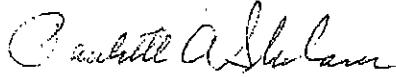
The motion carried unanimously.

A letter was received from Pete and Cil Buckner asking the township to remove a gazebo located at 5324 Versailles, owned by Phil Jennings. Moved by Mortensen, supported by Wildman, to deny the request for the initiation of litigation for removal of the gazebo.

GENOA TOWNSHIP BOARD – Regular Meeting – March 21, 2005

Further, to pursue an amendment to the township-zoning ordinance relative to the construction of gazebos. The motion carried unanimously.

The regular meeting of the township board was adjourned at 7:25 p.m.



Paulette A. Skolarus
Genoa Township Clerk

(PA 03/30/05)

GENOA TOWNSHIP
PLANNING COMMISSION
WORK SESSION
February 28, 2005
6:30 P.M.
MINUTES

The work session of the Planning Commission was called to order by Chairman Don Pobuda at 6:30 p.m. The following commission members were present constituting a quorum for transaction of business: Don Pobuda, James Mortensen, Barbara Figurski, Curt Brown, Teri Olson, and Mark Snyder. Also present was Michael Archinal, Township Manager; Jeff Purdy from Langworthy, Strader, LeBlanc & Associates, Inc. and Tesha Humphriss from Tetra Tech, MPS. By the end of the work session, there were a few persons in the audience.

Items scheduled for action during the regular session of the commission were discussed.

GENOA TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
7:00 P.M.
MINUTES

The regular session of the Planning Commission was called to order by Chairman Don Pobuda at 7:00 p.m.

The Pledge of Allegiance was recited and a moment of silence was observed.

Moved by Figurski, seconded by Brown, to approve the Agenda with the following changes:

1. Public Hearing #2 will be changed as following:
 - A. Recommendation regarding PUD Amendment
 - B. Recommendation regarding Impact Assessment (dated 1/15/05)
 - C. Recommendation regarding Site Plan (dated 1/27/05)

The motion carried unanimously.

The call to the public was made to discuss items not on the agenda. There was no response and the call to the public was closed at 7:04 p.m. Chairman Pobuda noted that the Board will not begin any new business after 10:00 p.m.

OPEN PUBLIC HEARING #1... Review of revised preliminary site plan for a proposed 98-unit condominium development located at the northeast intersection

of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. (PC 05-03)

Planning Commission Disposition of Petition

A. Recommendation regarding revised preliminary Site Plan (dated 2/1/05)

Mr. David Zimmerman of Bayfield Homes was present to represent the petition. He stated that they thought the speed limit on Chilson Road was 35 MPH; however, they were notified by the Road Commission that it is 55. The Road Commission wanted them to move the entrance approximately 250 feet toward the railroad tracks. They were unable to incorporate the boulevard due to this, but feel they are still maintaining a nice entrance to the development.

Commissioner Mortensen noted the Township Engineer's comment #1 in their letter dated February 23rd. They are recommending that an L or T-type dead-end street at the end of the roadway near Buildings #1 and #8 be added to allow ease of vehicles backing out of these buildings. There is currently approximately 8 feet of road extension near these buildings and Commissioner Mortensen suggested adding approximately two more feet. Mr. Zimmerman feels this is a reasonable request and will make that change.

Mr. Purdy reviewed his letter of February 22nd. Since the boulevard has been taken out the entry drive faces directly into the garage of Unit #80. This will be the first thing that people see when they drive into the development. He would like to see this shifted. Mr. Zimmerman stated there is no room to shift anything on this site. It is very tight. After a brief discussion, all commissioners agreed to allow the roadway and Unit #80 to remain where proposed.

Three more canopy trees are required along the Chilson Road frontage. The petitioner will comply.

Ms. Humphriss stated her only concern was mentioned by Commissioner Mortensen and this has been resolved.

The call to the public was made at 7:19 p.m. There was no response and the call to the public was closed.

Moved by Mortensen, seconded by Brown, to approve the revised preliminary Site Plan dated February 1, 2005 for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. with the following conditions:

1. Approval shall be obtained from the County Drain Commissioner regarding the proposed relocation of the drain easement and that the effected properties will be able to have 10 x 14' wide decks.
2. The Southwest Gas Storage Company must agree, in writing, to the site plan with regard to the road and utilities crossing their easements, with

such written documentation being provided at the time of final Site Plan review.

3. The Southwest Gas Storage Company must agree, in writing, to vacate the access easement, which will be replaced by an easement by the developer to permit the gas company to have access to its wellhead, and such easement will be recorded by the time of final Site Plan submittal.
4. The conditions of the Howell Fire Marshall shall be met.
5. The proposed building materials reviewed by the Planning Commission this evening are acceptable. Brick will be used on 100% of the rear of the buildings and will cover the entire garage front, with the exception of the garage door, on one garage of every duplex unit. The balance of the buildings will be vinyl siding.
6. The wellhead easement will be fenced.
7. Shrubbery and plantings in the detention pond, wellhead, and elsewhere will be shown on the final Site Plan and will be consistent with the Township Ordinance. The Planning Commission grants the developer to substitute evergreens in 50% of the required greenbelt plantings.
8. The conditions noted in the Township Engineer's letter of January 4, 2005 will be complied with by the time of construction plan submittal.
9. Three canopy trees will be added along Chilson Road.
10. The roadways in front of Units #1 and #38 will be extended approximately two feet to provide more backing out space for vehicles.

The motion carried unanimously.

OPEN PUBLIC HEARING #2... Review of a site plan application, environmental impact assessment and site plan for a proposed retail building located on the south side of Grand River Avenue at Lawson Drive. Sec. 9, petitioned by Boggio and Associates. (PC 05-06)

Planning Commission Disposition of Petition

- A. Recommendation regarding PUD Amendment
- B. Recommendation regarding Impact Assessment (dated 1/15/05)
- C. Recommendation regarding Site Plan (dated 1/27/05)

Mr. Michael Boggio, the architect for the project, and Mr. Harvey Weiss, the property owner, were present.

Mr. Boggio stated they are proposing to develop on Outlot #1 of the Genoa 24 development. They would like to build a 6,700 square-foot building with 3,700 square feet of retail space and 3,000 square feet for a coffee shop. They are providing 46 parking spaces, no access onto Grand River, and two driveways off of Lawson Drive.

He showed a colored site plan, outlining the landscaping and dumpster location. They are proposing one drive-thru window for the eastern most tenant of the building.



LSL Planning, Inc.

Community Planning Consultants

September 20, 2005

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Subject: Aspen Glen – final site plan review for a 96-unit residential condominium development (Review #2)
Location: East side of Chilson Road, north of C&O Railroad
Applicant: Bayfield of Howell, Inc.
54255 Foss Road
Macomb Twp., MI

Dear Planning Commission:

At your request, we have reviewed the revised final site plan, dated 09/07/05, for a 96-unit residential condominium development. The site is located on the east side of Chilson, north of the C&O Railroad, and is currently zoned MDR Medium Density Residential. Two family duplex dwellings are permitted uses in the MDR. The project previously received preliminary site plan approval from the Township. The proposed project has been reviewed in accordance with the Genoa Township Zoning Ordinance.

A. Summary of Issues

1. Percentage of exterior building materials must be provided meeting the standards of Section 12.01.03.
2. Building Architecture and materials must be presented to the Planning Commission for approval.
3. We recommend that sidewalk connections be provided along the west side of Maple Point Lane and the south side of Oak Terrace Way.
4. The amount of park area provided has been reduced from that shown on the preliminary plan. Many of the park areas are small and fragmented and do not provide quality areas for recreation activities.
5. Agency approvals are required prior to final site plan approval.

B. Process

The Township's condominium approval process, described in the Zoning Ordinance is as follows. The applicant is requesting approval of both the final condominium site plan. The applicant is at step 3 of the following process:

Step	Review	Planning Commission	Township Board
1	Preliminary Site Plan and EIA	Recommendation to Board	Approval
2	Preliminary County and State Permits		
3	Final Site Plan Approval	Recommendation to Board	Approval

C. Site Plan Review

- Density:** The site is located in the MDR zoning district, which permits a maximum density of up to 5 units per acre. The subject property is 27.8 acres, allowing a maximum of 139 units. However, a large portion of the site contains the Marion-Genoa County Drain, which is not developable land. The calculations provided on the site plan indicate the net area of the subject site to be 26.67 acres, resulting in a maximum of 133 units. The site plan proposes 48 duplex dwellings for a total of 96 residential units, which is within Ordinance standards.
- Dimensional Standards:** The required setbacks for MDR and those proposed on the plan are as follows. Building setback dimensions shown on the site plan indicate that the minimum dimensional standards will be met.

District	Lot Size		Minimum Yard Setbacks (feet)				Min. floor area / dwelling	Max. Lot Coverage
	Lot Area (density)	Width (ft.)	Front Yard	Side Yard spacing	Rear Yard	Max. Height		
MDR	5 units / acre	75	20 from road 20 from sidewalk	10 / 20	30	35 ft 2 stories	900 sq. ft.	35% bldg 50% imper
Provided	3.45 units / acre	809	25 from road minimum	10 / 20	30	Approx 23' 2 stories	1560-2033 sq. ft.	16.7% bldg 31.6% imper

- Architecture:** The revised submittal includes building elevations. The drawings identify the use of brick and siding; however, percentages of materials are not provided and must meet the requirements of Section 12.01.03. Proposed colors, building materials and architecture must be presented to the Planning Commission for approval.
- Internal Roadway:** The internal roadway serving the development is 28-feet wide and connects to Chilson Road at the northwesterly corner of the site. An emergency access connection has also been provided at the northeasterly corner of the site between the subject site and the adjacent apartment complex. As noted during review of the preliminary site plan, this connection will benefit both developments, as the subject site and apartment complex each have a single point of access for a large number of residential units. The plan also includes a cross section and identification of materials for the porous grass pavement access road.
- Pedestrian circulation:** Section 12.05.01(a) requires that 5-foot wide concrete sidewalks be provided along all internal streets. Five-foot wide sidewalks are provided through part of the

site. An 8-foot wide bikepath is also shown along Chilson Road and a 6-foot wide crushed limestone or asphalt trail is proposed along the easterly and southerly property lines and along the rear of residences on Streamview Trail.

As part of the preliminary approval, the Planning Commission permitted a limited amount of internal sidewalks due to the presence of the bikcpath along Chilson Road and the 6-foot wide trail through portions of the site. However, we recommend that additional sidewalks be provided to create a completely connected pedestrian system. More specifically, sidewalks should be constructed to fill in the gaps along the west side of Maple Pointe Lane and the south side of Oak Terrace Way. This will also provide a pedestrian friendly route to both the bikepath and trail for those residents at the north end of the development. The sidewalks can meander from adjacent to the curb across driveways and away from the roadway in between driveways. A 20-foot separation will need to be maintained between sidewalks and the front of the garages.

6. **Parking:** Section 14.04 requires that two-family residences provide 2 spaces per dwelling unit. Each unit provides a two car attached garage. In addition, the overall development provides 19 visitor parking spaces. The street is also wide enough to provide on-street parking. Lastly, the garages are setback at least 25 feet from the roadways, providing enough space for vehicles to be parked in driveways without obstructing drivers or pedestrians.
7. **Landscaping:** The landscaping plan specifies the number and general types of plantings proposed for the development.

Location	Amount of Planting Required	Amount of Planting Provided	Additional Landscaping Required
Chilson Rd greenbelt	20 foot greenbelt; 21 canopy trees	20 foot greenbelt; 10 canopies, 13 evergreens and 2 ornamental	Requirement met (a)
Residential street trees	192 canopy trees	192 canopy trees	Requirement met
Detention pond landscaping	19 trees; 190 shrubs	10 canopies; 9 evergreens; 190 shrubs	Requirement met

- a. Section 12.02.01 requires canopy trees; however, the Planning Commission may approve the substitution of evergreen trees for up to 50% of the required plantings. The Planning Commission permitted this substitution as part of the preliminary plan approval.
 - b. Additional evergreen plantings are provided as screening from both the rail line and the gas well area.
8. **Existing Plant Material:** The site plan identifies wooded areas within and around the County Drain and along the northerly property line that are to be preserved. The landscape plan provides a detail of the tree protection measures to be provided.
 9. **Park Areas:** Section 12.06 requires that condominium developments provide a minimum recreational area containing 1,500 square feet for each dwelling unit. This calculation results in the need for 144,000 square feet of recreational area, which is equivalent to 3.3

acres. A note on Sheet CE-2 indicates that 165,435 square feet of park area is provided, which is slightly less than the amount provided on the preliminary plan. A detail has also been added depicting the park areas; however, it should be noted that many of the park areas are small and fragmented and do not provide quality areas for recreation activities.

10. **Entrance features:** The landscape plan identifies shrub/perennial beds, 2 ornamental trees and 2 entryway signs at the development entrance from Chilson Road. The signs are to be affixed to a wall constructed of field cobblestone with limestone caps and a column containing a light fixture. The column is just over 7 feet in height, while the main portion of the wall is just over 3 feet tall.
11. **Exterior lighting:** A note on Sheet CE-2 indicates that each unit will provide two lights, one on each side of the garage, along with the lamps on the entrance piers. The project does not propose street lighting and fixture specifications have been provided for the building mounted lighting.

D. Agency Coordination

Copies of the following approvals on the plan need to be obtained prior to final site plan approval:

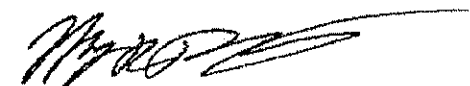
1. Livingston County Drain Commission.
2. Livingston County Road Commission.
3. Southwest Gas Storage Company (condition of the preliminary approval)

E. Impact Assessment

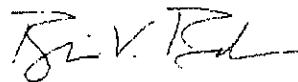
We have reviewed the impact assessment submitted with a revised date of March 14, 2005. The assessment does not anticipate that the proposed development will have any significant impact on natural features, stormwater management, surrounding land uses, public services and utilities, or traffic. The proposed development will be served by public sanitary sewer and water, while stormwater will be directed to a detention basin with a restricted outlet to the Marion-Genoa County Drain. The assessment indicates that anticipated traffic volumes are 54 vehicle trips during peak hours. Further, the assessment identifies empty nesters as the target demographic for the development, which will not create an adverse impact on the public school system.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Sincerely,
LSL PLANNING, INC.



Jeffrey R. Purdy, AICP
Partner



Brian V. Borden, AICP
Project Planner



TETRA TECH, INC.

August 25, 2005

Ms. Kelly Kolakowski
Genoa Township
2911 Dorr Road
Brighton, MI 48116

GENOA TOWNSHIP

AUG 29 REC'D

RECEIVED

**Re: Aspen Glen
Final Site Plan Review #1**

Dear Ms. Kolakowski:

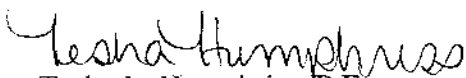
As requested, we have performed a review of the above-referenced site plan as prepared by Raymond J. Donnelly & Associates, Inc., dated August 17, 2005. This site is located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. The petitioner is proposing 48 duplex condominium buildings over a 27.8 acre site for a total of 96 units. We offer the following comments for your consideration:

1. This site is currently undergoing construction plans reviews with our office for the proposed water main, sanitary sewer, and private roads. The construction plans are in conformance with the August 17th final site plan drawings. The Livingston County Drain Commissioner's Office is completing a drainage review of the construction plans.
2. The petitioner should provide finalized easement documents for the proposed utilities and road system. Exhibit B drawings should be submitted for our review and approval.

We recommend the Township consider the above issues prior to taking action on the site plan.

Please call if you have any questions.

Sincerely,


Tesha L. Humphriss, P.E.
Project Manager

:cpl

Copy: Mr. Gary McCrie, Genoa Township
Mr. Raymond Donnelly, RJD Surveyors

HOWELL AREA FIRE DEPARTMENT

FIRE MARSHAL DIVISION

1211 W Grand River

Howell, MI 48843

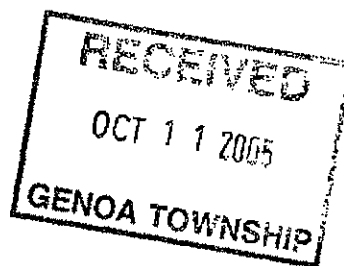
517-546-0560

Fax: 517-546-6011

To: Amy Ruthig **Date:** September 12, 2005
Company: Genoa Twp **Pages:** 1, including this cover sheet.
VIA: E-Mail
From: Les Rodwell, Fire Marshal
lrodwell@howellareafd.org
Subject: Aspen Glen final site plan, Genoa Township

COMMENTS:

I have reviewed the above listed site plan date 9/7/05 and find that it is **satisfactory** as presented. Any changes in this site plan shall be submitted to the Howell Area Fire Department for additional approval. If there is anything further that you need, please feel free to give me a call.



Environmental Impact Assessment

"Aspen Glen"

Proposed 96 Unit Residential Duplex Condominium Development

Part of the Southeast $\frac{1}{4}$ of Section 6
Genoa Township, Michigan

December 1, 2004

-
Revised February 1, 2005
(Dust Control Note Added)

-
Revised March 14, 2005
(Offsite Sanitary Sewer System Connection)

Prepared by:
Raymond J. Donnelly & Associates, Inc.
1853 E. Maple Road
Troy, Michigan 48063-4207
(248) 689-5555
Fax (248) 689-5677
www.RJDSurveyors.com

RJD&A Project No 2004-156

A. Name and address of person responsible for preparation of the impact assessment and a brief statement of their qualifications.

Raymond J. Donnelly, RLS, and president of Raymond J. Donnelly & Associates, Inc., has prepared this Impact Assessment on behalf of the developer, Bayfield of Howell, Inc. Mr. Donnelly has been a Professional Surveyor and Site Development Consultant on similar types of projects for over 30 years. Mr. Donnelly's firm is located at 1853 E. Maple Road, Troy, Michigan 48083.

B. Map(s) and written description/analysis of the project site including all existing structures, manmade facilities, and natural features. The analysis shall also include information for areas within 10 feet of the property. An aerial photograph or drawing may be used to delineate these areas.

The proposed Aspen Glen site consists of a 27.8 acre parcel of undeveloped land, which lies on the east side of Chilson Road, approximately ½ mile south of Grand River Avenue. The site is bounded on the south by the C&O Railroad, on the east by "Grand Oaks West Industrial Park," and on the north by "Lakeshore Village Apartments." The site contains an existing "Panhandle Eastern Gas Storage Facility and Pipeline," and an old dairy barn in the northwest corner. Also, the Marion-Genoa County Drain Branch No. 3 traverses the parcel.

C. Impact on natural features: A written description of the environmental characteristics of the site prior to development and following development, i.e., topography, soils, wildlife, woodlands, mature trees (eight inch caliper or greater), wetlands, drainage, lakes, streams, creeks or ponds. Documentation by a qualified wetland specialist shall be required wherever the Township determines that there is a potential regulated wetland. Reduced copies of the Existing Conditions Map(s) or aerial photographs may accompany written material.

The project site was farmed prior to 1996 (at least that portion lying west of the Marion-Genoa Drain). The site consists of generally rolling terrain with a few oak and ash trees dotting the otherwise open parcel. The property lines and the banks of the Marion-Genoa County Drain do contain windrows of trees and small brush. A wetlands determination was conducted at the site in October of 2004 by Insight Environmental Services, Inc. of Howell. Insight observed minimal wetland vegetation within the base of the county drain channel, and it was considered part of the watercourse. The proposed Aspen Glen 96 residential duplex condominium development will have minimal impact on the existing site conditions, especially since the proposed development will not encroach into the Marion-Genoa Drain. No wildlife was encountered during various site visits during October of 2004, and as stated above, the minimal wetland areas are within the banks of the drain.

- D. Impact on stormwater management: Description of measures to control soil erosion and sedimentation during grading and construction operations and until a permanent ground cover is established. Recommendations for such measures may be obtained from County Soil Conservation Service.**

The site development will consist of grading, installation of utilities, roads, and construction of the duplex units. Specific soil erosion control and sedimentation measures will be implemented to limit impact on the Marion-Genoa Drain watershed area. The soil erosion measures will consist of silt fencing, low point inlet filters, sedimentation control pond, storm water detention pond, restricted storm water discharge outlets, soil stabilization and restoration.

- E. Impact on surrounding land used: Description of the types of proposed uses and other man made facilities, including any project phasing, and an indication of how the proposed use conforms or conflicts with existing and potential development patterns. A description shall be provided of any increases of light, noise or air pollution which could negatively impact adjacent properties.**

The proposed Aspen Glen development will be considerably less dense (3.5 units per acre) than the ordinance allows for medium density residential parcels. The duplex nature of the development will provide a smooth transition from the "Lakeshore Village Apartments" along the north property line to the suburban residential parcels fronting Chilson Road. The Genoa-Oceola Wastewater Treatment Facility sits on the west side of Chilson Road, and the C&O Railroad is to the south. Aspen Glen will produce the minimal light and noise consistent with this type of residential development and will not have a negative impact on the adjacent properties.

- F. Impact on public facilities and services: Describe the number of expected residents, employees, visitors, or patrons, and the anticipated impact on public schools, police protection and fire protection. Letters from the appropriate agencies may be provided, as appropriate.**

The intended demographic for the Aspen Glen duplex development is 55 and over, "empty nesters," who wish to travel and enjoy the benefits of a condominium lifestyle. With only 96 units proposed, we expect the development population to be less than 250 persons. Considering this demographic, there will be minimal impact on public schools, police protection and fire protection.

- G. Impact on public utilities: Describe the method to be used to service the development with water and sanitary sewer facilities, the method to be used to control drainage on the site and from the site, including runoff control during periods of construction. For sites serviced with sanitary sewer, calculations for pre- and post development flows shall be**

provided in comparison with sewer line capacity. Expected sewage rates shall be provided in equivalents to a single family home. Where septic systems are proposed, documentation or permits from the Livingston County Health Department shall be provided.

The proposed Aspen Glen will be serviced with public sanitary sewer and public watermain extended to the parcel through easements in the adjacent "Grand Oaks West Industrial Park" and "Lakeshore Village Apartments" respectively. The on-site sanitary sewer will be a gravity system connected to the existing pump station in Victory Drive. The public water supply will be a looped system, and stubs will be provided within the Chilson Road right-of-way for future extensions by the Township. Storm water runoff will be directed to a detention basin with a restricted outlet to the Marion-Genoa County Drain.

The development of 96 units will generate approximately 25,000 gallons per day of sewage (250 persons x 100 gppd), which equates to 0.05 cfs. The existing 8 inch Sanitary Sewer lateral, where the connection is to be made, has a capacity of 0.86 cfs. This is more than adequate to accommodate the proposed duplex development.

- H. **Storage and handling of any hazardous materials: A description of any hazardous substances expected to be used, stored or disposed of on the site. The information shall describe the type of materials, location within the site and method of containment. Documentation of compliance with federal and state requirements, and a Pollution Incident Prevention Plan (PIPP) shall be submitted, as appropriate.**

There is presently a "Panhandle Eastern Gas Storage Well and Pipeline" on the subject parcel, which is confined by a fenced in area. There is no known evidence of any leakage from this facility. There will not be any storage or uses of hazardous substances associated with this new development.

- I. **Impact on Traffic and Pedestrians: A description of the traffic volumes to be generated based on national reference documents, such as the most recent edition of the *Institute of Transportation Engineers Trip Generation Manual*, other published studies or actual counts of similar uses in Michigan.**

The proposed Aspen Glen development of 96 units will generate an average of 54 trips during peak hours according to the 1991 ITE Trip Generation Manual, which provides minimal impact on the present Chilson Road traffic volume. (6912 total trips per day per the Livingston County Road Commission).

Since the demographic of Aspen Glen favors a retirement aged resident, the inbound and outbound vehicle trips during peak traffic hours will be negligible.

Dust Control

The developer and his sub-contractors will implement the measures necessary during the construction phase of this project to limit dust from affecting neighboring parcels or the Chilson Road right-of-way.

Conclusion

The subject parcel consists of gently sloping, undeveloped land, with many constraints that have delayed the development for some time. The proposed development of 96 duplex units will be a definite enhancement to the area and provide an affordable, quality housing community to those wishing to enjoy an independent lifestyle without the burden of maintaining a single family residence.

RECEIVED
JAN 17 2006
DEPT. OF PUBLIC WORKS
DIVISION OF PUBLIC UTILITIES

"ASPEN GLEN"

A RESIDENTIAL DUPLEX CONDOMINIUM GENOA TOWNSHIP, MICHIGAN

OWNER / DEVELOPER: DAVE ZIMMERMAN OR PAUL VAN DOORNE
BAYFIELD OF HOWELL, INC.
54255 FOSS ROAD
MACOMB TOWNSHIP, MI 48042
PH: (586) 749-5289 FAX: (586) 749-5289

CONSULTANT: RAYMOND J. DONNELLY, R.L.S., PRESIDENT
RAYMOND J. DONNELLY & ASSOCIATES, INC.
1853 E. MAPLE ROAD
TROY, MI 48083
PH: (248) 689-5555 FAX: (248) 689-5677

LANDSCAPE ARCHITECT: FREDERICK J. VERESH, L.A.
VERESH & ASSOCIATES
1100 N. OPDYKE ROAD
AUBURN HILLS, MI 48326
PH: (248) 373-9092 FAX: (248) 373-8933

LEGAL DESCRIPTION

LAND IN THE TOWNSHIP OF GENOA, LIVINGSTON COUNTY, MICHIGAN,
DESCRIBED AS FOLLOWS:

PARCEL 2-B:

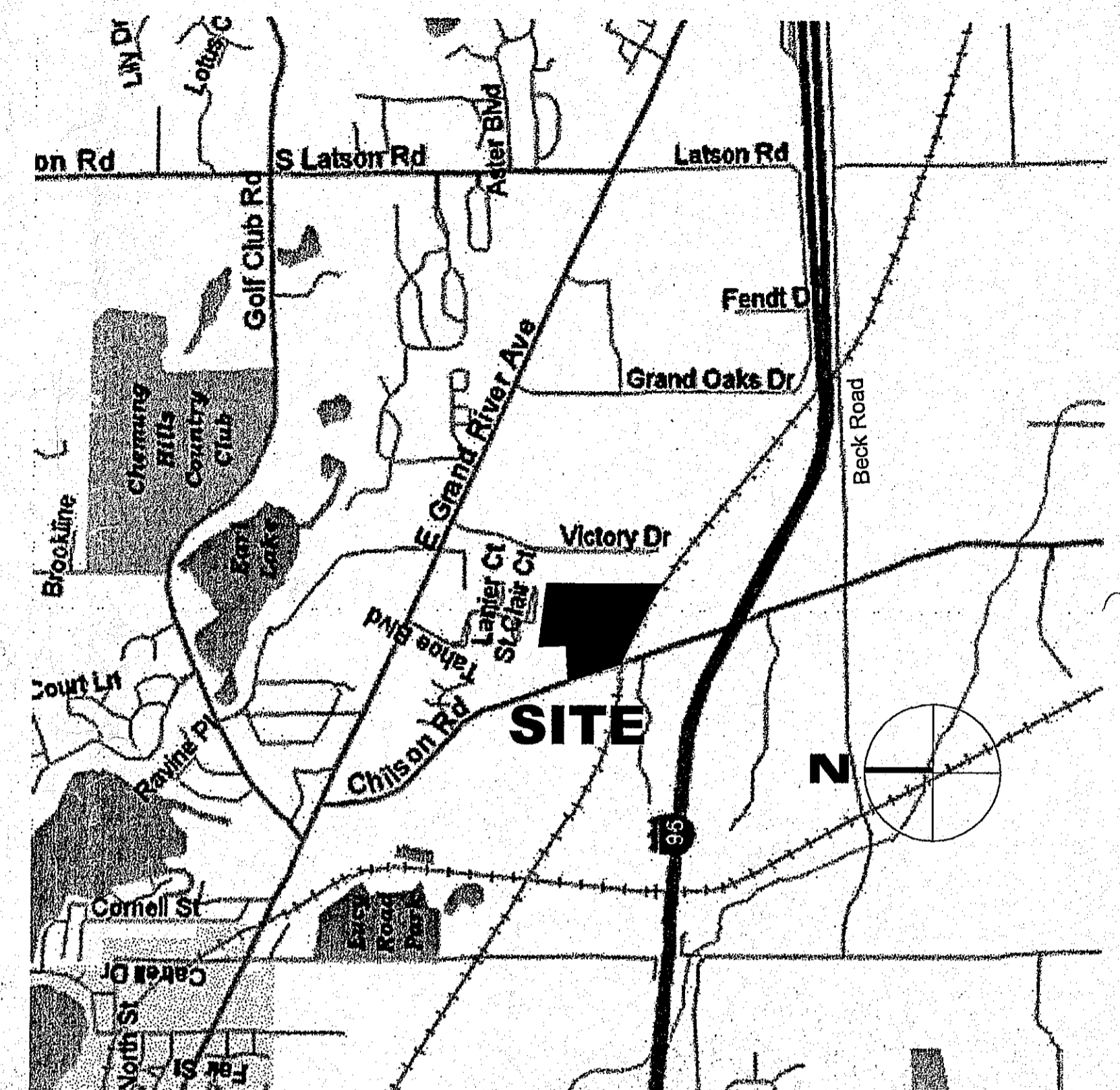
PART OF THE SOUTHEAST ¼ OF SECTION 6, TOWN 2 NORTH, RANGE 5 EAST, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE EAST ¼ CORNER OF SAID SECTION 6; THENCE ALONG THE NORTH LINE OF "GRAND OAKS WEST INDUSTRIAL PARK," A SUBDIVISION AS RECORDED IN LIBER 30 OF PLATS ON PAGES 1-5 OF LIVINGSTON COUNTY RECORDS, SOUTH 86 DEGREES 35 MINUTES 09 SECONDS WEST, 330.00 FEET; THENCE ALONG THE WEST LINE OF SAID SUBDIVISION, SOUTH 01 DEGREE 04 MINUTES 01 SECOND EAST, 351.89 FEET; THENCE CONTINUING ALONG SAID WEST LINE, SOUTH 86 DEGREES 35 MINUTES 09 SECONDS WEST, 100.00 FEET; THENCE CONTINUING ALONG SAID WEST LINE, SOUTH 07 DEGREES 28 MINUTES 54 SECONDS WEST, 658.72 FEET TO THE POINT OF BEGINNING OF THE PARCEL TO BE DESCRIBED; THENCE CONTINUING ALONG SAID WEST LINE, SOUTH 07 DEGREES 28 MINUTES 54 SECONDS WEST, 1427.53 FEET; THENCE ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF THE C&O RAILROAD, NORTHWESTERLY ON AN ARC LEFT, HAVING A LENGTH OF 893.38 FEET, A RADIUS OF 2834.50 FEET, A CENTRAL ANGLE OF 18 DEGREES 03 MINUTES 31 SECONDS AND A LONG CHORD WHICH BEARS NORTH 67 DEGREES 50 MINUTES 07 SECONDS WEST, 889.69 FEET; THENCE ALONG THE CENTERLINE OF CHILSON ROAD (66 FOOT WIDE RIGHT-OF-WAY), NORTH 18 DEGREES 44 MINUTES 40 SECONDS WEST, 809.27 FEET; THENCE NORTH 89 DEGREES 00 MINUTES 29 SECONDS EAST, 487.21 FEET; THENCE NORTH 01 DEGREE 06 MINUTES 44 SECONDS WEST, 408.86 FEET; THENCE SOUTH 82 DEGREES 31 MINUTES 05 SECONDS EAST, 797.47 FEET, TO THE POINT OF BEGINNING.

PARCEL CONTAINS 27.80 ACRES

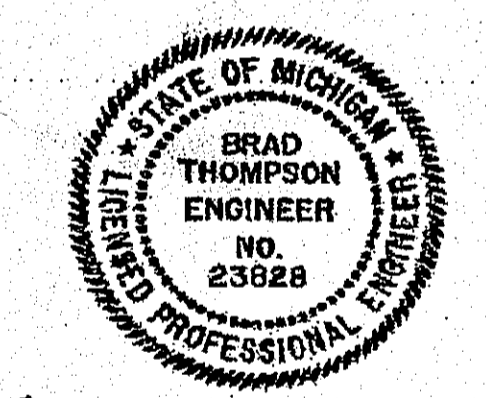
TAX ITEM NO. 11-06-400-015-201-47070

PROJECT DRAWINGS

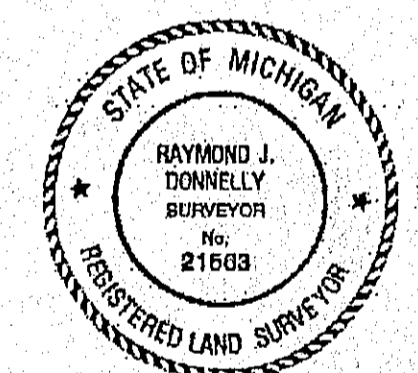
- CE-0 COVER SHEET
- CE-1 SURVEY PLAN OF EXISTING CONDITIONS
- CE-1A SURVEY PLAN OF EXISTING CONDITIONS
- CE-2 FINAL SITE PLAN
- CE-3 SOIL EROSION PLAN AND OVERALL GRADING PLAN
- CE-3A SOIL EROSION AND SEDIMENTATION DETAILS
- CE-4 SANITARY SEWER LAYOUT
- CE-5 WATER MAIN LAYOUT AND STATIONING
- CE-6 SANITARY SEWER AND WATER MAIN PLAN
- CE-7 SANITARY SEWER AND WATER MAIN PLAN
- CE-8 SANITARY SEWER AND WATER MAIN PLAN
- CE-9 SANITARY SEWER AND WATER MAIN PLAN
- CE-10 SANITARY SEWER AND WATER MAIN PLAN
- CE-11 SANITARY SEWER AND WATER MAIN PLAN
- CE-11A WATER MAIN PROFILES
- CE-11B WATER MAIN PROFILES
- CE-12 STORM SEWER LAYOUT
- CE-13 STORM SEWER PLAN AND PROFILE
- CE-14 STORM SEWER PLAN AND PROFILE
- CE-15 STORM SEWER PLAN AND PROFILE
- CE-16 STORM SEWER PLAN AND PROFILE
- CE-17 STORM SEWER PLAN AND PROFILE
- CE-18 STORM SEWER PLAN AND PROFILE
- CE-19 DRAINAGE DISTRICT PLAN
- CE-20 DETENTION POND DETAILS AND CALCULATIONS
- CE-21 STORM SEWER DESIGN AND CALCULATIONS
- CE-22 EXISTING MARION-GENOA COUNTY DRAIN
- CE-23 PROPOSED MARION-GENOA COUNTY DRAIN
- CE-23A MARION-GENOA COUNTY DRAIN PROFILE
- CE-24 ROAD LAYOUT AND STATIONING
- CE-25 SITE GRADING AND PAVING PLAN
- CE-26 SITE GRADING AND PAVING PLAN
- CE-27 SITE GRADING AND PAVING PLAN
- CE-28 SITE GRADING AND PAVING PLAN
- CE-29 SITE GRADING AND PAVING PLAN
- CE-30 CHILSON ROAD ENTRANCE PLAN
- CE-31 LANDSCAPE PLAN
- CE-31A LANDSCAPE PLAN/DETAILS
- CE-32 STORM DRAIN NOTES AND DETAILS
- CE-32A SOUTHWEST GAS EASEMENT AND DETAILS
- CE-33 MHOG SWATH STANDARD SANITARY DETAILS
- CE-34 MHOG SWATH STANDARD SANITARY DETAILS
- CE-35 MHOG SWATH STANDARD WATER MAIN DETAILS
- CE-36 GENOA/OCEOLA TOWNSHIP STANDARD DETAILS



LOCATION MAP
NO SCALE



Brad F. Thompson
BRAD F. THOMPSON, P.E., P.S., NO. 23828



Raymond J. Donnelly
RAYMOND J. DONNELLY, P.S., NO. 21663

Reviewed by Authority Engineer, Tetra Tech
for compliance with Authority Standards.
 APPROVED
 APPROVED WITH CONDITIONS
 REVISE AND RESUBMIT
 NOT APPROVED
BY *Louise Voukhanova*
DATE *1-13-06*

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
W 061045 MAR 27 '06

EXAMINED AND APPROVED FOR COMPLIANCE WITH ACT 350, P.A. 1976
1-03-06 REVISED PER ENGINEERING REVIEW No. 3
12-16-05 REVISED PER ENGINEERING REVIEW No. 2
12-01-05 REVISED PER LIVINGSTON COUNTY DRAIN COMMISSION
10-28-05 REVISED PER CLIENT, TETRA-TECH, L.C.R.C. & LIVINGSTON COUNTY DRAIN COMMISSION
9-27-05 REVISED PER ENGINEERING REVIEW No. 1
06-07-05 ISSUED CONSTRUCTION PLANS FOR REVIEW
03-11-05 REVISED PER L.C.D.C.
02-01-05 ENTRY ROAD & BLDG LAYOUT PER L.C.R.C. & INFO PER PLANNING REVIEW
12-22-04 REVISED PER PRELIMINARY SITE PLAN REVIEW No. 1 BY FIRE DEPT., ENGINEERING CONSULTANT & PLANNING CONSULTANT

Construction Plans

SEE DETAIL BELOW FOR TIE FROM GOVERNMENT CORNER TO THE POINT OF BEGINNING

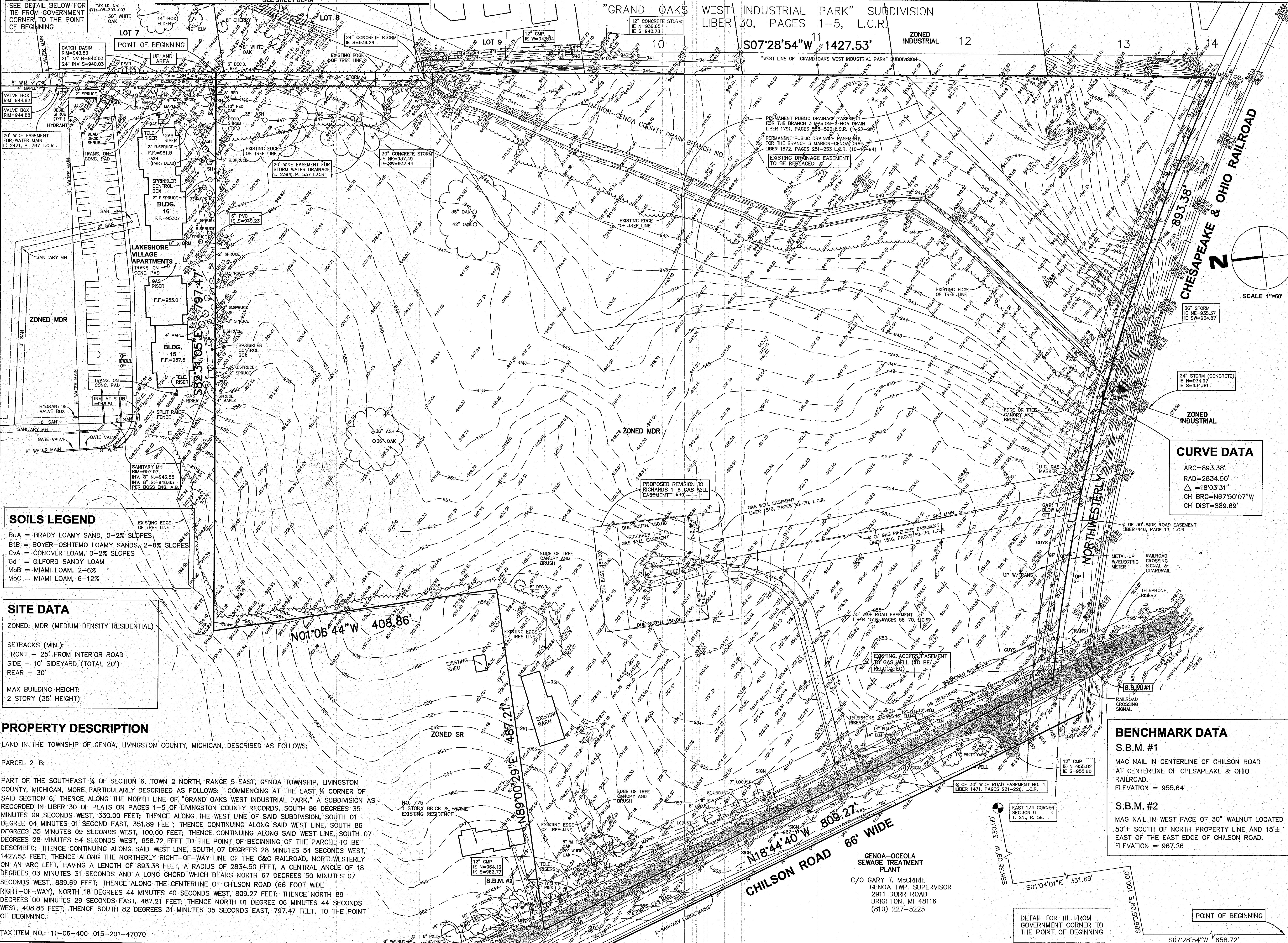
TAX ID. NO. 4711-09-303-007
30" WHITE OAK

SEE SHEET CE-1A

"GRAND OAKS WEST INDUSTRIAL PARK" SUBDIVISION
LIBER 30, PAGES 1-5, L.C.R.

S07°28'54"W 1427.53'

ZONED INDUSTRIAL 12



SOILS LEGEND

BuA = BRADY LOAMY SAND, 0-2% SLOPES
 BtB = BOYER-OSHTEMO LOAMY SANDS, 2-8% SLOPES
 CVA = CONOVER LOAM, 0-2% SLOPES
 Gd = GILFORD SANDY LOAM
 MoB = MIAMI LOAM, 2-6%
 MoC = MIAMI LOAM, 6-12%

SITE DATA

ZONED: MDR (MEDIUM DENSITY RESIDENTIAL)

SETBACKS (MIN.):
 FRONT - 25' FROM INTERIOR ROAD
 SIDE - 10' SIDEYARD (TOTAL 20')
 REAR - 30'

MAX BUILDING HEIGHT:
 2 STORY (35' HEIGHT)

PROPERTY DESCRIPTION

LAND IN THE TOWNSHIP OF GENOA, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS:

PARCEL 2-B:

PART OF THE SOUTHEAST 1/4 OF SECTION 6, TOWN 2 NORTH, RANGE 5 EAST, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE EAST 1/4 CORNER OF SAID SECTION 6; THENCE ALONG THE NORTH LINE OF "GRAND OAKS WEST INDUSTRIAL PARK," A SUBDIVISION AS RECORDED IN LIBER 30 OF PLATS ON PAGES 1-5 OF LIVINGSTON COUNTY RECORDS, SOUTH 86 DEGREES 35 MINUTES 09 SECONDS WEST, 330.00 FEET; THENCE ALONG THE WEST LINE OF SAID SUBDIVISION, SOUTH 01 DEGREE 04 MINUTES 01 SECOND EAST, 351.89 FEET; THENCE CONTINUING ALONG SAID WEST LINE, SOUTH 86 DEGREES 35 MINUTES 09 SECONDS WEST, 100.00 FEET; THENCE CONTINUING ALONG SAID WEST LINE, SOUTH 07 DEGREES 28 MINUTES 54 SECONDS WEST, 658.72 FEET TO THE POINT OF BEGINNING OF THE PARCEL TO BE DESCRIBED; THENCE CONTINUING ALONG SAID WEST LINE, SOUTH 07 DEGREES 28 MINUTES 54 SECONDS WEST, 1427.53 FEET; THENCE ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF THE C&O RAILROAD, NORTHWESTERLY ON AN ARC LEFT, HAVING A LENGTH OF 893.38 FEET, A RADIUS OF 2834.50 FEET, A CENTRAL ANGLE OF 18 DEGREES 03 MINUTES 31 SECONDS AND A LONG CHORD WHICH BEARS NORTH 67 DEGREES 50 MINUTES 07 SECONDS WEST, 889.69 FEET; THENCE ALONG THE CENTERLINE OF CHILSON ROAD (66 FOOT WIDE RIGHT-OF-WAY), NORTH 18 DEGREES 44 MINUTES 40 SECONDS WEST, 809.27 FEET; THENCE NORTH 89 DEGREES 00 MINUTES 29 SECONDS EAST, 487.21 FEET; THENCE NORTH 01 DEGREE 06 MINUTES 44 SECONDS WEST, 408.86 FEET; THENCE SOUTH 82 DEGREES 31 MINUTES 05 SECONDS EAST, 797.47 FEET, TO THE POINT OF BEGINNING.

TAX ITEM NO.: 11-06-400-015-201-47070

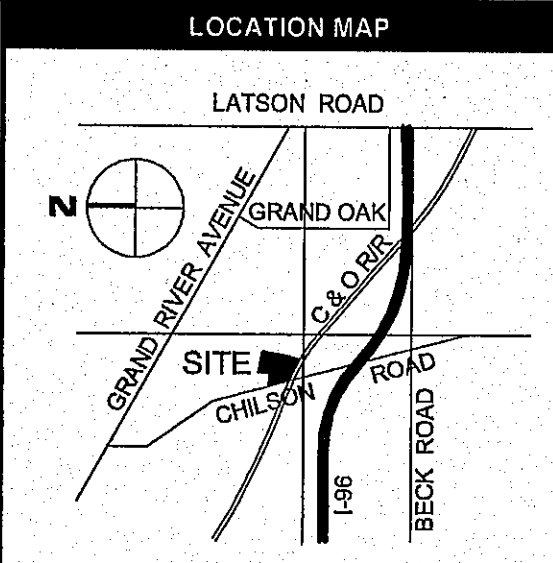
CURVE DATA

ARC=893.38'
 RAD=2834.50'
 Δ=18°03'31"
 CH BRG=N67°50'07"W
 CH DIST=889.69'

BENCHMARK DATA

S.B.M. #1
 MAG NAIL IN CENTERLINE OF CHILSON ROAD AT CENTERLINE OF CHESAPEAKE & OHIO RAILROAD.
 ELEVATION = 955.64

S.B.M. #2
 MAG NAIL IN WEST FACE OF 30" WALNUT LOCATED 50'± SOUTH OF NORTH PROPERTY LINE AND 15'± EAST OF THE EAST EDGE OF CHILSON ROAD.
 ELEVATION = 967.26



LEGEND

ABBREVIATIONS

- FI FOUND IRON ROD
- FM FOUND IRON PIPE
- FC FOUND CONCRETE MONUMENT
- SI SET IRON ROD
- CL CALCULATED
- M MEASURED
- R RECORD
- CLF CHAIN LINK FENCE
- CB CATCH BASIN
- CO CLEAN OUT
- DS DOWNSPOUT
- FF FINISHED FLOOR
- GVAV GATE VALVE & WELL
- HYD HYDRANT
- INL INVERT
- IE INVERT ELEVATION
- LP LIGHT POLE
- MH MANHOLE
- NTS NOT TO SCALE
- OH OVERHEAD
- SB SOIL BORING
- TC TOP OF CURB
- UG UNDERGROUND
- UP UTILITY POLE

SYMBOLS

- CABLE
- ELECTRIC
- FENCE
- GAS WIRE & ANCHOR
- SANITARY SEWER
- STORM SEWER
- TELEPHONE
- △ TRAVERSE/CONTROL POINT
- WATER MAIN
- EXISTING CONTOURS
- EXISTING ELEVATIONS
- PROPOSED CONTOURS
- PROPOSED ELEVATIONS

REVISIONS

11-18-05 REVISED LIBER AND PAGE ON 30" WIDE ROAD EASEMENT
 11-18-05 UPDATED SURVEY FOR NEW TITLE WORK
 9-22-05 ADDED ADDITIONAL TOPOGRAPHY
 8-12-05 REVISED PER SOUTHWEST GAS STORAGE AND ENGINEERING REVIEW NO. 1
 3-11-05 REVISED PER LIVINGSTON COUNTY DRAIN COMMISSION

SEAL



Raymond J. Donnelly & Associates, Inc.
 Land Surveying, Mapping
 Site Development Consulting
 "Over 22 Years of Excellence"

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 Troy, MI 48063-4207
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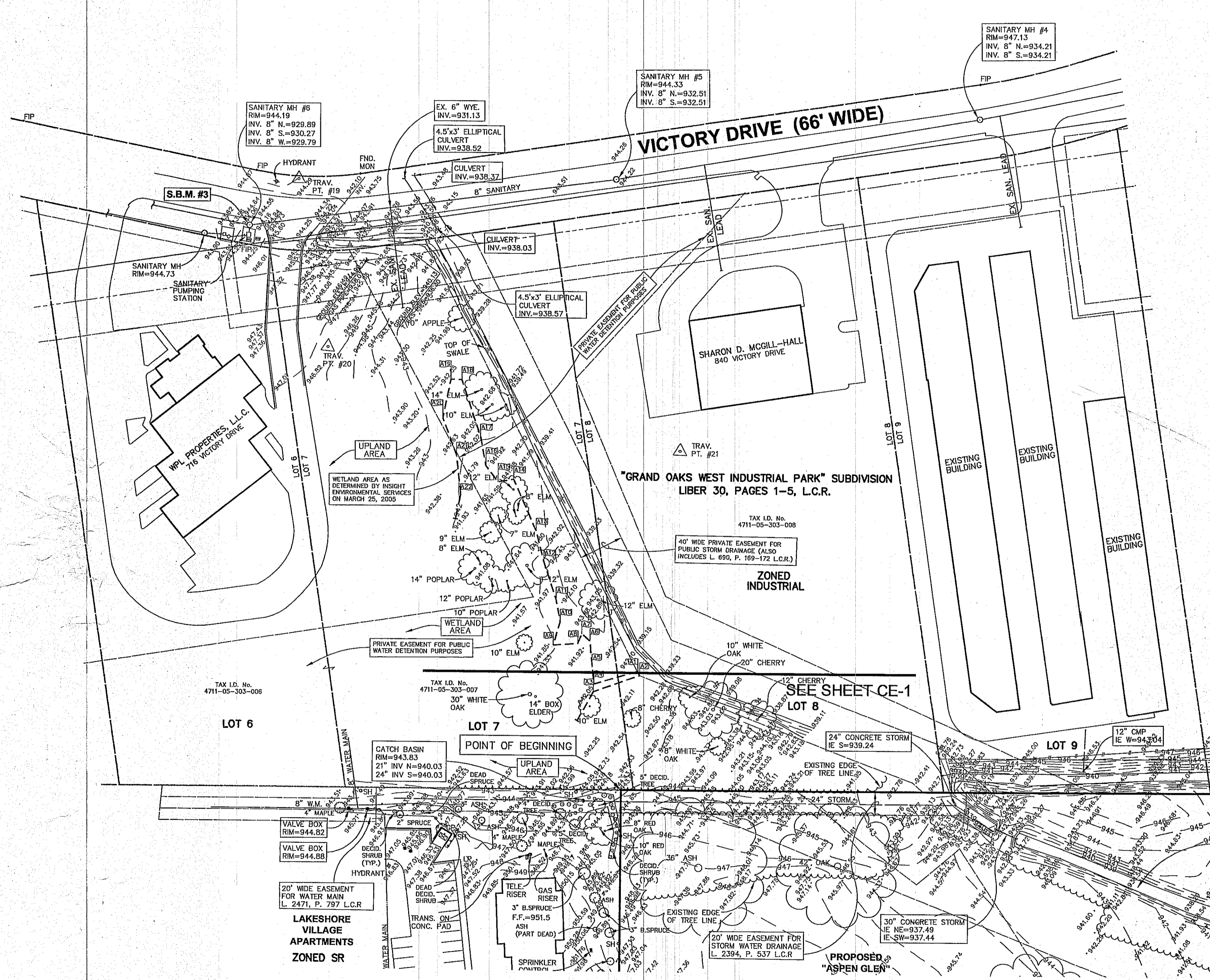
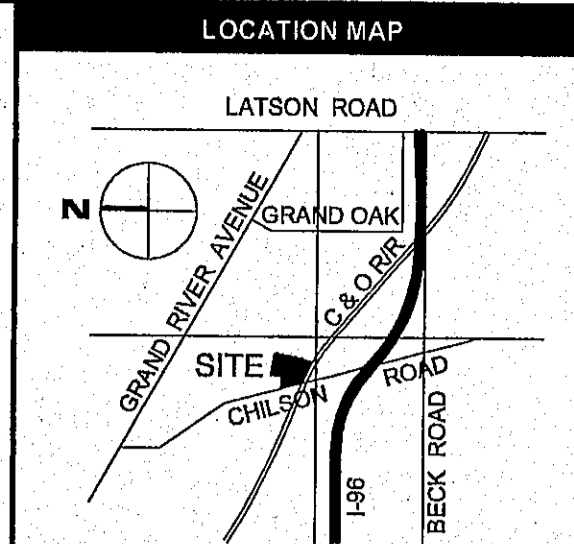
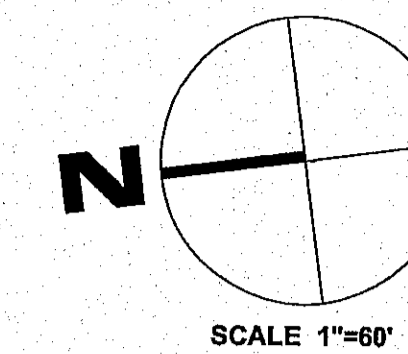
PROJECT NAME

SURVEY PLAN OF EXISTING CONDITIONS
"ASPEN GLEN"
 GENOA TOWNSHIP, MI

CLIENT

BAYFIELD OF HOWELL, INC.
 54255 FOSS
 MACOMB TOWNSHIP, MI 48042

DRAWN BY	DATE	SCALE
GLB	11-18-05	1"=60'
PROJECT	SHEET	
2004-156	CE-1	



BENCHMARK DATA

S.B.M. #1
MAG NAIL IN CENTERLINE OF CHILSON ROAD
AT CENTERLINE OF CHESAPEAKE & OHIO
RAILROAD.
ELEVATION = 955.64

S.B.M. #2
MAG NAIL IN WEST FACE OF 30" WALNUT LOCATED
50'± SOUTH OF NORTH PROPERTY LINE AND 15'±
EAST OF THE EAST EDGE OF CHILSON ROAD.
ELEVATION = 967.26

S.B.M. #3
NORTH RIM OF EXISTING SANITARY MANHOLE No. 6
RIM LOCATED ON WEST SIDE OF VICTORY DRIVE
NORTH OF SOUTHERLY ENTRANCE TO ADDRESS No. 719
ELEV.=944.19

- ABBREVIATIONS**
- FI FOUND IRON ROD
 - FIP FOUND IRON PIPE
 - FC FOUND CONCRETE CURB
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 - GUY WIRE & ANCHOR
 - S SANITARY SEWER
 - ST STORM SEWER
 - T TELEPHONE
 - △ TRAVERSE/CONTROL POINT
 - W WATER MAIN
 - 0.00 EXISTING CONTOURS
 - 0.00 EXISTING ELEVATIONS
 - 0.00 PROPOSED CONTOURS
 - 0.00 PROPOSED ELEVATIONS

REVISIONS

9-27-05 REVISED PER SOUTHWEST GAS STORAGE
9-22-05 ADDITIONAL TOPOGRAPHY ADDED
3-31-05 ADDED OFFSITE WETLAND AREA

SEAL



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Land Surveying, Mapping
Site Development Consulting
"Over 22 Years of Excellence"

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Troy, MI 48063-4207
Phone: 248.689.5555
Fax: 248.689.5677
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FOR OFFSITE
SANITARY SEWER EXTENSION

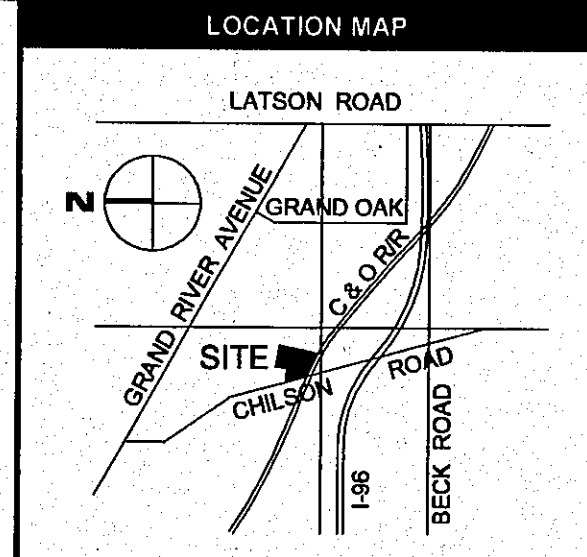
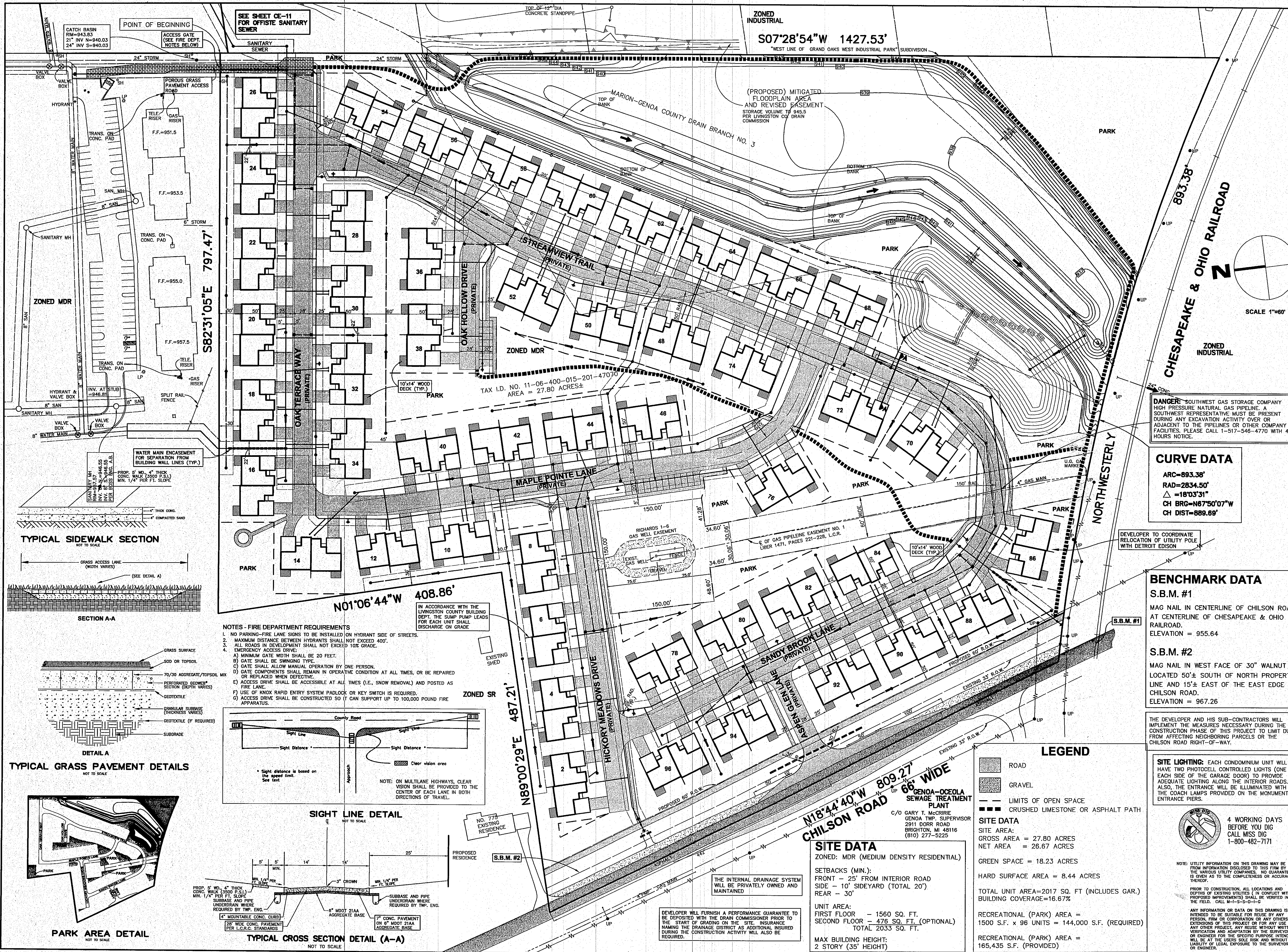
PROJECT NAME

**SURVEY PLAN OF
EXISTING CONDITIONS**
"ASPEN GLEN"
GENOA TOWNSHIP, MI

CLIENT

BAYFIELD OF HOWELL, INC.
54255 FOSS
MACOMB TOWNSHIP, MI 48042

DRAWN BY	DATE	SCALE
GLB	9-27-05	1"=60'
PROJECT	SHEET	
2004-156	CE-1A	



LEGEND

ABBREVIATIONS

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- TELEPHONE
- △ TRAVERSE/CONTROL POINT
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- EXISTING CONTOURS
- EXISTING ELEVATIONS
- PROPOSED CONTOURS
- PROPOSED ELEVATIONS

REVISIONS

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 12-16-05 REVISED PER ENGINEERING REVIEW No. 2
 12-01-05 REVISED PER LIVINGSTON COUNTY DRAIN COMMISSION
 10-28-05 REVISED PER CLINT, TETRA-TECH, L.C.R.C. & LIVINGSTON COUNTY DRAIN COMMISSION
 9-27-05 REVISED PER SOUTHWEST GAS STORAGE, ENGINEERING REVIEW No. 1, FIRE MARSHALL AND PLANNING DEPARTMENT

SEAL

DANGER: SOUTHWEST GAS STORAGE COMPANY HIGH PRESSURE NATURAL GAS PIPELINE. A SOUTHWEST REPRESENTATIVE MUST BE PRESENT DURING ANY EXCAVATION ACTIVITY OVER OR ADJACENT TO THE PIPELINES OR OTHER COMPANY FACILITIES. PLEASE CALL 1-517-546-4770 WITH 48 HOURS NOTICE.

CURVE DATA

ARC=893.38'
 RAD=2834.50'
 Δ=18°03'31"
 CH BRG=N67°50'07"W
 CH DIST=589.69'

BENCHMARK DATA

S.B.M. #1
 MAG NAIL IN CENTERLINE OF CHILSON ROAD AT CENTERLINE OF CHESAPEAKE & OHIO RAILROAD.
 ELEVATION = 955.64

S.B.M. #2
 MAG NAIL IN WEST FACE OF 30" WALNUT LOCATED 50± SOUTH OF NORTH PROPERTY LINE AND 15± EAST OF THE EAST EDGE OF CHILSON ROAD.
 ELEVATION = 967.26

THE DEVELOPER AND HIS SUB-CONTRACTORS WILL IMPLEMENT THE MEASURES NECESSARY DURING THE CONSTRUCTION PHASE OF THIS PROJECT TO LIMIT DUST FROM AFFECTING NEIGHBORING PARCELS OR THE CHILSON ROAD RIGHT-OF-WAY.

SITE LIGHTING: EACH CONDOMINIUM UNIT WILL HAVE TWO PHOTOCELL CONTROLLED LIGHTS (ONE ON EACH SIDE OF THE GARAGE DOOR) TO PROVIDE ADEQUATE LIGHTING ALONG THE INTERIOR ROADS. ALSO, THE ENTRANCE WILL BE ILLUMINATED WITH THE COACH LAMPS PROVIDED ON THE MONUMENT ENTRANCE PIERS.

4 WORKING DAYS BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171

NOTE: UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION PROVIDED TO THIS FIRM BY THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL M-1-S-S-0-G

ANY INFORMATION OR DATA ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON ANY PROJECT OR FOR ANY USE OTHER THAN THAT SPECIFICALLY INTENDED HEREON. ANY REUSE WITHOUT WRITTEN PERMISSION AND ADAPTS RISK AND WITHOUT LIABILITY OF LEGAL EXPOSURE TO THE SURVEYOR OR ENGINEER.

LEGEND

- ROAD
- GRAVEL
- LIMITS OF OPEN SPACE
- CRUSHED LIMESTONE OR ASPHALT PATH

SITE DATA

SITE AREA: GROSS AREA = 27.80 ACRES
 NET AREA = 26.67 ACRES
 GREEN SPACE = 18.23 ACRES
 HARD SURFACE AREA = 8.44 ACRES
 TOTAL UNIT AREA=2017 SQ. FT. (INCLUDES GAR.)
 BUILDING COVERAGE=16.67%

RECREATIONAL (PARK) AREA = 1500 S.F. x 96 UNITS = 144,000 S.F. (REQUIRED)
 RECREATIONAL (PARK) AREA = 165,435 S.F. (PROVIDED)

SITE DATA

ZONED: MDR (MEDIUM DENSITY RESIDENTIAL)

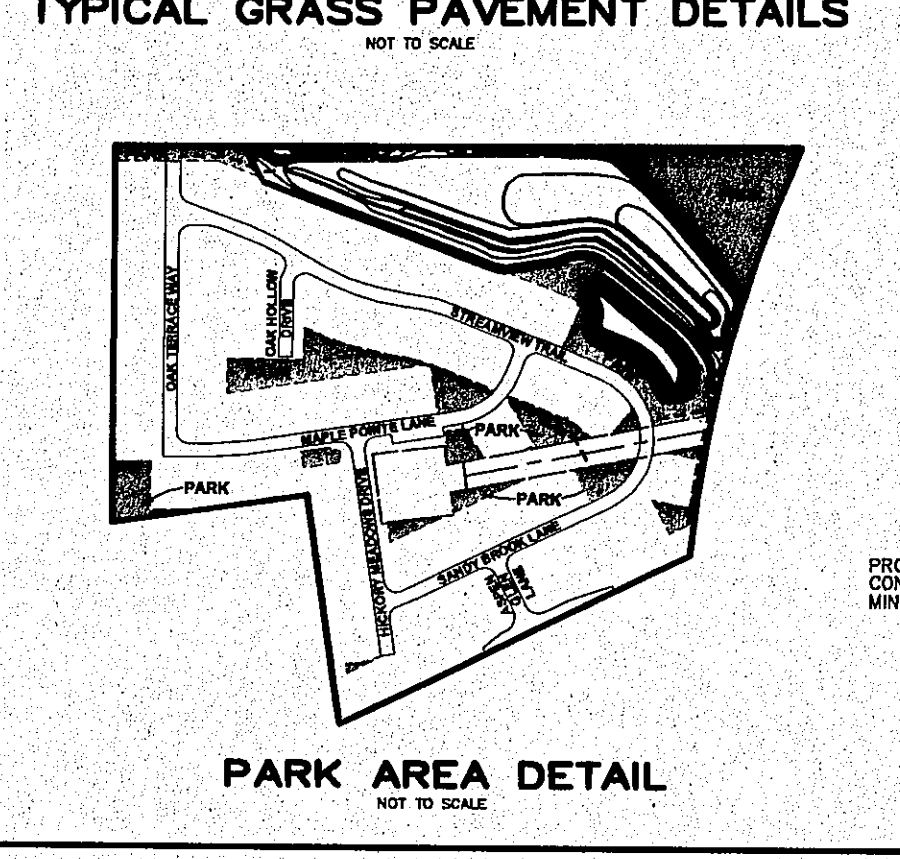
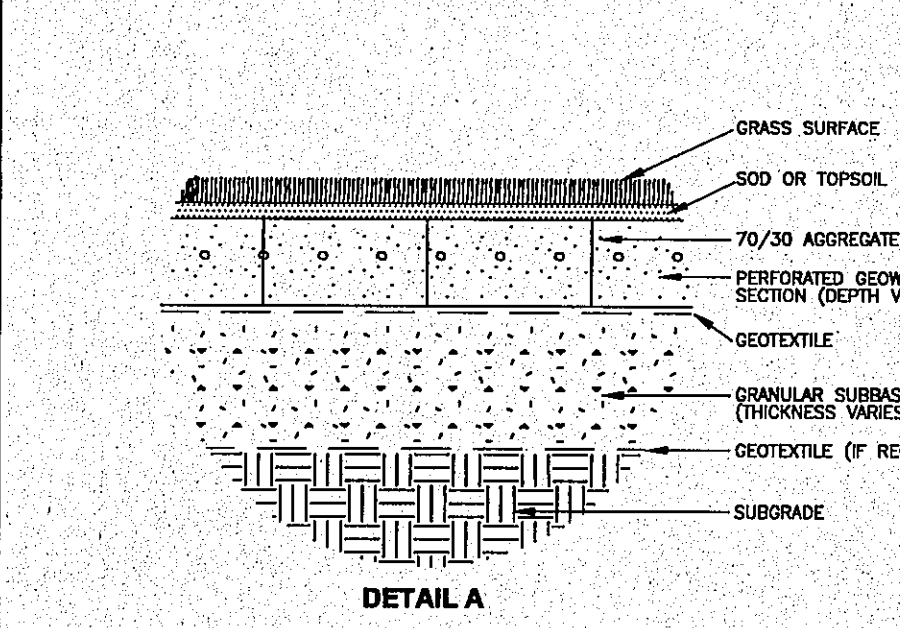
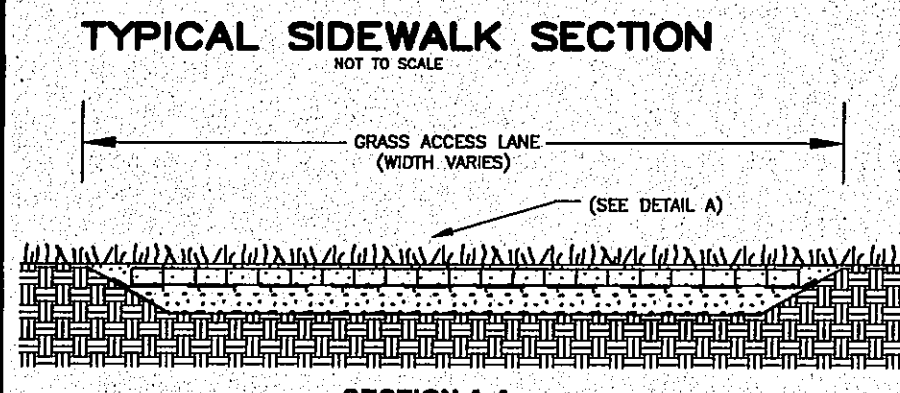
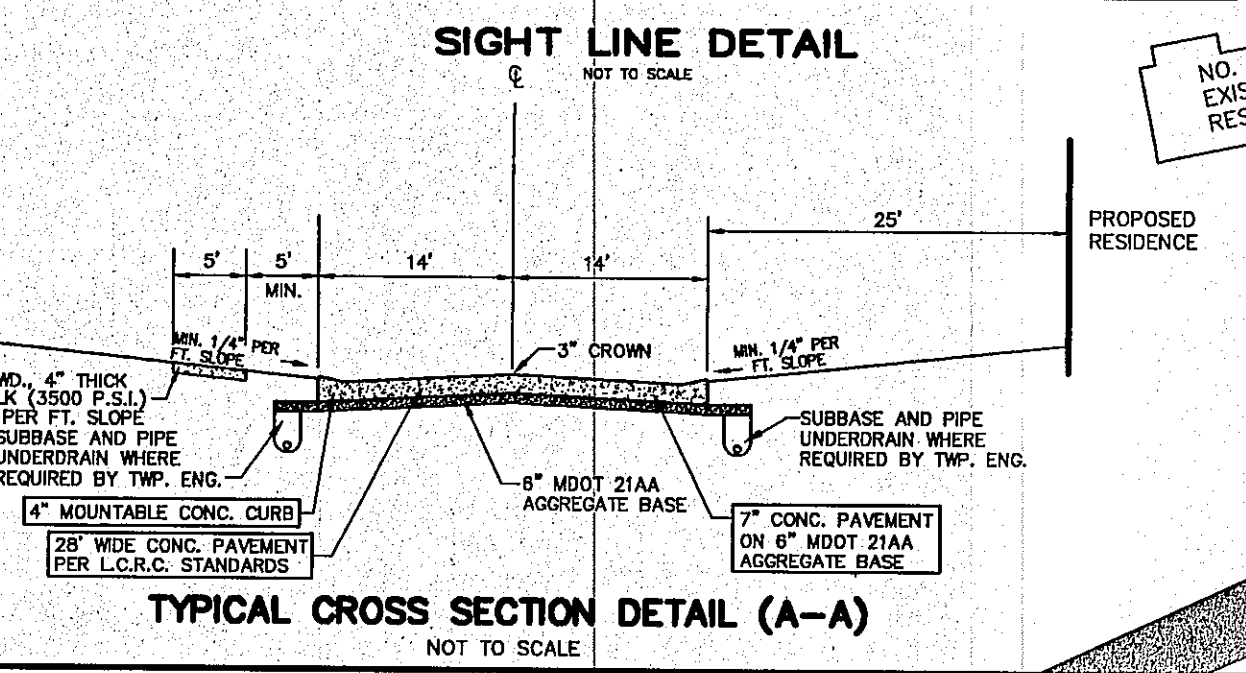
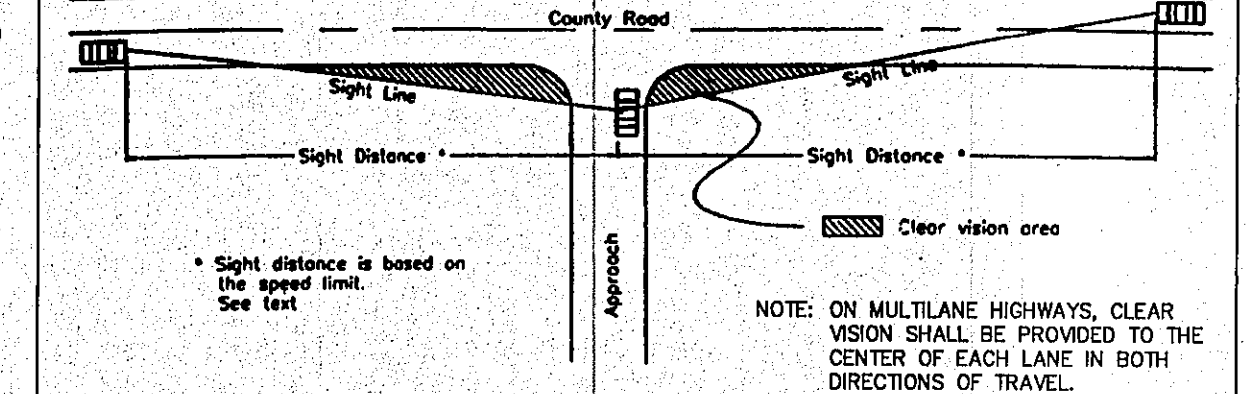
SETBACKS (MIN.):
 FRONT - 25' FROM INTERIOR ROAD
 SIDE - 10' SIDEYARD (TOTAL 20')
 REAR - 30'

UNIT AREA:
 FIRST FLOOR - 1560 SQ. FT.
 SECOND FLOOR - 476 SQ. FT. (OPTIONAL)
 TOTAL 2033 SQ. FT.

MAX BUILDING HEIGHT:
 2 STORY (35' HEIGHT)

NOTES - FIRE DEPARTMENT REQUIREMENTS

- NO PARKING-FIRE LANE SIGNS TO BE INSTALLED ON HYDRANT SIDE OF STREETS.
- MAXIMUM DISTANCE BETWEEN HYDRANTS SHALL NOT EXCEED 400'.
- ALL ROADS IN DEVELOPMENT SHALL NOT EXCEED 10% GRADE.
- EMERGENCY ACCESS DRIVE.
- MINIMUM GATE WIDTH SHALL BE 20 FEET.
- GATE SHALL BE SWINGING TYPE.
- GATE COMPONENTS SHALL REMAIN IN OPERATIVE CONDITION AT ALL TIMES, OR BE REPAIRED OR REPLACED WHEN DEFECTIVE.
- ACCESS DRIVE SHALL BE ACCESSIBLE AT ALL TIMES (I.E., SNOW REMOVAL) AND POSTED AS FIRE LANE.
- USE OF KNOX RAPID ENTRY SYSTEM PADLOCK OR KEY SWITCH IS REQUIRED.
- ACCESS DRIVE SHALL BE CONSTRUCTED SO IT CAN SUPPORT UP TO 100,000 POUND FIRE APPARATUS.



1-03-06 REVISED PER ENGINEERING REVIEW No. 3
 12-16-05 REVISED PER ENGINEERING REVIEW No. 2
 12-01-05 REVISED PER LIVINGSTON COUNTY DRAIN COMMISSION
 10-28-05 REVISED PER CLINT, TETRA-TECH, L.C.R.C. & LIVINGSTON COUNTY DRAIN COMMISSION
 9-27-05 REVISED PER SOUTHWEST GAS STORAGE, ENGINEERING REVIEW No. 1, FIRE MARSHALL AND PLANNING DEPARTMENT

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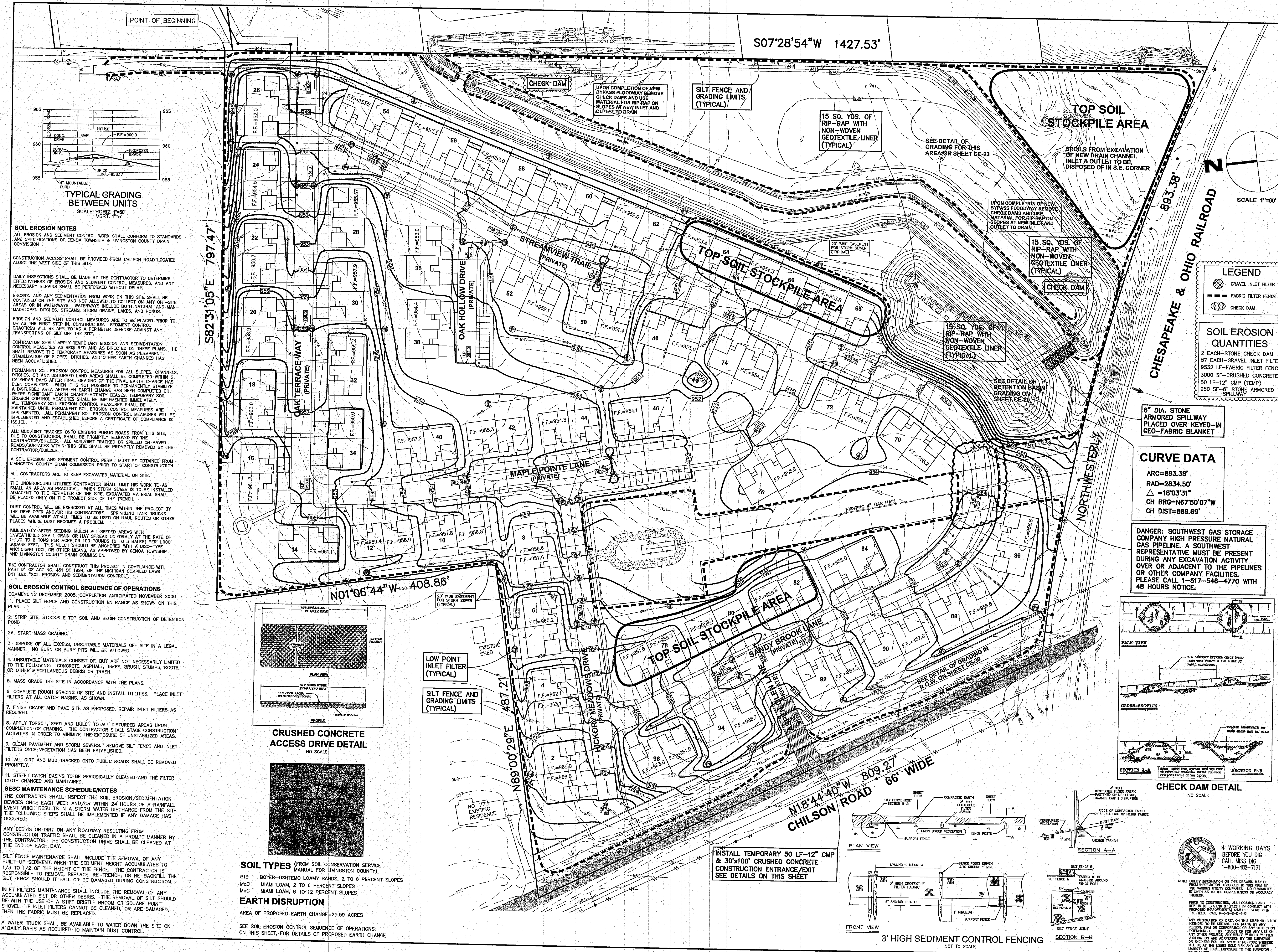
PROJECT NAME

FINAL SITE PLAN
 "ASPEN GLEN"
 GENOA TOWNSHIP, MI

CLIENT

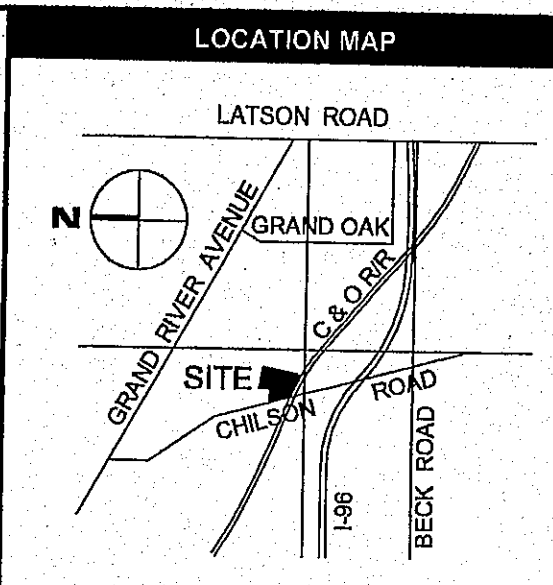
BAYFIELD OF HOWELL, INC.
 54255 FOSS
 MACOMB TOWNSHIP, MI 48042

DRAWN BY	DATE	SCALE
JEK	1-03-06	1"=60'
PROJECT	SHEET	
2004-156	CE-2	



POINT OF BEGINNING

S07°28'54"W 1427.53'



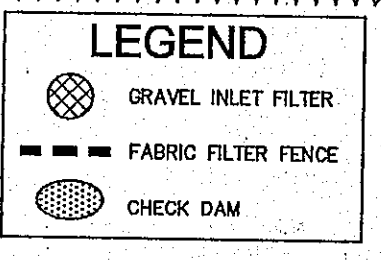
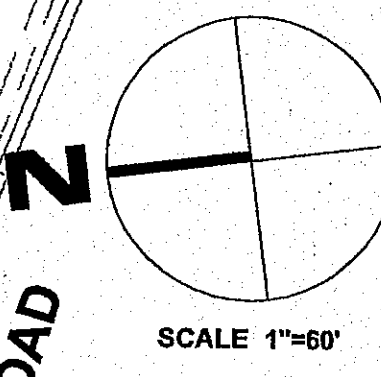
LEGEND

ABBREVIATIONS

FI	FOUND IRON ROD
FIP	FOUND IRON PIPE
FC	FOUND CONCRETE CURB
SI	SET IRON ROD
CL	CALCULATED
M	MEASURED
R	RECORD
CLF	CHAIN LINK FENCE
CB	CATCH BASIN
CO	CLEAN OUT
DS	DOWNSPOUT
FF	FINISHED FLOOR
GVAV	GATE VALVE & WELL
HYD	HYDRANT
INL	INLET
IE	INVERT ELEVATION
LP	LIGHT POLE
MH	MANHOLE
NTS	NOT TO SCALE
OH	OVERHEAD
SB	SOIL BORING
TC	TOP OF CURB
UC	UNDERGROUND UTILITY POLE

SOIL EROSION QUANTITIES

- 2 EACH-STONE CHECK DAM
- 57 EACH-GRAPVEL INLET FILTER
- 9532 LF-FABRIC FILTER FENCE
- 3000 SF-CRUSHED CONCRETE
- 50 LF-12" CMP (TEMP)
- 950 SF-6" STONE ARMORED SPILLWAY



SOIL EROSION QUANTITIES

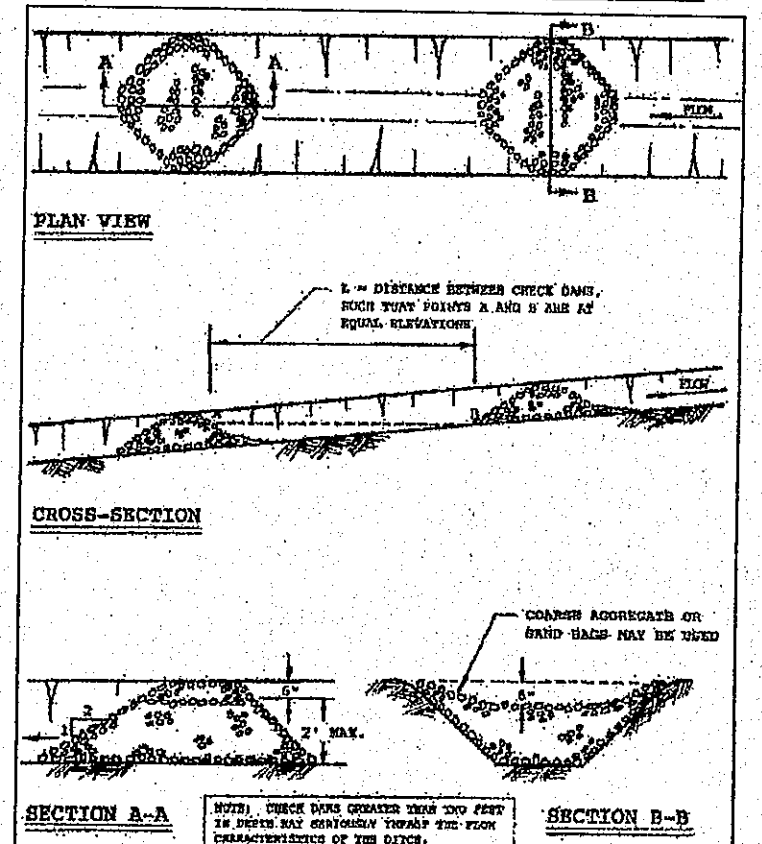
- 2 EACH-STONE CHECK DAM
- 57 EACH-GRAPVEL INLET FILTER
- 9532 LF-FABRIC FILTER FENCE
- 3000 SF-CRUSHED CONCRETE
- 50 LF-12" CMP (TEMP)
- 950 SF-6" STONE ARMORED SPILLWAY

6" DIA. STONE ARMORED SPILLWAY PLACED OVER KEYED-IN GEO-FABRIC BLANKET

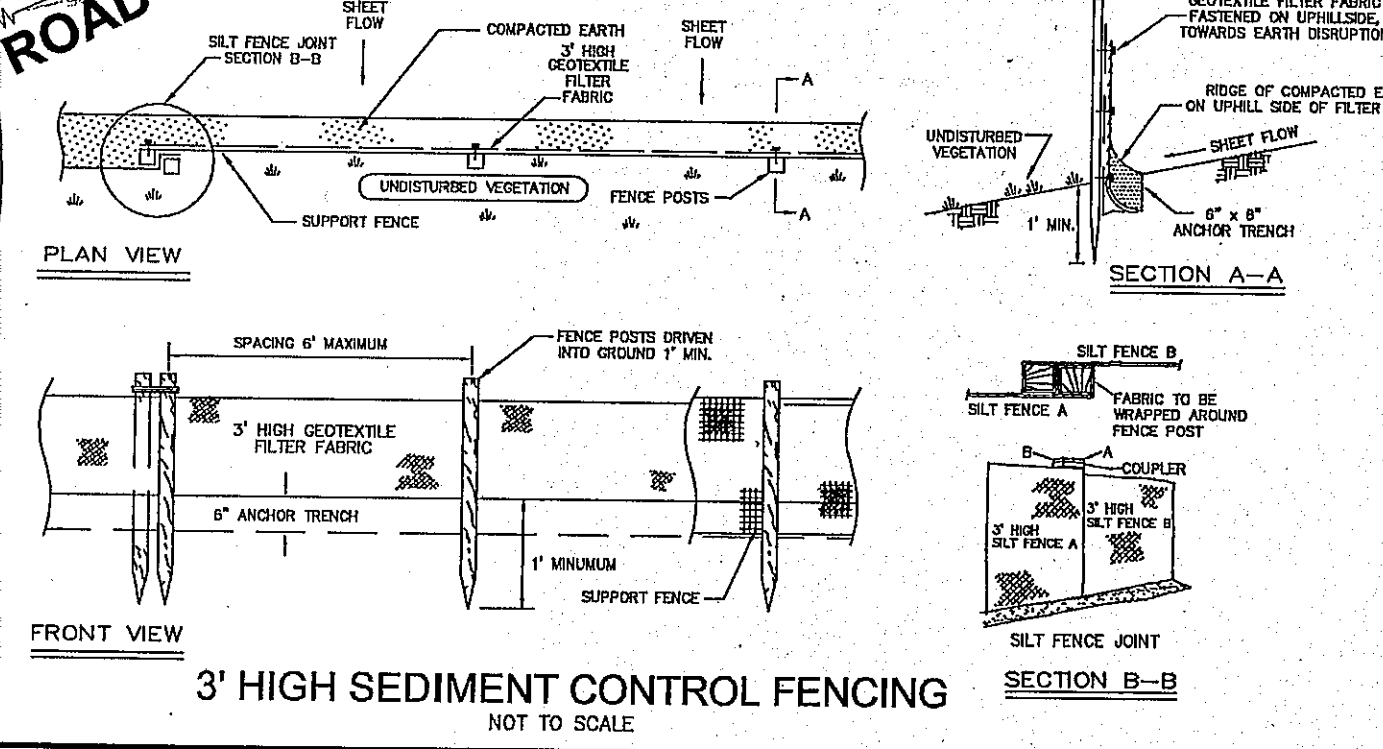
CURVE DATA

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 CH BRG=N67°50'07"W
 CH DIST=889.69'

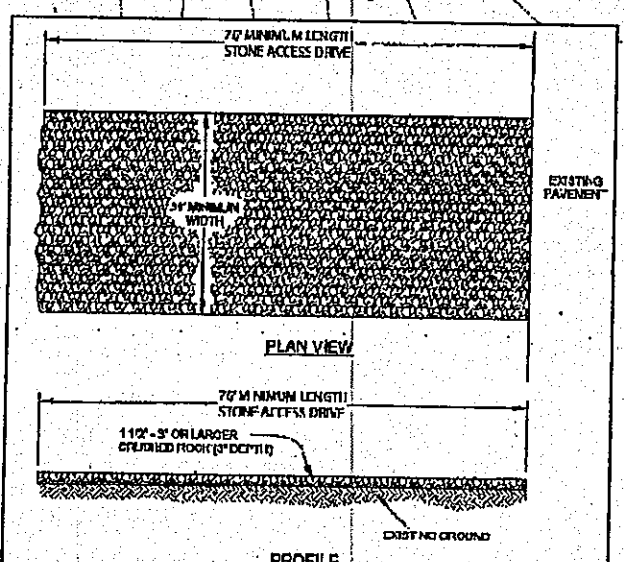
DANGER: SOUTHWEST GAS STORAGE COMPANY HIGH PRESSURE NATURAL GAS PIPELINE. A SOUTHWEST REPRESENTATIVE MUST BE PRESENT DURING ANY EXCAVATION ACTIVITY OVER OR ADJACENT TO THE PIPELINES OR OTHER COMPANY FACILITIES. PLEASE CALL 1-817-546-4770 WITH 48 HOURS NOTICE.



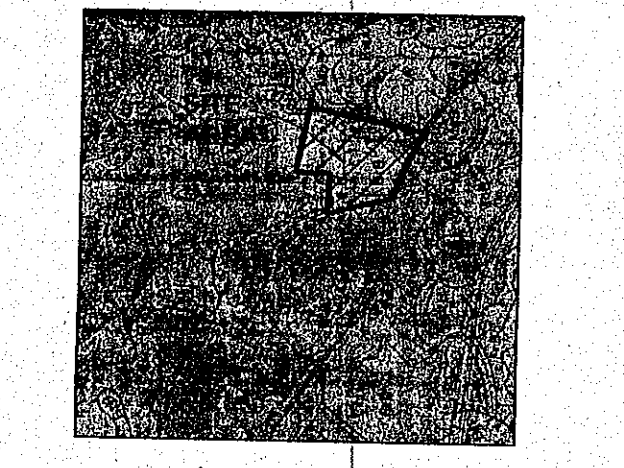
CHECK DAM DETAIL



3' HIGH SEDIMENT CONTROL FENCING



CRUSHED CONCRETE ACCESS DRIVE DETAIL



SOIL TYPES (FROM SOIL CONSERVATION SERVICE MANUAL FOR LIVINGSTON COUNTY)

BIB BOYER-OSHTEMO LOAMY SANDS, 2 TO 6 PERCENT SLOPES

M6B MIAMI LOAM, 2 TO 6 PERCENT SLOPES

M6c MIAMI LOAM, 6 TO 12 PERCENT SLOPES

EARTH DISRUPTION

AREA OF PROPOSED EARTH CHANGE=25.59 ACRES

SEE SOIL EROSION CONTROL SEQUENCE OF OPERATIONS, ON THIS SHEET, FOR DETAILS OF PROPOSED EARTH CHANGE

TYPICAL GRADING BETWEEN UNITS
SCALE: HORIZ 1"=50' VERT. 1"=5'

SOIL EROSION NOTES

ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF GENOA TOWNSHIP & LIVINGSTON COUNTY DRAIN COMMISSION.

CONSTRUCTION ACCESS SHALL BE PROVIDED FROM CHILSON ROAD LOCATED ALONG THE WEST SIDE OF THIS SITE.

DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.

EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLIDE TO SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.

EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN, CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.

CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED AS DIRECTED ON THESE PLANS. HE SHALL REMOVE THE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAS BEEN ACCOMPLISHED.

PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OF THE FINAL EARTH CHANGE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY OCCURS, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.

ALL MUD/DIRT TRACKED ONTO EXISTING PUBLIC ROADS FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR/BUILDER. ALL MUD/DIRT TRACKED OR SPILLED ON PAVED ROADS/SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR/BUILDER.

A SOIL EROSION AND SEDIMENT CONTROL PERMIT MUST BE OBTAINED FROM LIVINGSTON COUNTY DRAIN COMMISSION PRIOR TO START OF CONSTRUCTION.

ALL CONTRACTORS ARE TO KEEP EXCAVATED MATERIAL ON SITE.

THE UNDERGROUND UTILITIES CONTRACTOR SHALL LIMIT HIS WORK TO AS SMALL AN AREA AS PRACTICABLE. WHEN A STORM SEWER IS TO BE INSTALLED ADJACENT TO THE PERIMETER OF THE SITE, EXCAVATED MATERIAL SHALL BE PLACED ONLY ON THE PROJECT SIDE OF THE TRENCH.

DUST CONTROL WILL BE EXERCISED AT ALL TIMES WITHIN THE PROJECT BY THE DEVELOPER AND/OR HIS CONTRACTORS. SPRINKLING TANK TRUCKS WILL BE AVAILABLE AT ALL TIMES TO BE USED ON HAUL ROUTES OR OTHER PLACES WHERE DUST BECOMES A PROBLEM.

IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDING AREAS WITH UNWEATHERED SMALL GRASS OR HAY SPREAD UNIFORMLY AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE OR 100 POUNDS (2 TO 3 BALES) PER 1000 SQUARE FEET. THIS MULCH SHOULD BE ANCHORED WITH A DISC-TYPE ANCHORING TOOL OR OTHER MEANS, AS APPROVED BY GENOA TOWNSHIP AND LIVINGSTON COUNTY DRAIN COMMISSION.

THE CONTRACTOR SHALL CONSTRUCT THIS PROJECT IN COMPLIANCE WITH PART 91 OF ACT NO. 451 OF 1994, OF THE MICHIGAN COMPILED LAWS ENTITLED "SOIL EROSION AND SEDIMENTATION CONTROL".

SOIL EROSION CONTROL SEQUENCE OF OPERATIONS

1. PLACE SILT FENCE AND CONSTRUCTION ENTRANCE AS SHOWN ON THIS PLAN.
2. STRIP SITE, STOCKPILE TOP SOIL, AND BEGIN CONSTRUCTION OF DETENTION POND.
3. START MASS GRADING.
4. DISPOSE OF ALL EXCESS, UNSUITABLE MATERIALS OFF SITE IN A LEGAL MANNER. NO BURN OR BURY PITS WILL BE ALLOWED.
5. UNSUITABLE MATERIALS CONSIST OF, BUT ARE NOT NECESSARILY LIMITED TO THE FOLLOWING: CONCRETE, ASPHALT, TREES, BRUSH, STUMPS, ROOTS, OR OTHER MISCELLANEOUS DEBRIS OR TRASH.
6. MASS GRADE THE SITE IN ACCORDANCE WITH THE PLANS.
7. COMPLETE ROUGH GRADING OF SITE AND INSTALL UTILITIES. PLACE INLET FILTERS AT ALL CATCH BASINS, AS SHOWN.
8. FINISH GRADE AND PAVE SITE AS PROPOSED. REPAIR INLET FILTERS AS REQUIRED.
9. APPLY TOPSOIL, SEED AND MULCH TO ALL DISTURBED AREAS UPON COMPLETION OF GRADING. THE CONTRACTOR SHALL STAGE CONSTRUCTION ACTIVITIES IN ORDER TO MINIMIZE THE EXPOSURE OF UNSTABILIZED AREAS.
10. CLEAN PAVEMENT AND STORM SEWERS. REMOVE SILT FENCE AND INLET FILTERS ONCE VEGETATION HAS BEEN ESTABLISHED.
11. ALL DIRT AND MUD TRACKED ONTO PUBLIC ROADS SHALL BE REMOVED PROMPTLY.
12. STREET CATCH BASINS TO BE PERIODICALLY CLEANED AND THE FILTER CLOTH CHANGED AND MAINTAINED.

SESS MAINTENANCE SCHEDULE/NOTES

THE CONTRACTOR SHALL INSPECT THE SOIL EROSION/SEDIMENTATION DEVICES ONCE EACH WEEK AND/OR WITHIN 24 HOURS OF A RAINFALL EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. THE FOLLOWING STEPS SHALL BE IMPLEMENTED IF ANY DAMAGE HAS OCCURRED:

ANY DEBRIS OR DIRT ON ANY ROADWAY RESULTING FROM CONSTRUCTION TRAFFIC SHALL BE CLEANED IN A PROMPT MANNER BY THE CONTRACTOR. THE CONSTRUCTION DRIVE SHALL BE CLEANED AT THE END OF EACH DAY.

SILT FENCE MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY BUILT-UP SEDIMENT WHEN THE SEDIMENT HEIGHT ACCUMULATES TO 1/2 TO 1 1/2 OF THE HEIGHT OF THE FENCE. THE CONTRACTOR IS RESPONSIBLE TO REMOVE, REPLACE, RE-TRENCH, OR RE-BACKFILL THE SILT FENCE SHOULD IT FALL OR BE DAMAGED DURING CONSTRUCTION.

INLET FILTERS MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY ACCUMULATED SILT OR OTHER DEBRIS. THE REMOVAL OF SILT SHOULD BE WITH THE USE OF A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF INLET FILTERS CANNOT BE CLEANED, OR ARE DAMAGED, THEN THE FABRIC MUST BE REPLACED.

A WATER TRUCK SHALL BE AVAILABLE TO WATER DOWN THE SITE ON A DAILY BASIS AS REQUIRED TO MAINTAIN DUST CONTROL.

REVISIONS

NO.	DATE	DESCRIPTION
12-18-05	REVISED PER ENGINEERING REVIEW No. 2	
12-21-05	REVISED PER LIVINGSTON COUNTY DRAIN COMMISSION	
10-28-05	REVISED PER GENOA TOWNSHIP I.L.S.P.C. & LIVINGSTON COUNTY DRAIN COMMISSION	
9-27-05	REVISED PER ENGINEERING REVIEW No. 1	

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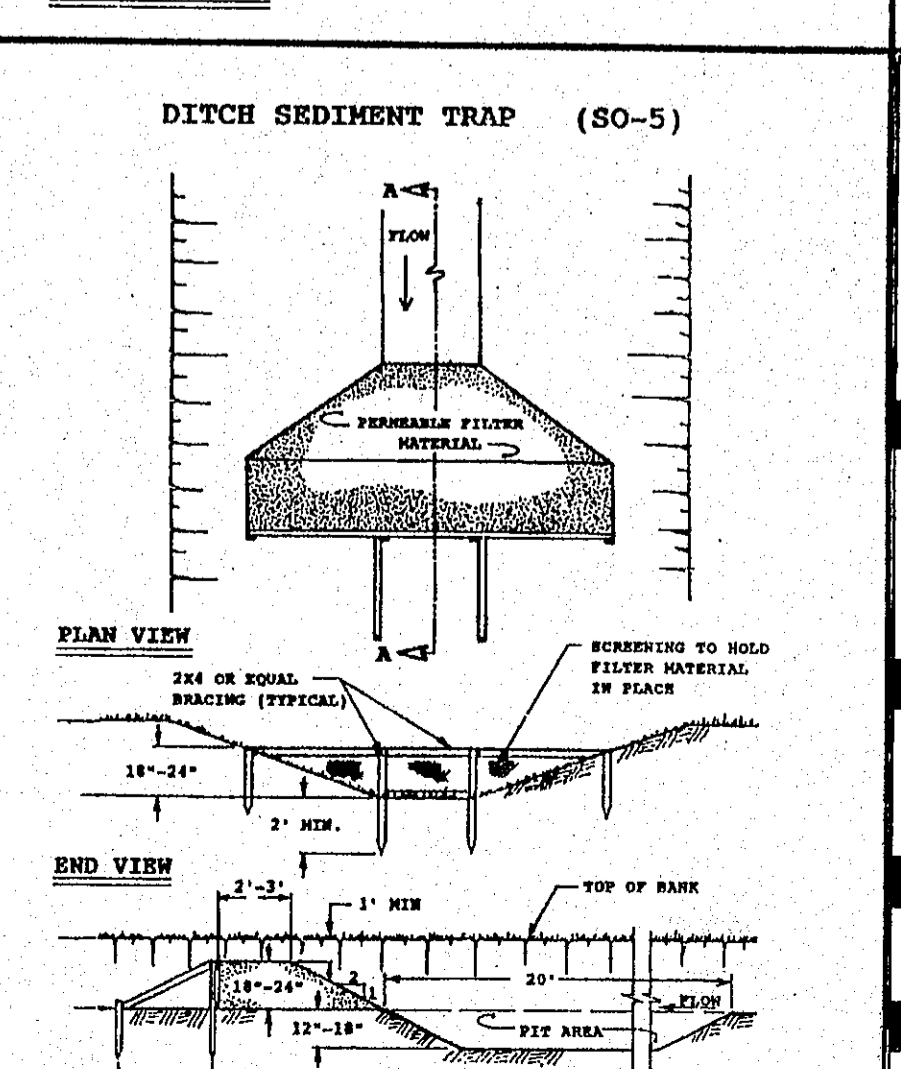
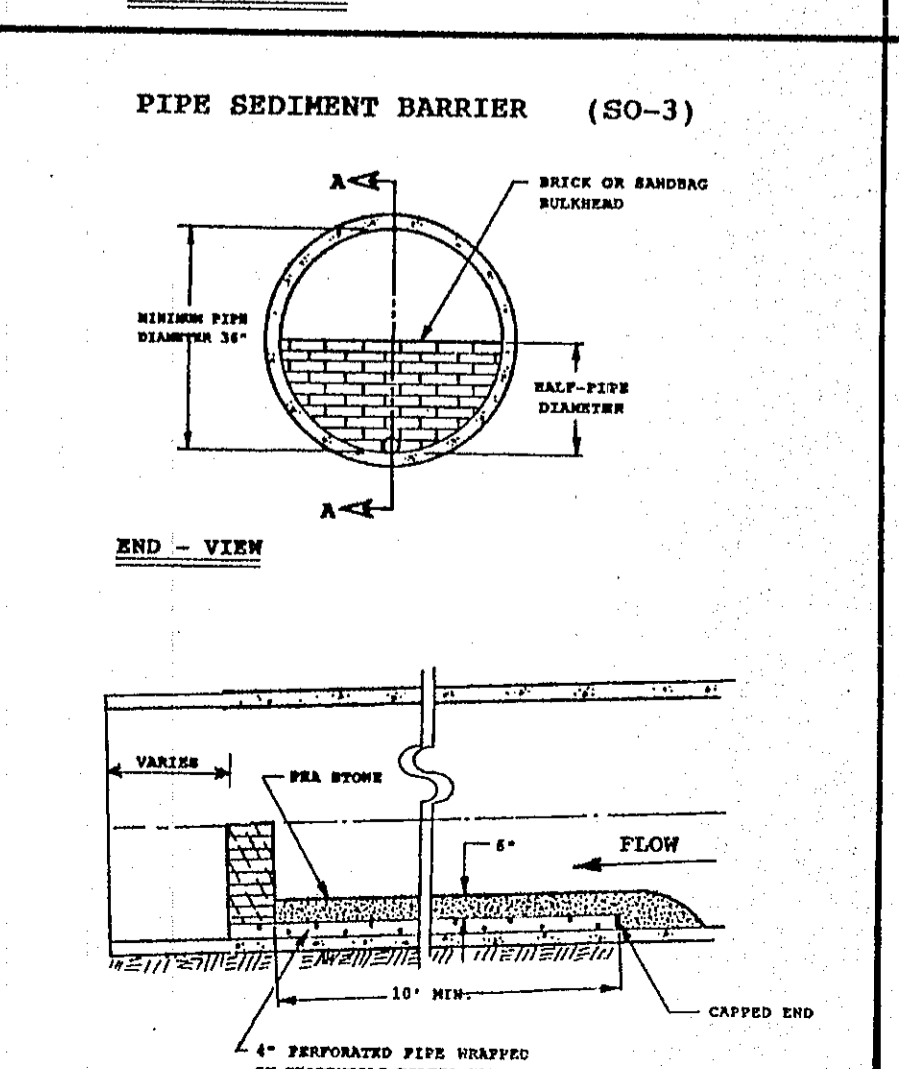
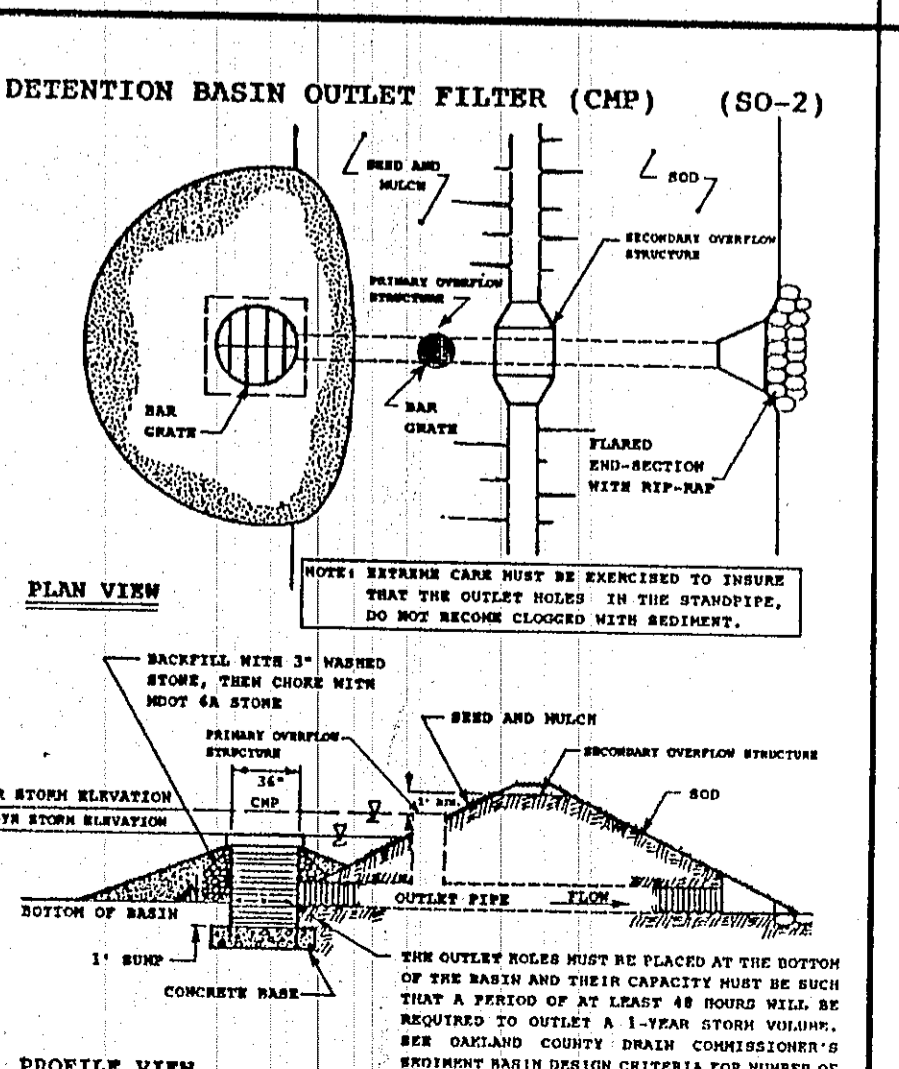
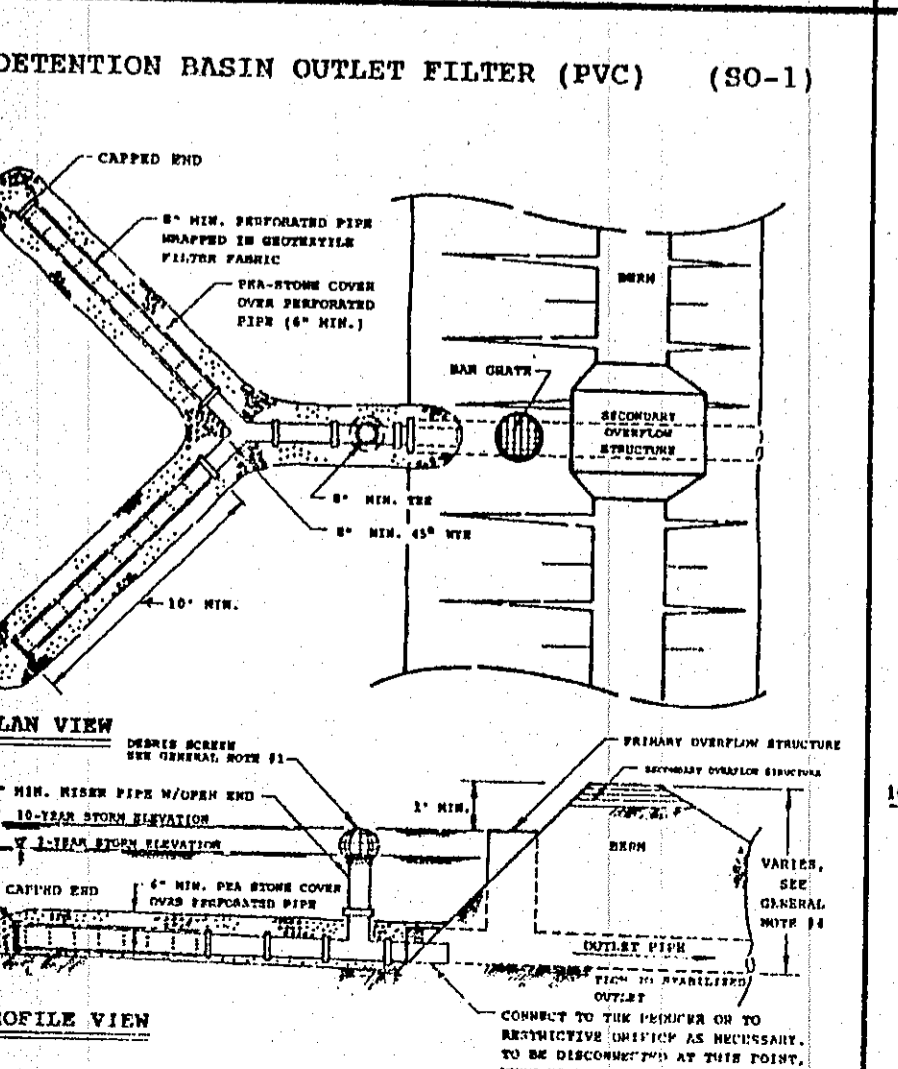
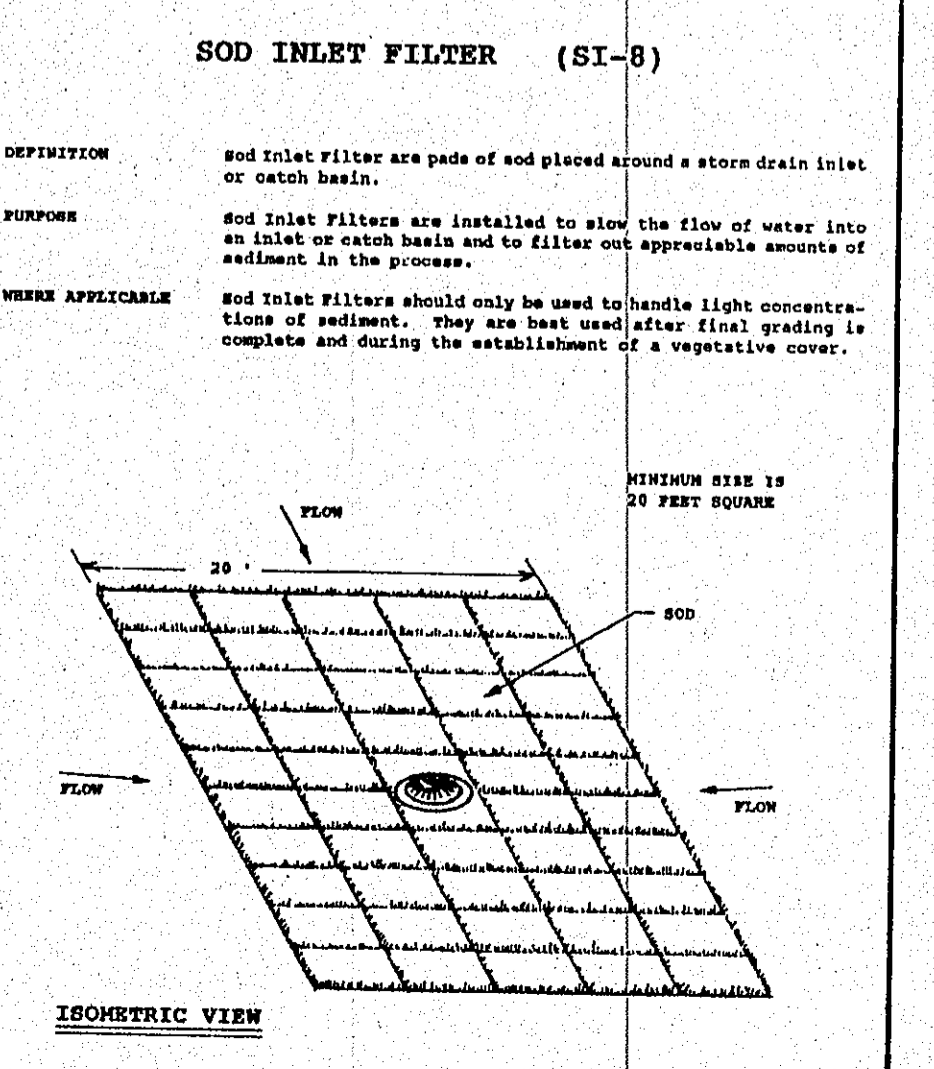
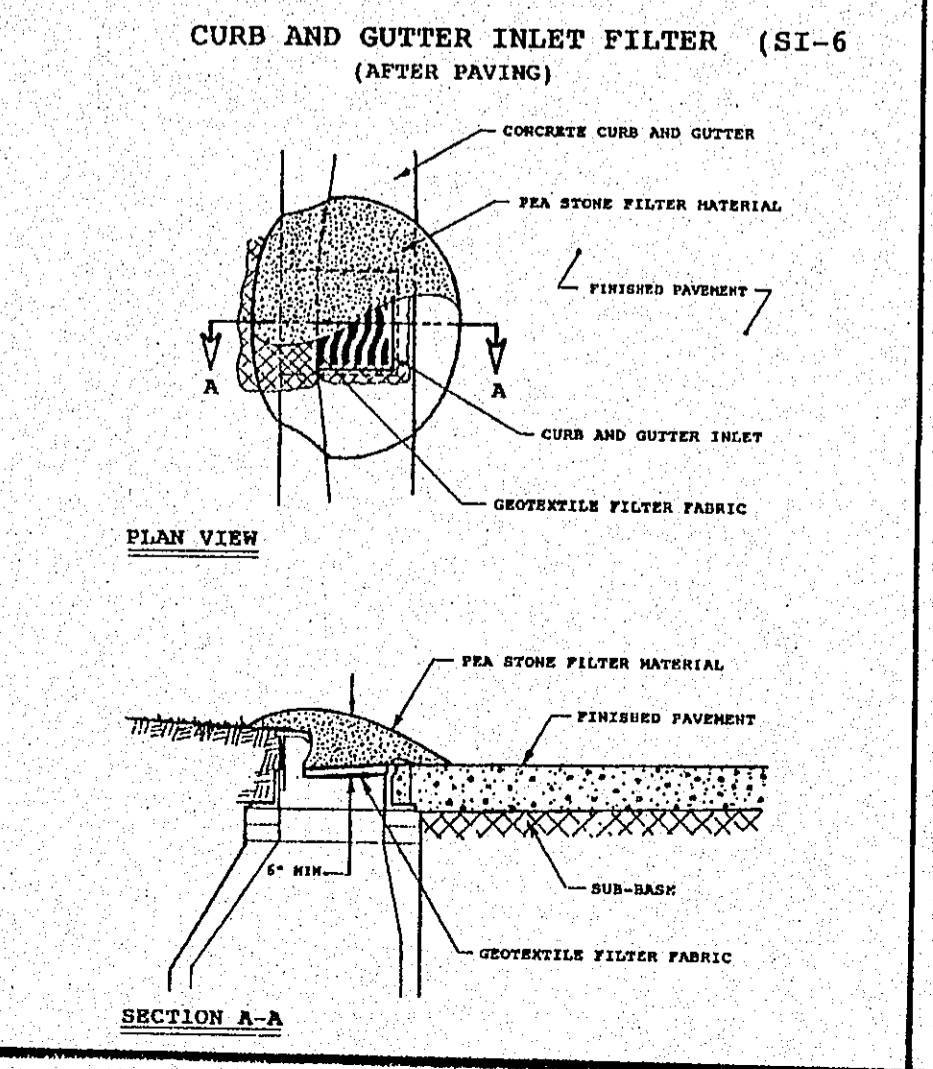
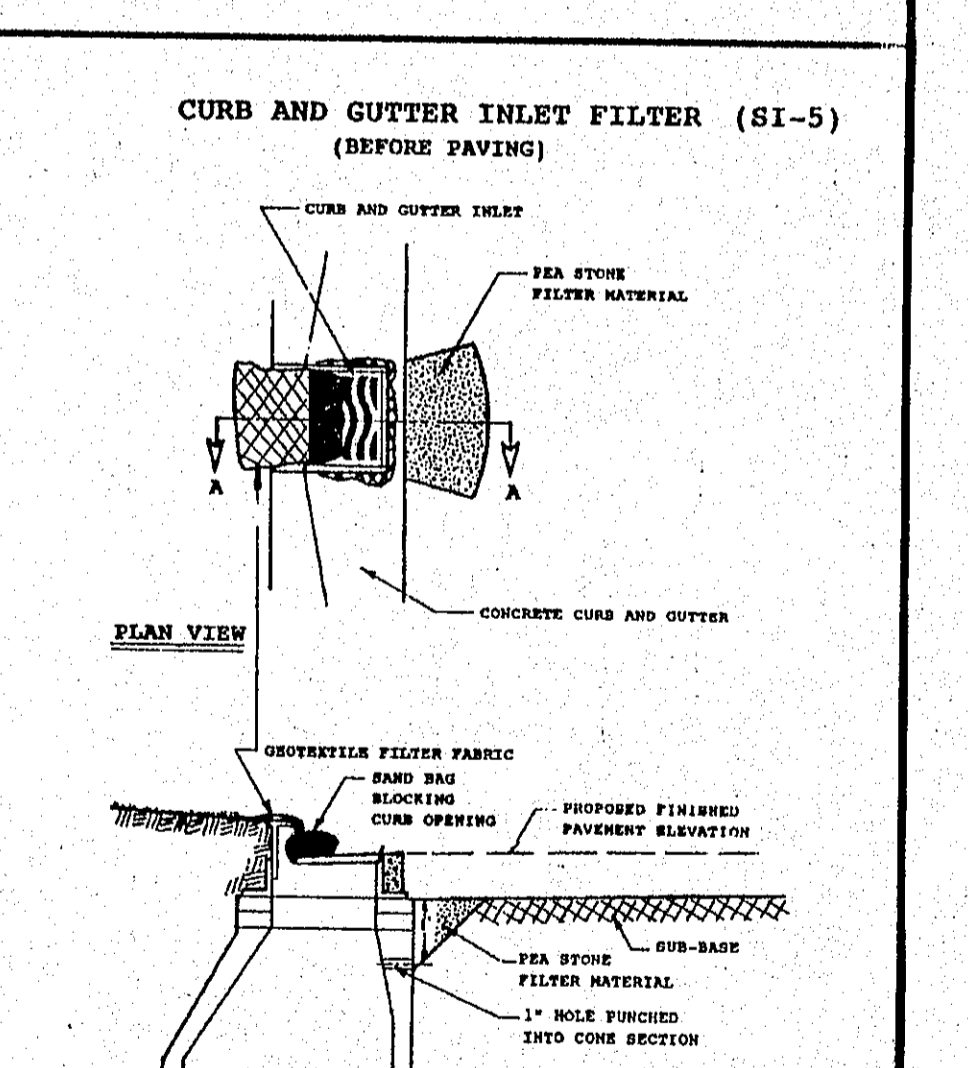
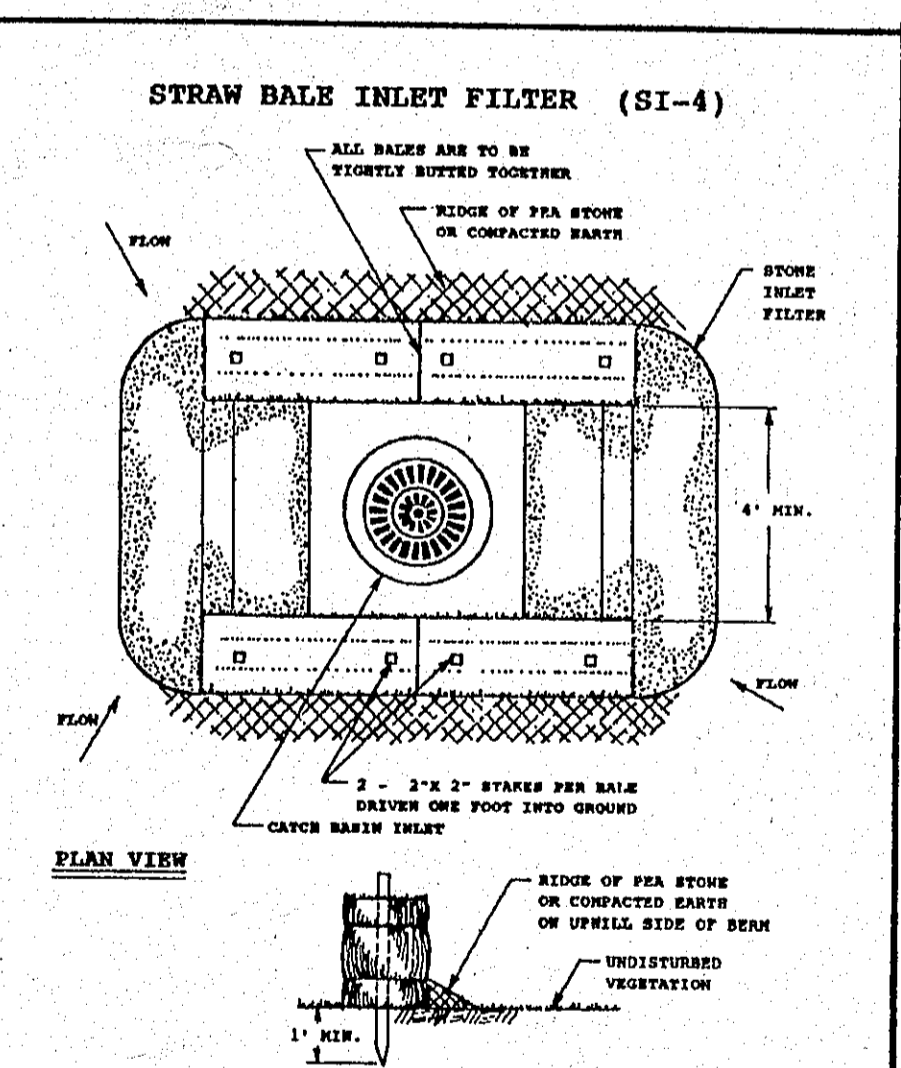
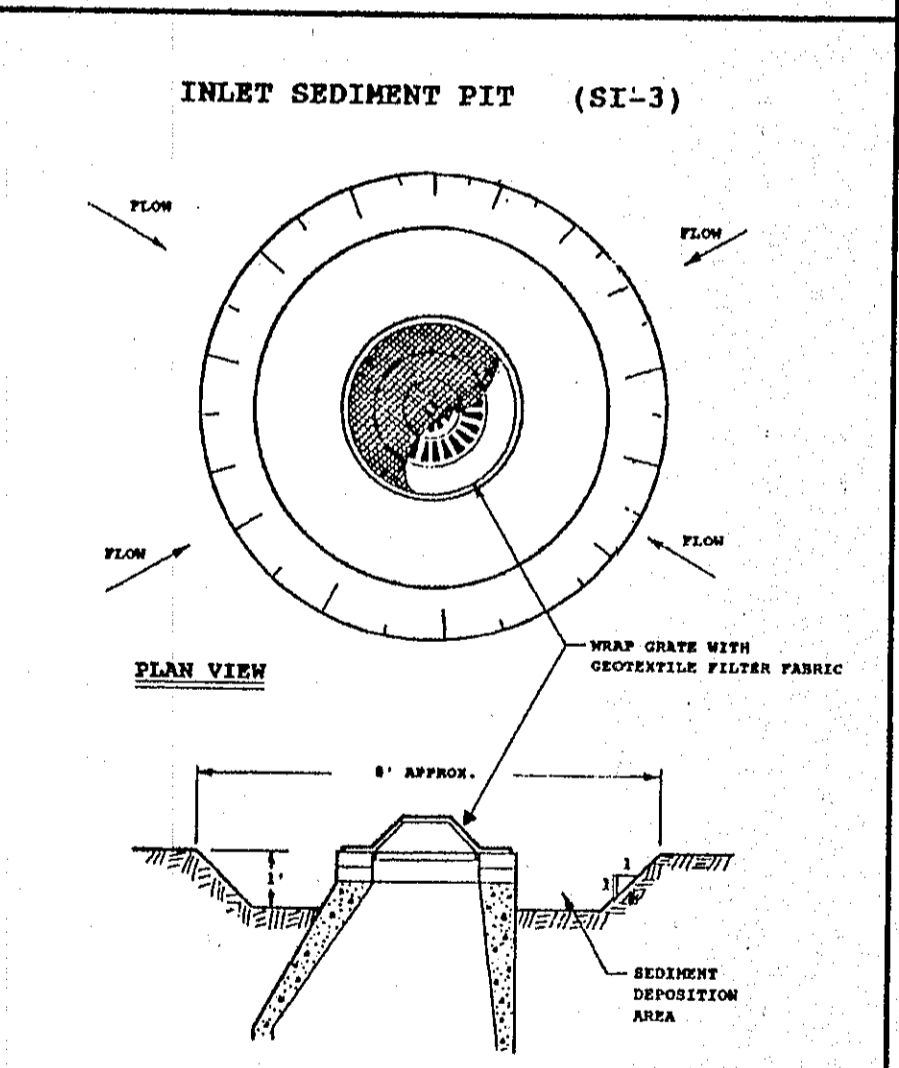
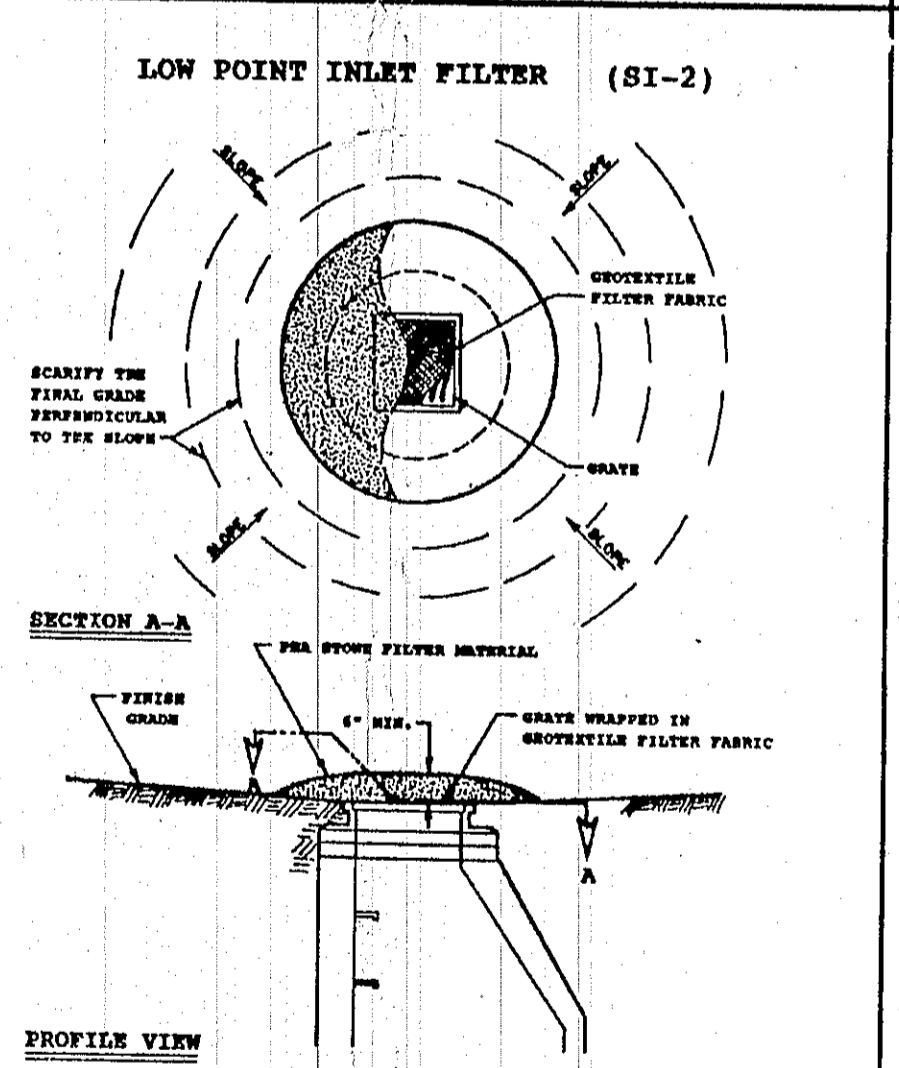
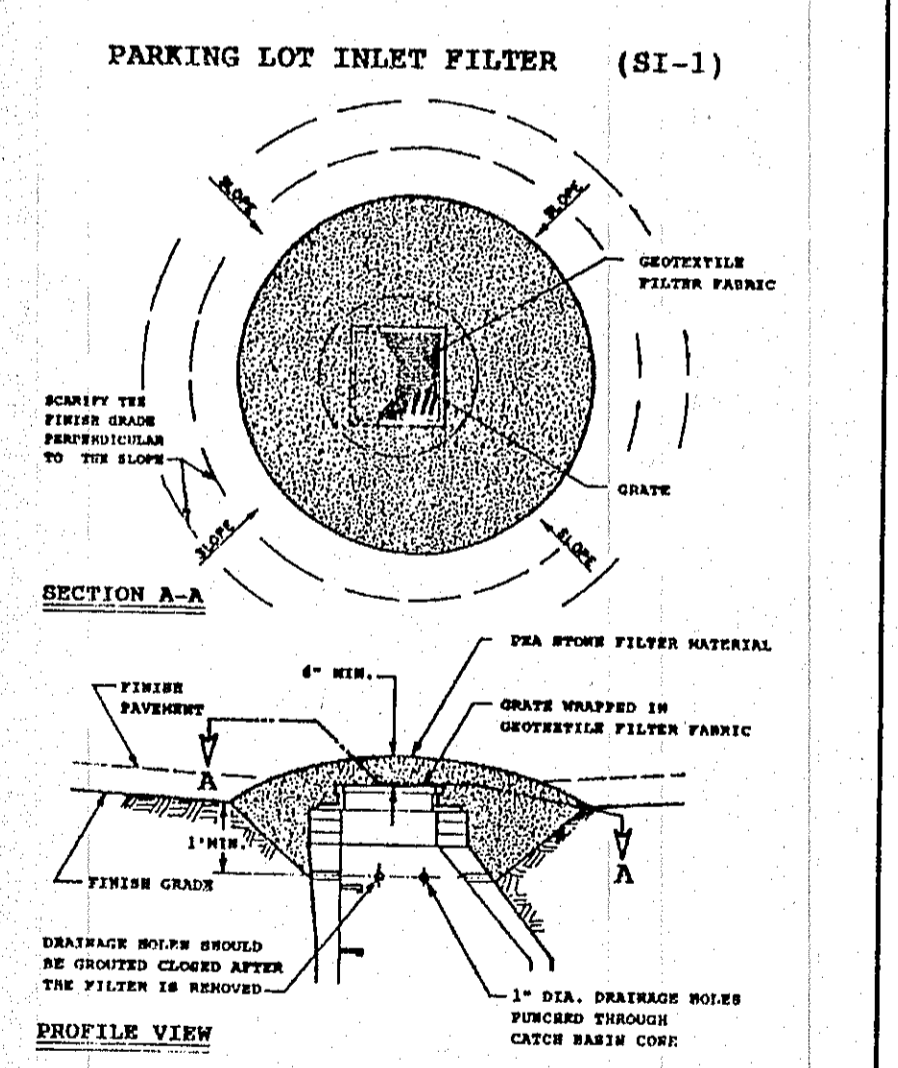
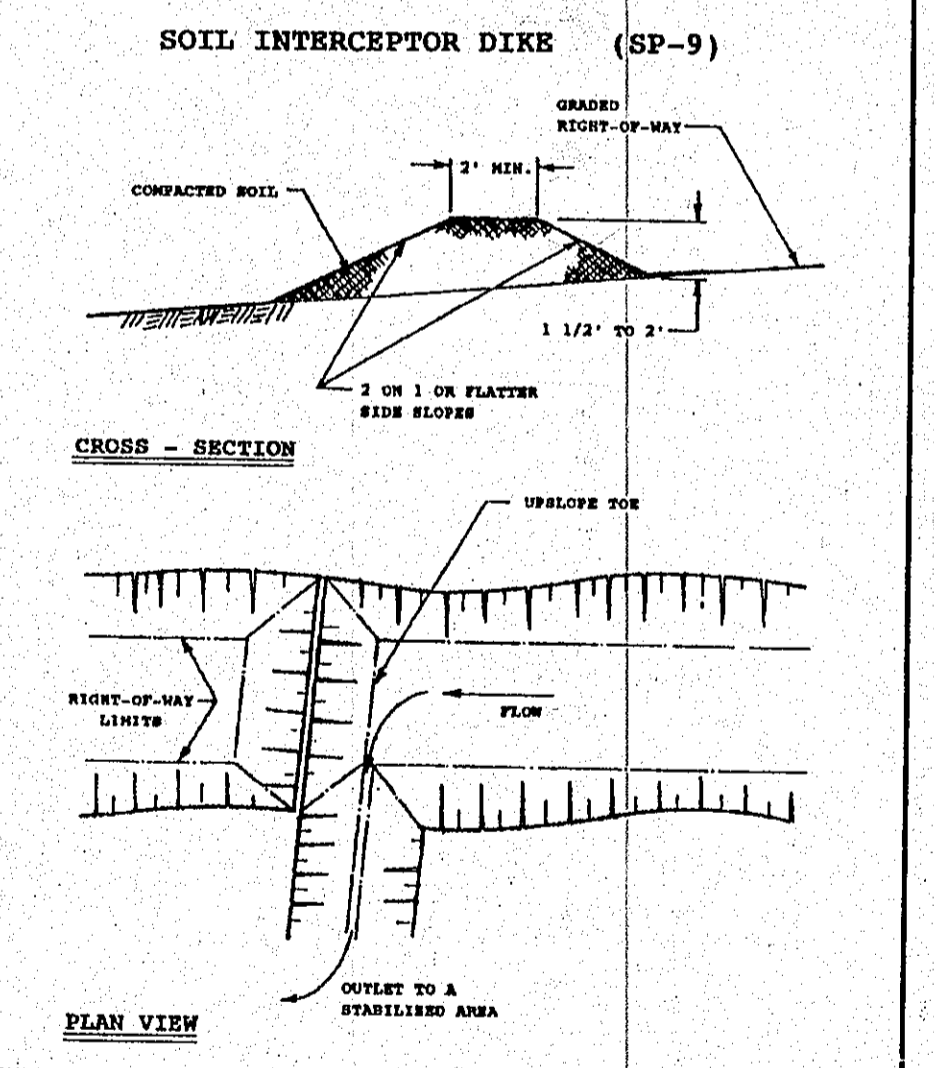
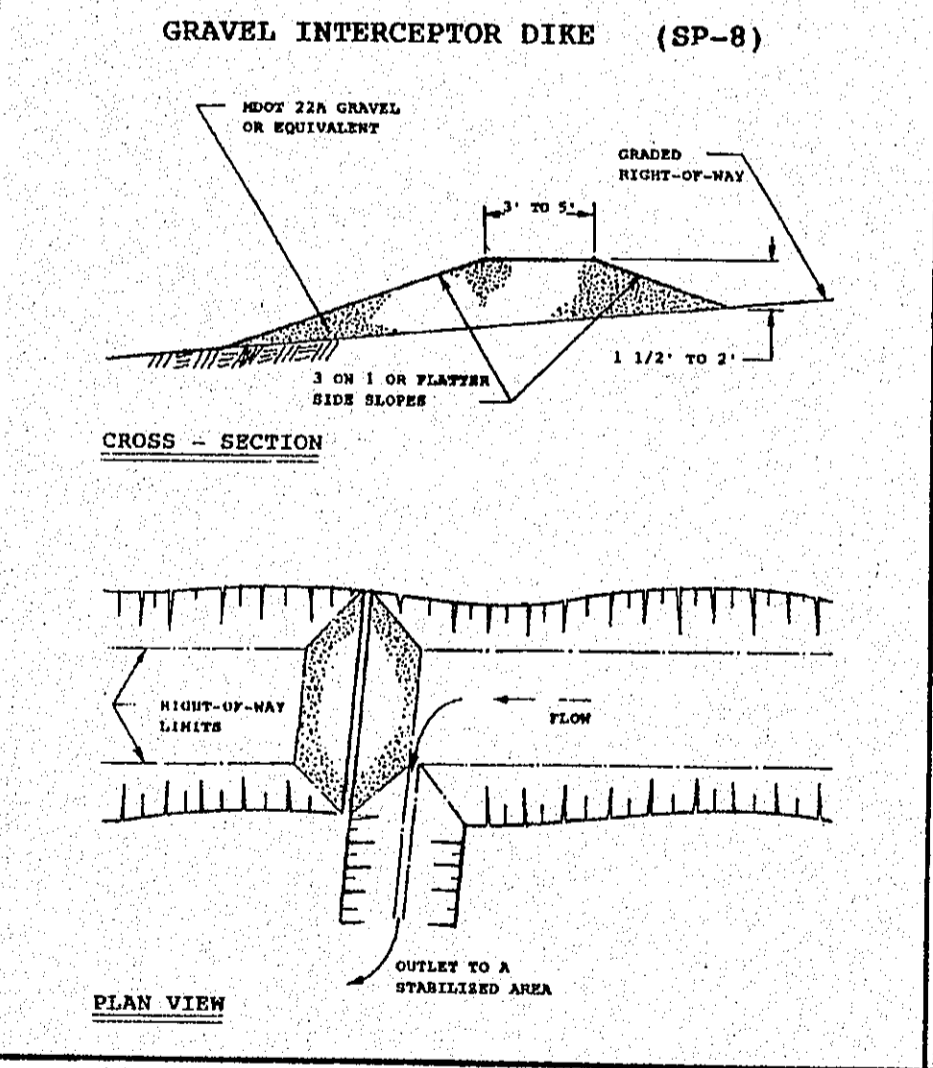
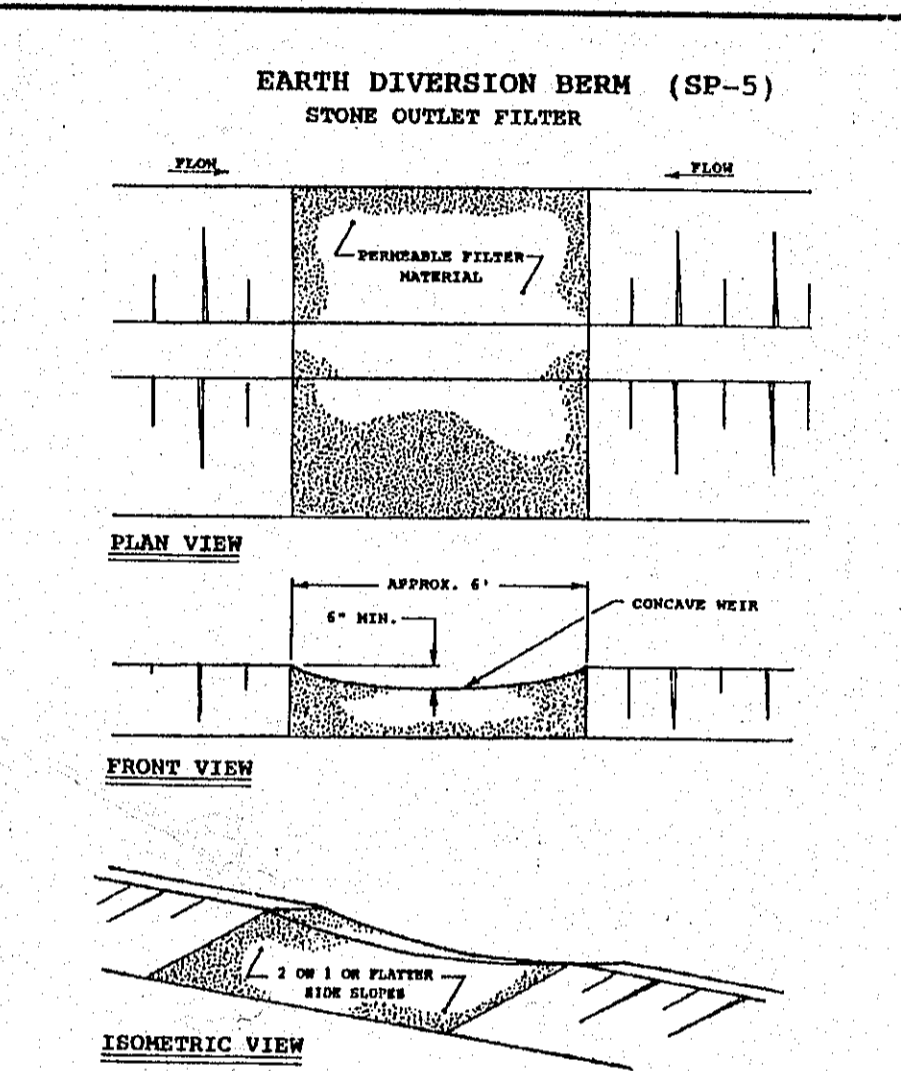
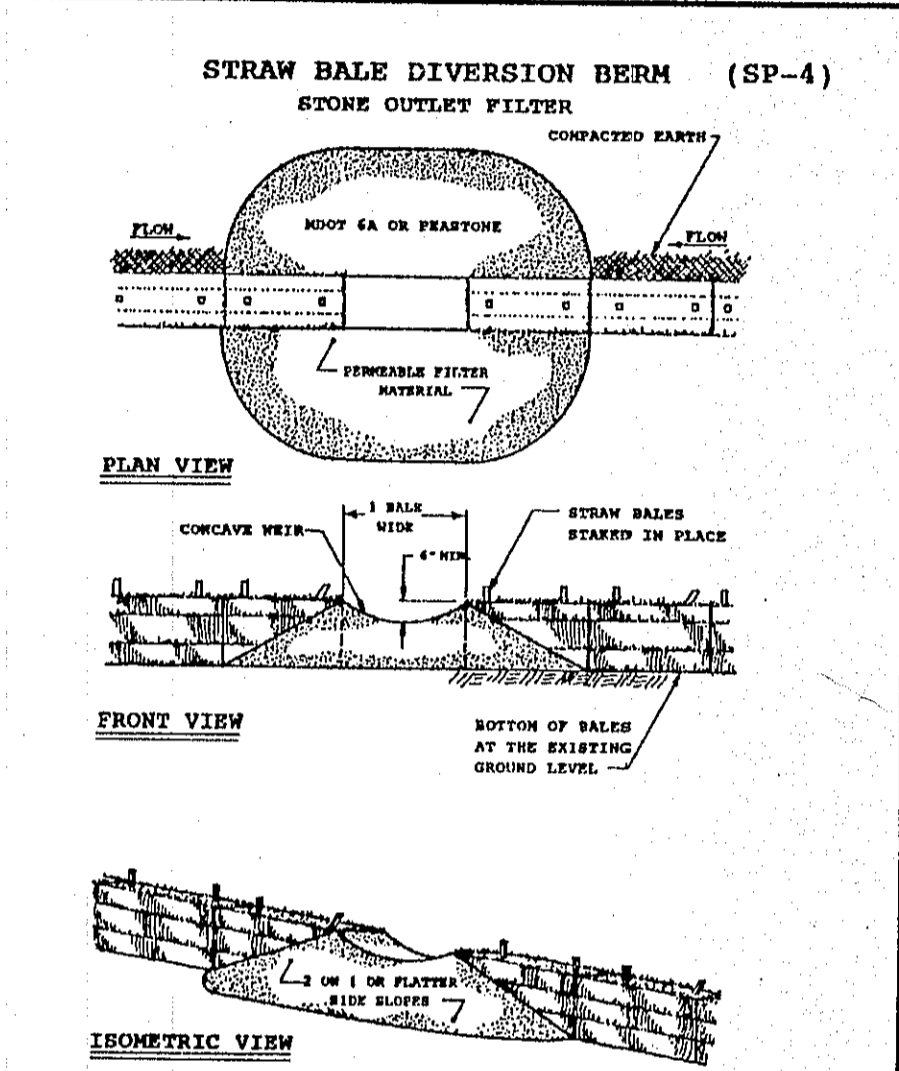
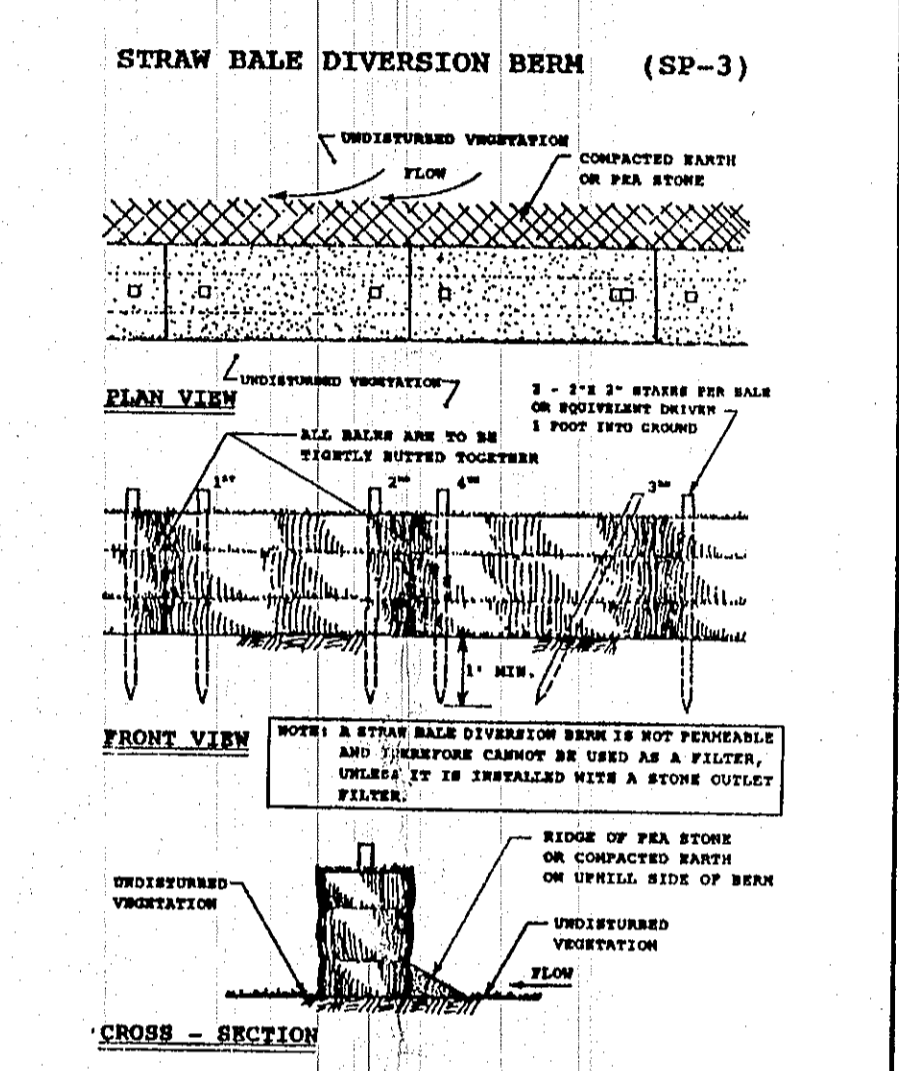
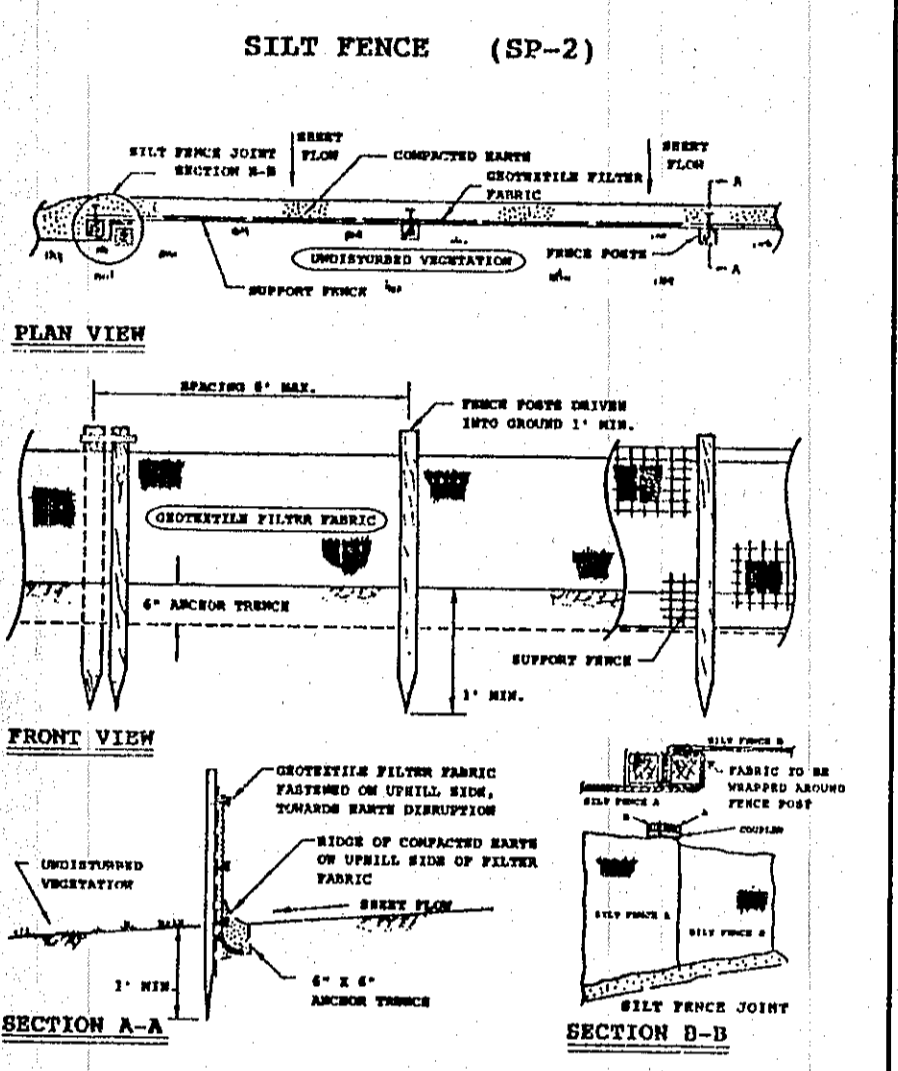
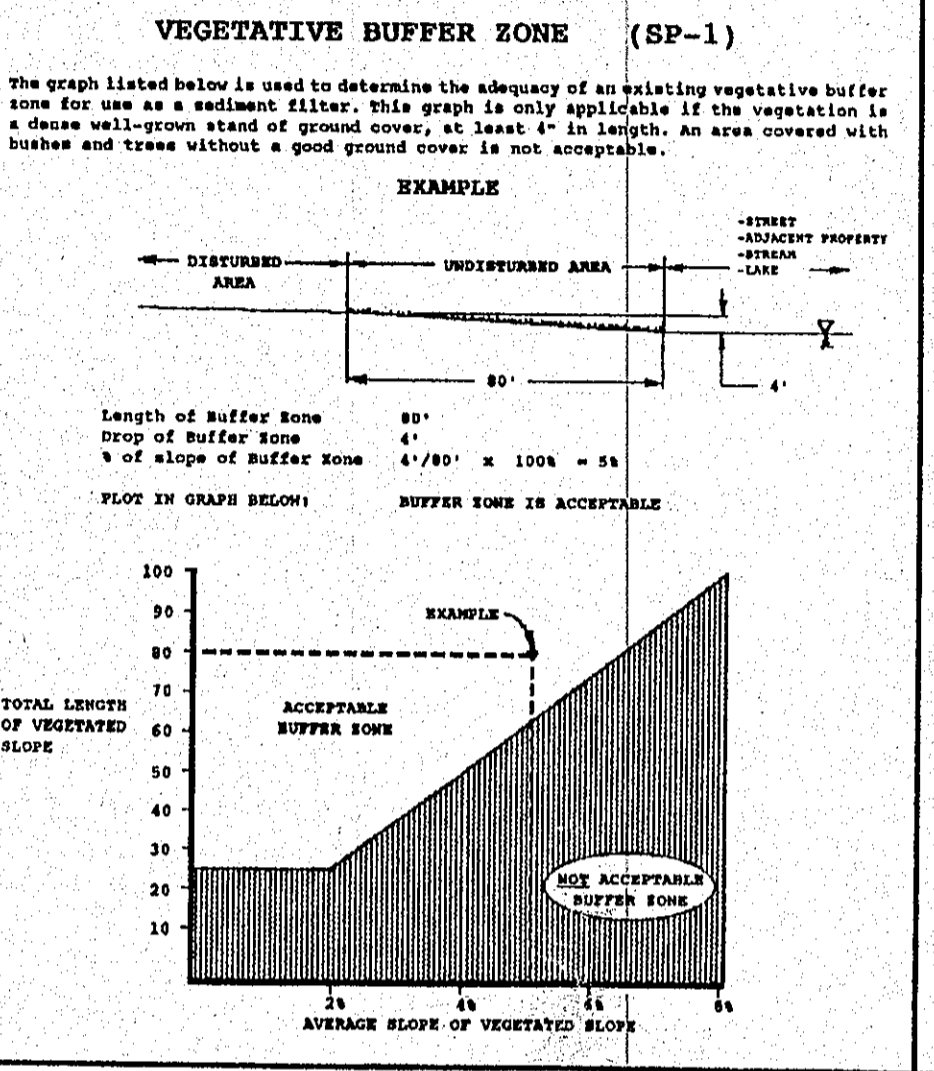
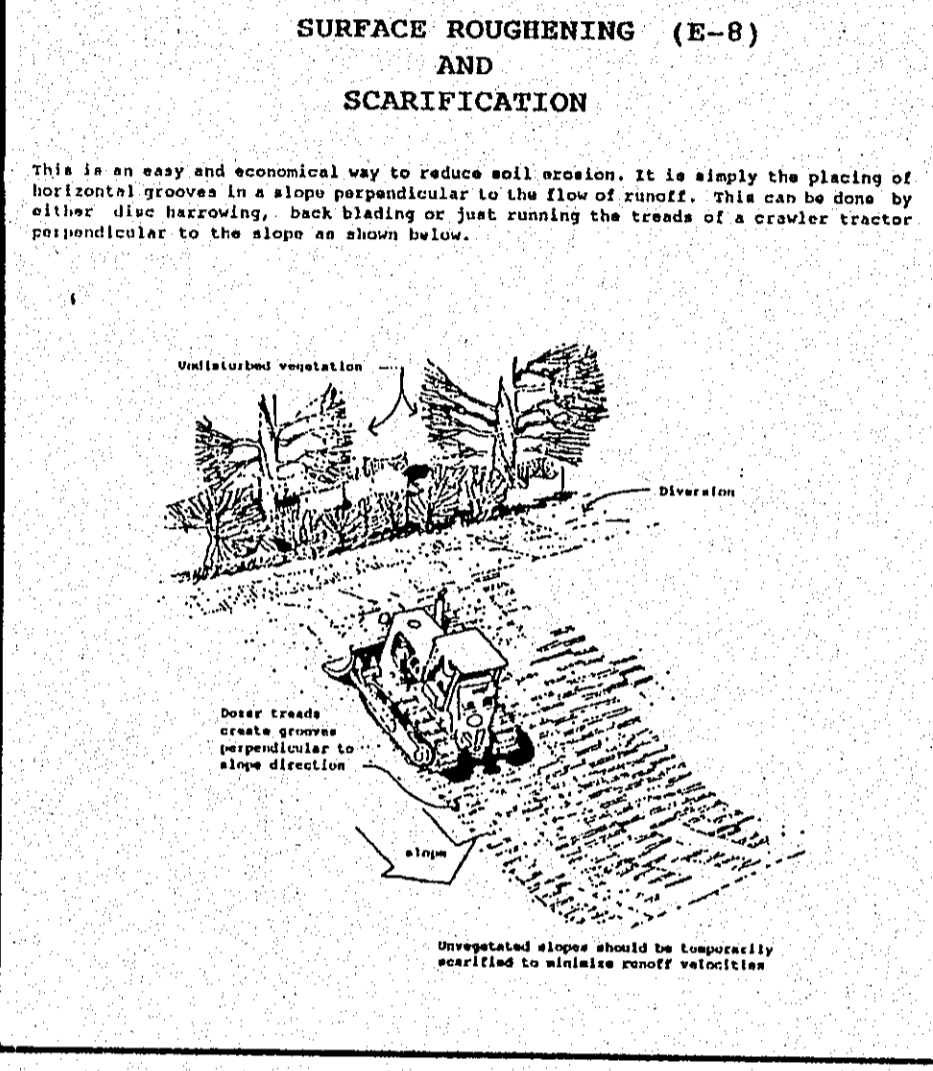
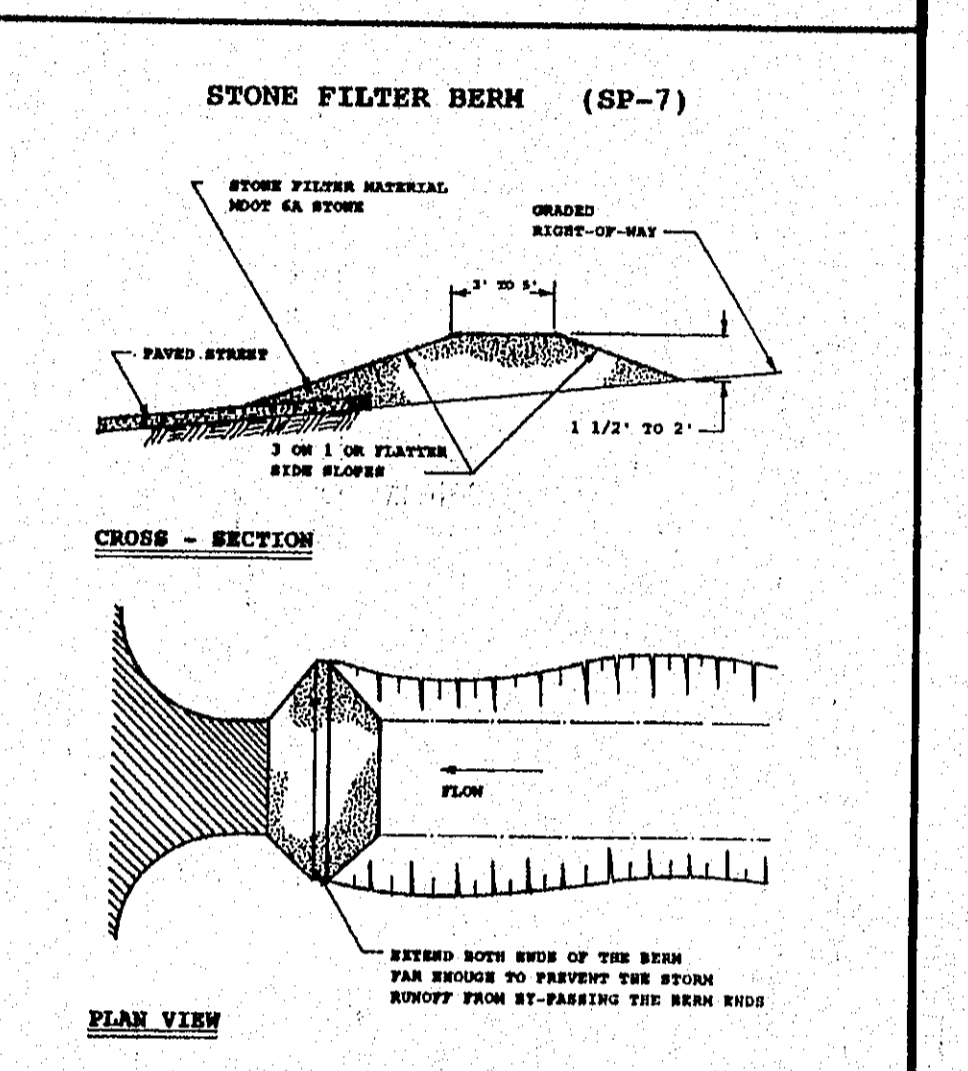
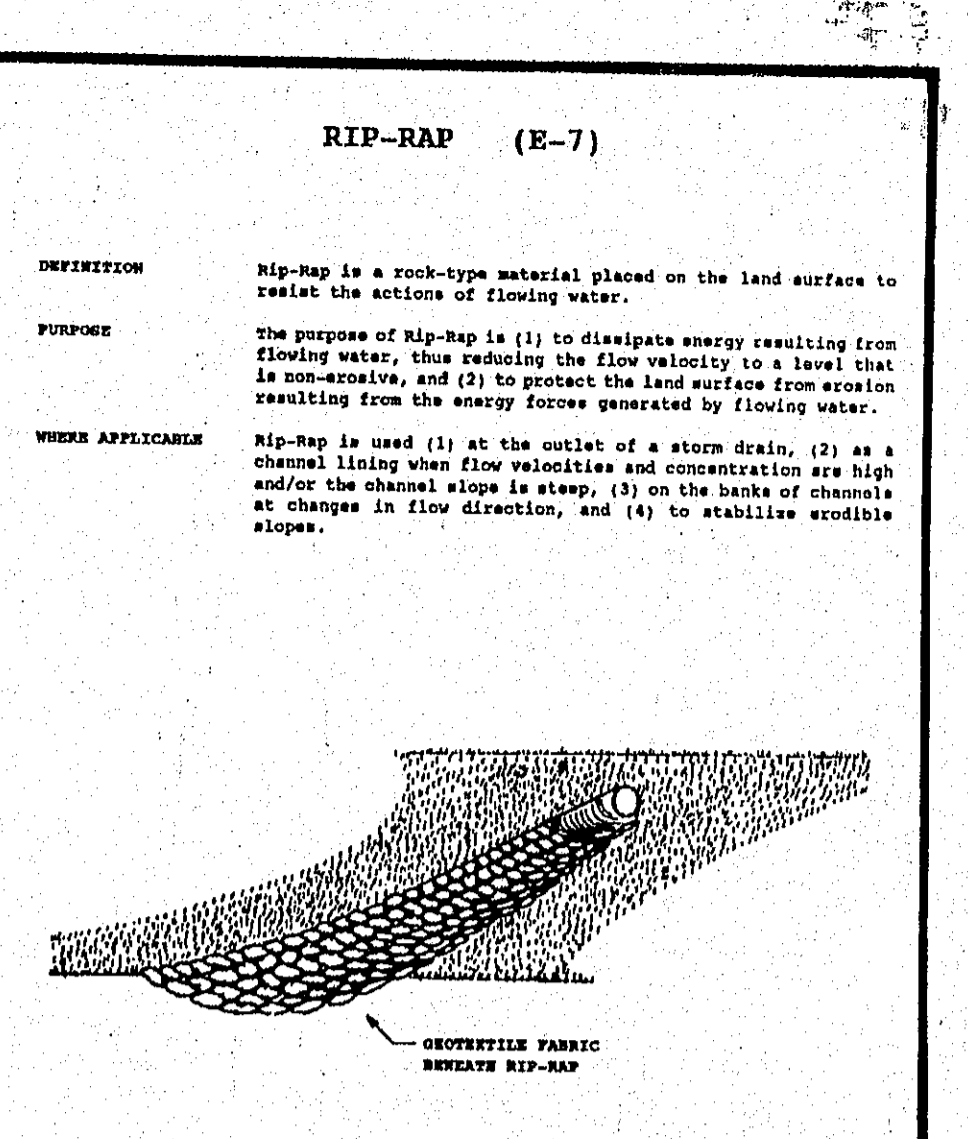
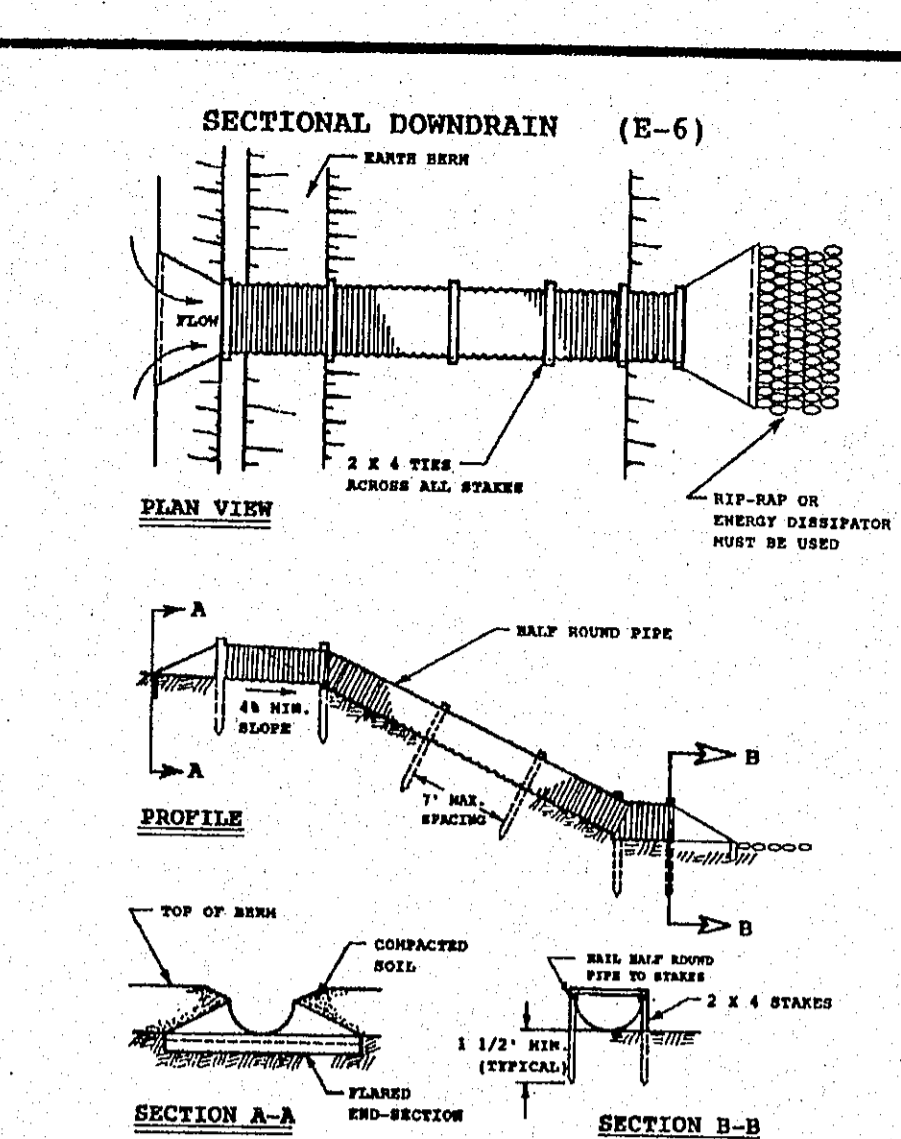
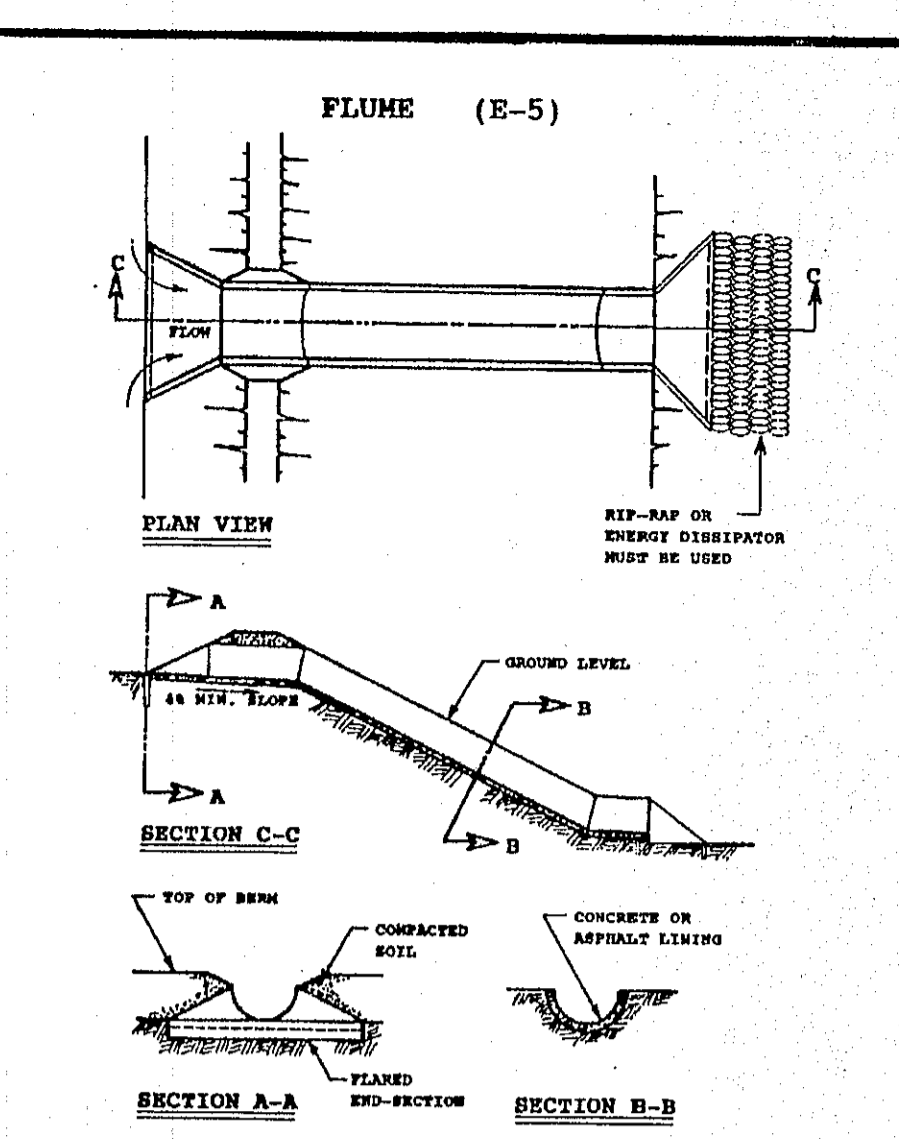
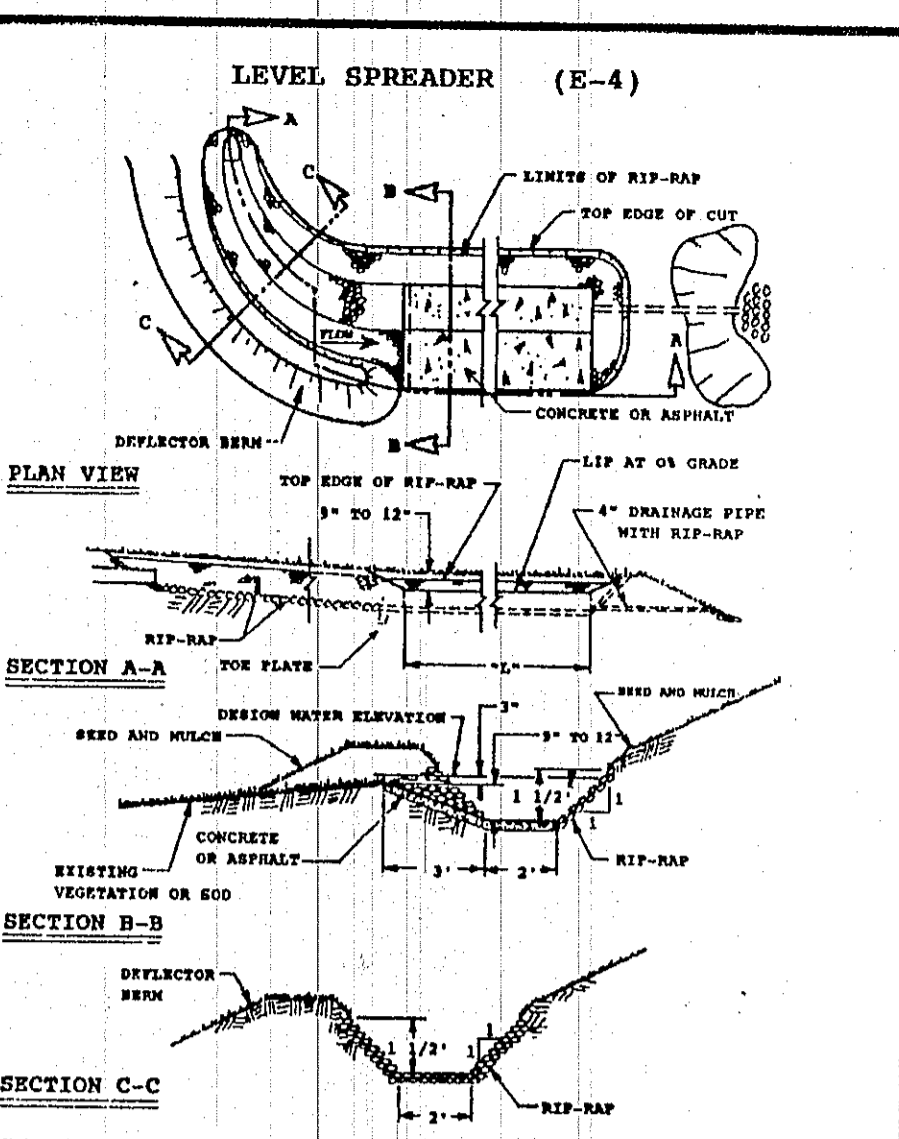
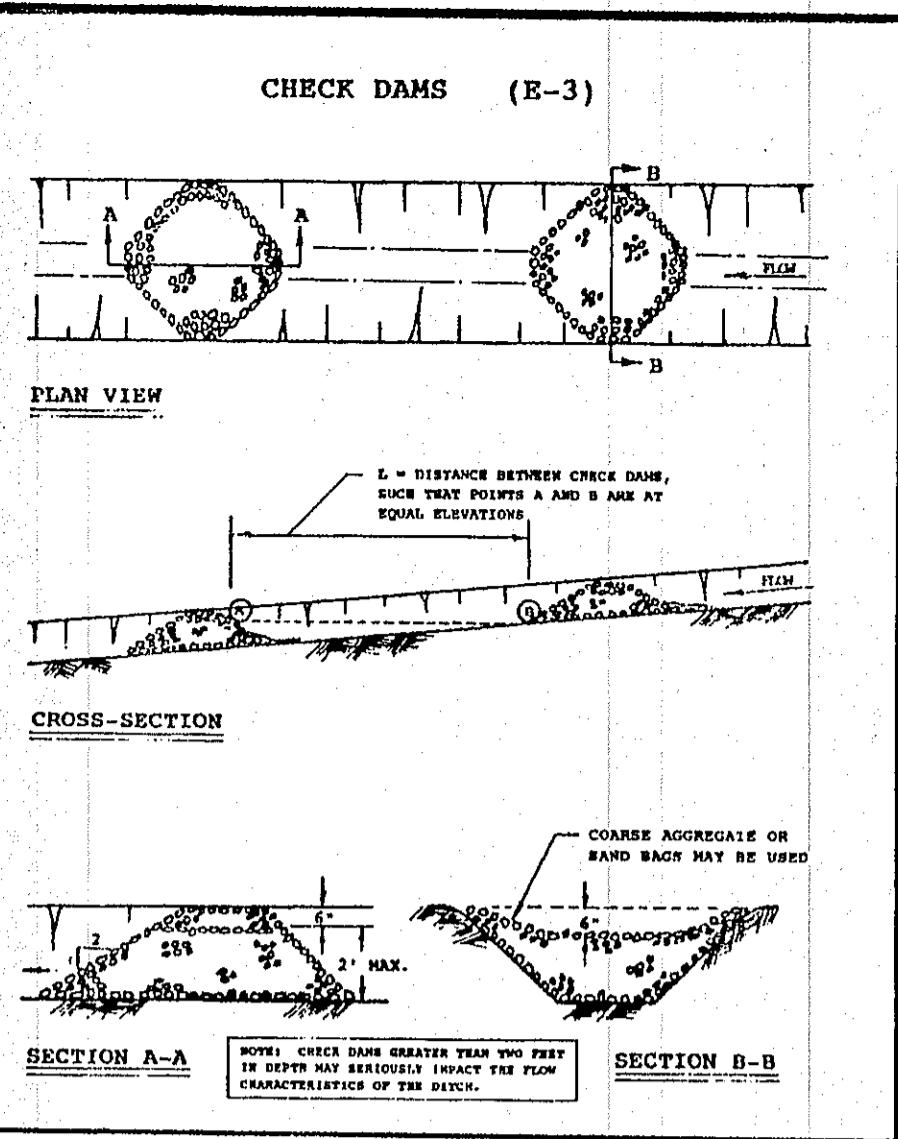
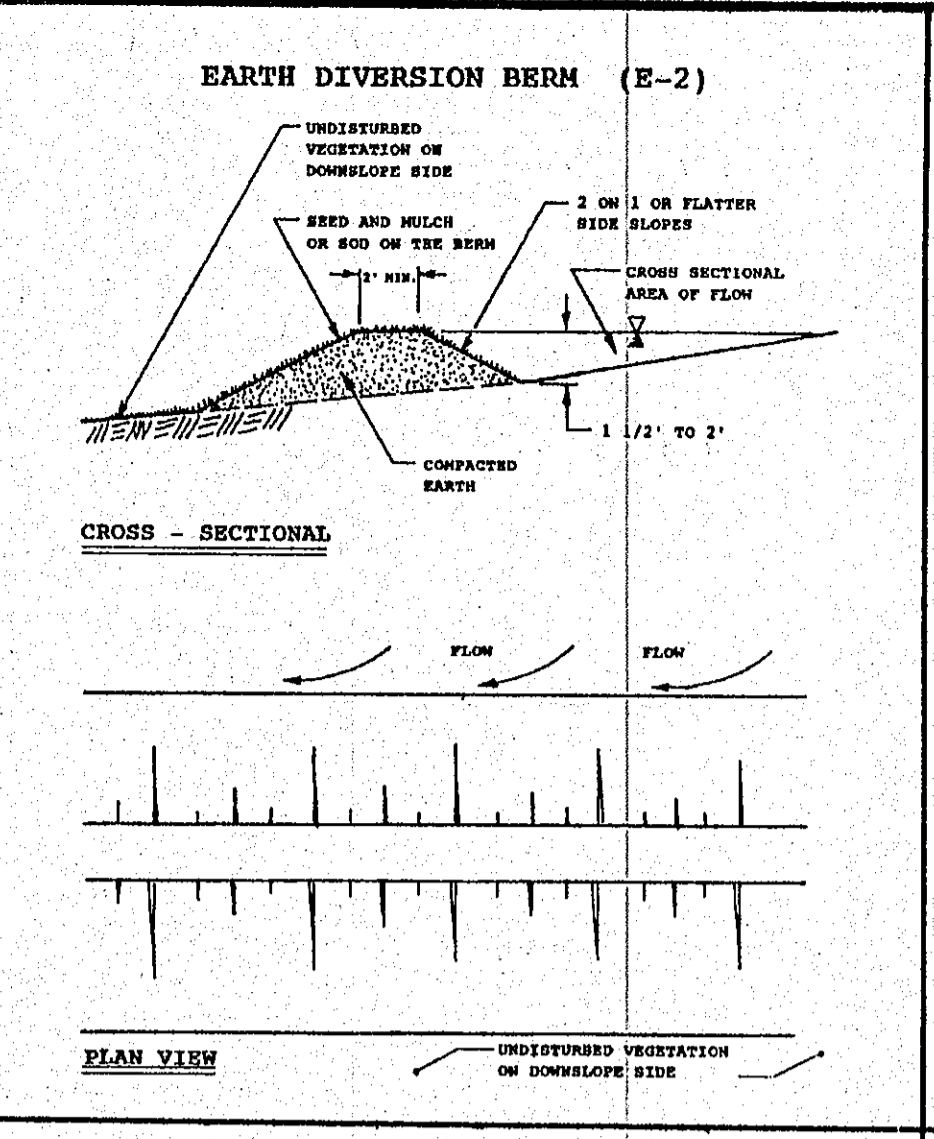
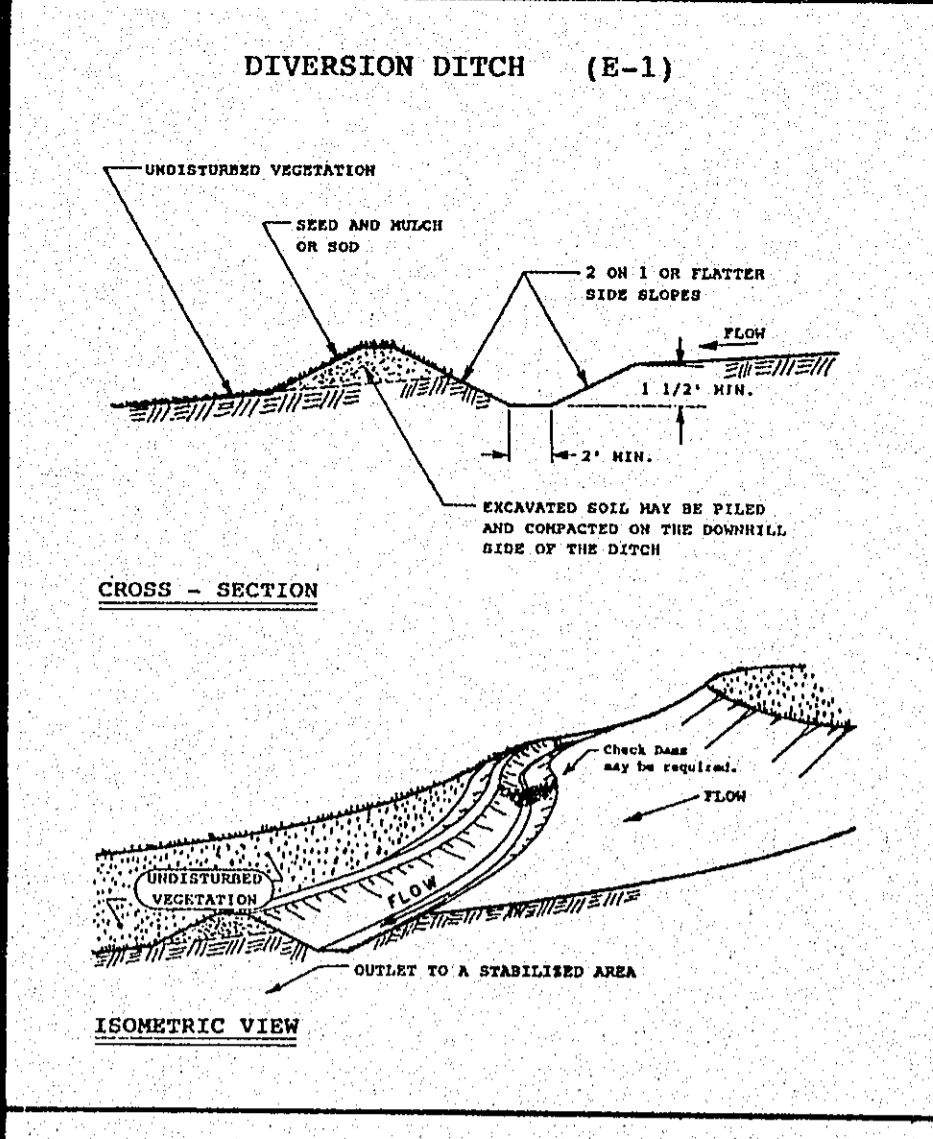
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 Troy, MI 48063-4207
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 Fax: 248.689.5677
 Web: www.rjdsurveyors.com

PROJECT NAME
SOIL EROSION AND OVERALL GRADING PLAN
"ASPEN GLEN"
 GENOA TOWNSHIP, MI

CLIENT
 BAYFIELD OF HOWELL, INC.
 54255 FOSS
 MACOMB TOWNSHIP, MI 48042

DRAWN BY	DATE	SCALE
JEK	12-16-05	1"=60'
PROJECT	SHEET	
2004-156	CE-3	



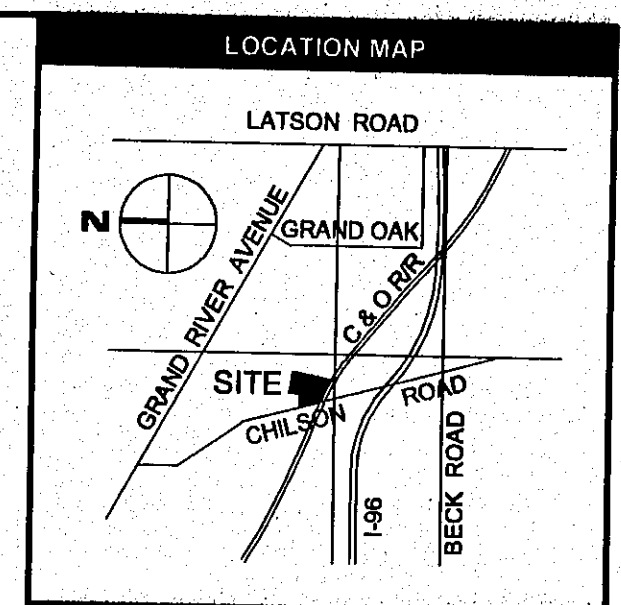
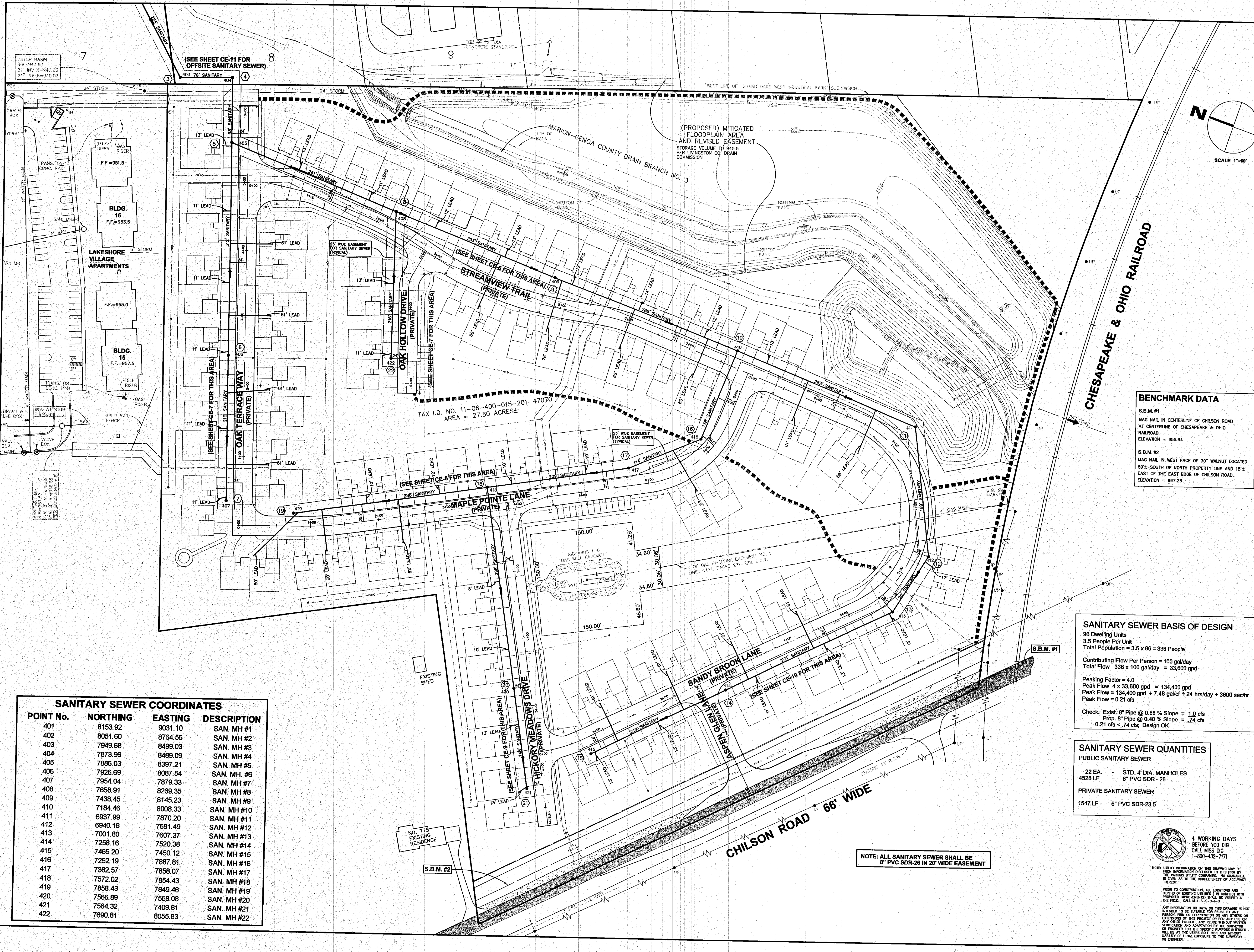
Raymond J. Donnelly & Associates, Inc.
 Land Surveying, Mapping
 Site Development Consulting
 1853 E. Maple Road
 Troy, MI 48063-4207
 Phone: 248.689.5555

PROJECT NAME
SOIL EROSION & SEDIMENT CONTROL DETAILS
"ASPEN GLEN"
 GENOA TOWNSHIP, MI

CLIENT
 BAYFIELD OF HOWELL, INC.
 54255 FOSS
 MACOMB TOWNSHIP, MI 48042

DRAWN BY: JEK DATE: 6-07-05 SCALE: SHEET

2004-156 CE-3A



LEGEND

ABBREVIATIONS

- FI FOUND IRON ROD
- FIP FOUND IRON PIPE
- FCM FOUND CONCRETE MONUMENT
- SI SET IRON ROD
- C CALCULATED
- M MEASURED
- R RECORD
- CLF CHAIN LINK FENCE
- CB CATCH BASIN
- CO CLEAN OUT
- DS DOWNSPOUT
- FF FINISHED FLOOR
- GV&W GATE VALVE & WELL
- HYD HYDRANT
- INLET INLET
- IE INVERT ELEVATION
- LP LIGHT POLE
- MH MANHOLE
- NTS NOT TO SCALE
- OH OVERHEAD
- SB SOIL BORING
- TC TOP OF CURB
- UG UNDERGROUND
- UP UTILITY POLE

SYMBOLS

- CABLE
- ELECTRIC
- FENCE
- GAS
- GUY WIRE & ANCHOR
- SANITARY SEWER
- STORM SEWER
- TELEPHONE
- △ TRAVELER CONTROL POINT
- WATER MAIN
- EXISTING CONTOURS
- EXISTING ELEVATIONS
- PROPOSED CONTOURS
- PROPOSED ELEVATIONS

REVISIONS

- 1-03-06 REVISED PER ENGINEERING REVIEW No. 3
- 12-16-05 REVISED PER ENGINEERING REVIEW No. 2
- 10-28-05 REVISED PER CLIENT, TETRA TECH, L.L.C. & LIVINGSTON COUNTY DRAIN COMMISSION
- 9-27-05 REVISED PER ENGINEERING REVIEW No. 1

BENCHMARK DATA

S.B.M. #1
MAG NAIL IN CENTERLINE OF CHILSON ROAD AT CENTERLINE OF CHESAPEAKE & OHIO RAILROAD.
ELEVATION = 955.64

S.B.M. #2
MAG NAIL IN WEST FACE OF 30" WALNUT LOCATED 50'± SOUTH OF NORTH PROPERTY LINE AND 15'± EAST OF THE EAST EDGE OF CHILSON ROAD.
ELEVATION = 967.28

SANITARY SEWER BASIS OF DESIGN

96 Dwelling Units
3.5 People Per Unit
Total Population = 3.5 x 96 = 336 People

Contributing Flow Per Person = 100 gal/day
Total Flow 336 x 100 gal/day = 33,600 gpd

Peaking Factor = 4.0
Peak Flow 4 x 33,600 gpd = 134,400 gpd
Peak Flow = 134,400 gpd + 7.48 gal/cf + 24 hrs/day + 3600 sec/hr
Peak Flow = 0.21 cfs

Check: Exist. 8" Pipe @ 0.68 % Slope = 1.0 cfs
Prop. 8" Pipe @ 0.40 % Slope = .74 cfs
0.21 cfs < .74 cfs; Design OK

SANITARY SEWER QUANTITIES

PUBLIC SANITARY SEWER

22 EA - STD. 4" DIA. MANHOLES
4528 LF - 8" PVC SDR - 26

PRIVATE SANITARY SEWER

1547 LF - 6" PVC SDR-25.5

NOTE: ALL SANITARY SEWER SHALL BE 8" PVC SDR-26 IN 20' WIDE EASEMENT

4 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171

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SANITARY SEWER COORDINATES

POINT No.	NORTHING	EASTING	DESCRIPTION
401	8153.92	9031.10	SAN. MH #1
402	8051.60	8764.56	SAN. MH #2
403	7949.68	8499.03	SAN. MH #3
404	7873.96	8489.09	SAN. MH #4
405	7886.03	8397.21	SAN. MH #5
406	7926.69	8087.54	SAN. MH #6
407	7954.04	7879.33	SAN. MH #7
408	7658.91	8269.35	SAN. MH #8
409	7438.45	8145.23	SAN. MH #9
410	7184.46	8008.33	SAN. MH #10
411	6937.99	7870.20	SAN. MH #11
412	6940.16	7681.49	SAN. MH #12
413	7001.80	7607.37	SAN. MH #13
414	7258.16	7520.38	SAN. MH #14
415	7465.20	7450.12	SAN. MH #15
416	7252.19	7887.81	SAN. MH #16
417	7362.57	7858.07	SAN. MH #17
418	7572.02	7854.43	SAN. MH #18
419	7858.43	7849.46	SAN. MH #19
420	7566.89	7558.08	SAN. MH #20
421	7564.32	7409.81	SAN. MH #21
422	7690.81	8055.83	SAN. MH #22

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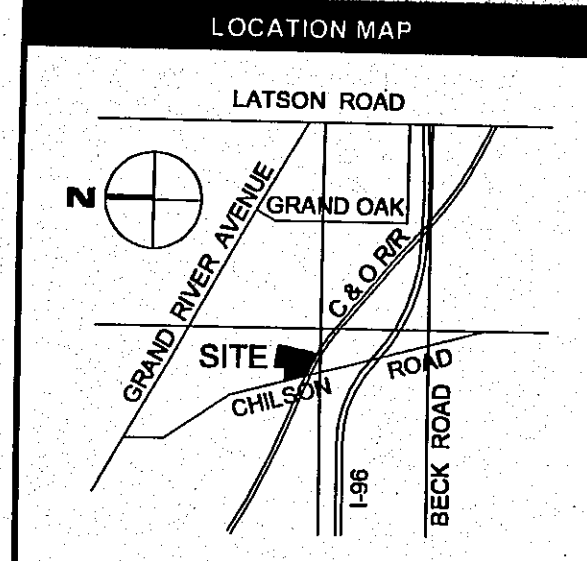
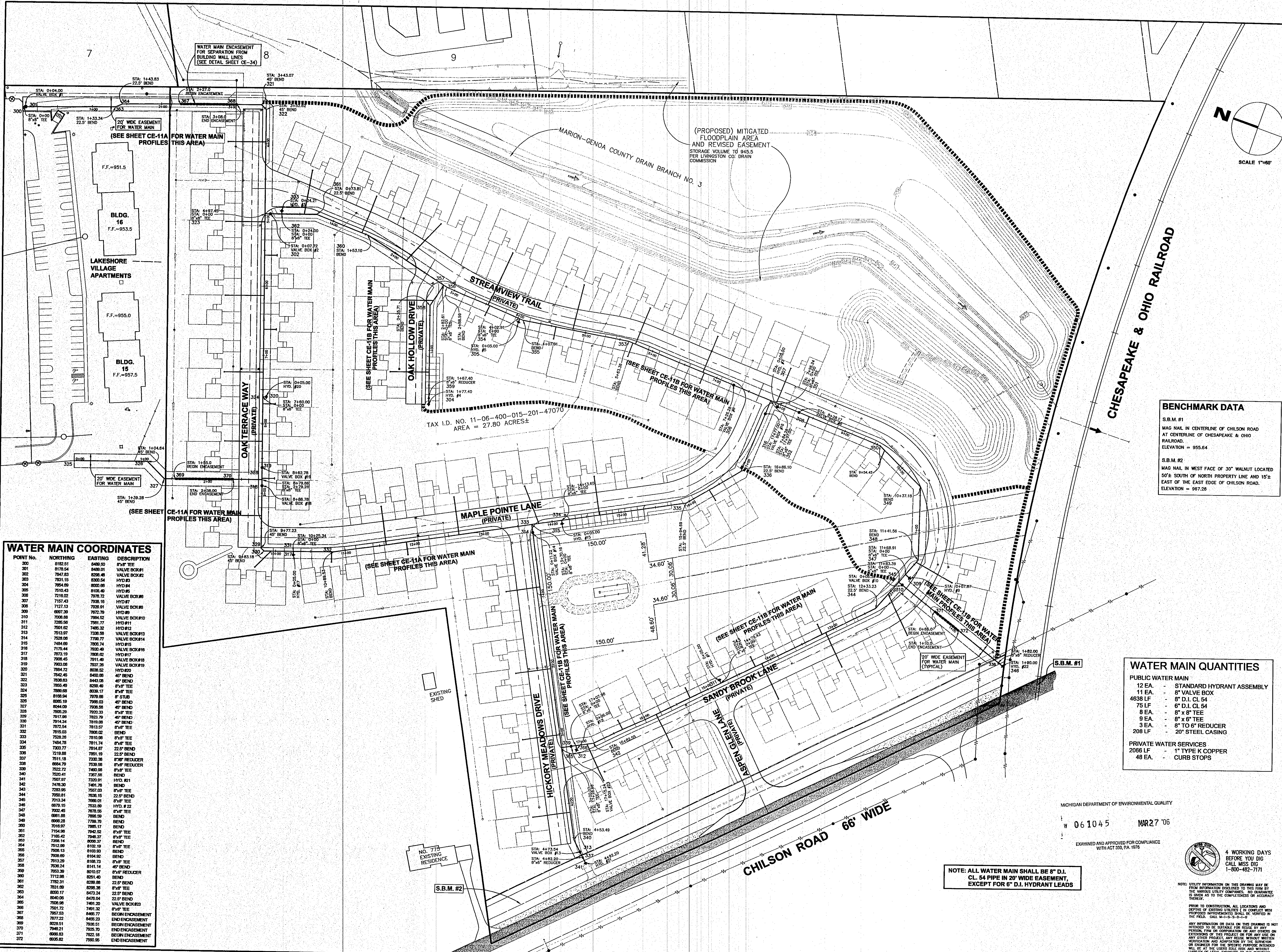
SANITARY SEWER LAYOUT
"ASPEN GLEN" GENOA TOWNSHIP, MI

CLIENT

BAYFIELD OF HOWELL, INC.
54255 FOSS
MACOMB TOWNSHIP, MI 48042

DRAWN BY: JEK DATE: 12-16-05 SCALE: 1"=60'

PROJECT: 2004-156 SHEET: CE-4



LEGEND

ABBREVIATIONS

FI	FOUND IRON ROD
FP	FOUND IRON PIPE
FM	FOUND METAL MONUMENT
C	CALCULATED
M	MEASURED
R	RECORD
CLF	CHAIN LINK FENCE
CB	CATCH BASIN
CO	CLEAN OUT
DS	DOWNSPOUT
FF	FINISHED FLOOR
GW&W	GATE VALVE & WELL
HYD	HYDRANT
INL	INLET
IE	INVERT ELEVATION
LP	LIGHT POLE
MH	MANHOLE
NTS	NOT TO SCALE
OH	OVERHEAD
SB	SOIL BORING
TC	TOP OF CURB
UG	UNDERGROUND
UTL	UTILITY POLE

SYMBOLS

—	CABLE
—	ELECTRIC
—	FENCE
—	GAS
—	GUY WIRE & ANCHOR
—	SANITARY SEWER
—	STORM SEWER
—	TELEPHONE
△	TRAVERSE/CONTROL POINT
—	WATER MAIN
—	EXISTING CONTOURS
—	PROPOSED CONTOURS
—	PROPOSED ELEVATIONS

BENCHMARK DATA

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MAG NAIL IN CENTERLINE OF CHILSON ROAD AT CENTERLINE OF CHESAPEAKE & OHIO RAILROAD.
ELEVATION = 955.64

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MAG NAIL IN WEST FACE OF 30" WALNUT LOCATED 50± SOUTH OF NORTH PROPERTY LINE AND 15± EAST OF THE EAST EDGE OF CHILSON ROAD.
ELEVATION = 967.28

WATER MAIN COORDINATES

POINT No.	NORTHING	EASTING	DESCRIPTION
300	8182.51	8486.50	6" PIP TEE
301	8178.54	8489.01	VALVE BOX #1
302	8183.83	8538.46	VALVE BOX #2
303	7831.15	8000.08	HYD #1
304	7854.89	8000.08	HYD #4
305	7910.43	8108.49	HYD #5
306	7218.02	8276.72	VALVE BOX #8
307	7157.43	7838.16	HYD #7
308	7127.13	7838.01	VALVE BOX #6
309	6997.28	7872.78	HYD #9
310	7008.88	7894.82	VALVE BOX #10
311	7286.58	7881.77	HYD #11
312	7501.82	7485.32	HYD #12
313	7513.97	7338.58	VALVE BOX #13
314	7528.08	7789.77	VALVE BOX #14
315	7484.89	7838.14	HYD #15
316	7175.44	7830.40	VALVE BOX #16
317	7873.19	7838.82	HYD #17
318	7838.45	7811.48	VALVE BOX #18
319	7803.08	7837.28	VALVE BOX #19
320	7884.72	8038.52	HYD #20
321	7845.45	8443.08	45° BEND
322	7838.63	8443.08	45° BEND
323	7865.49	8058.46	6" PIP TEE
324	7898.88	8238.17	6" PIP TEE
325	8188.94	7878.88	6" SLUB
326	8006.19	7988.03	45° BEND
327	8044.09	7838.16	45° BEND
328	7805.28	7920.33	6" PIP TEE
329	7811.89	7823.79	45° BEND
330	7814.34	7818.09	45° BEND
331	7872.54	7813.57	6" PIP TEE
332	7816.03	7808.02	BEND
333	7828.28	7810.89	6" PIP TEE
334	7484.78	7811.74	6" PIP TEE
335	7833.77	7814.27	22.5° BEND
336	7218.88	7851.49	22.5° BEND
337	7511.18	7330.38	6" PIP REDUCER
338	6984.79	7538.58	6" PIP REDUCER
339	7352.72	7483.98	6" PIP TEE
340	7820.41	7367.85	BEND
341	7507.07	7363.81	HYD. #21
342	7478.30	7481.76	BEND
343	7283.95	7567.03	6" PIP TEE
344	7830.81	7838.15	22.5° BEND
345	7013.34	7838.01	6" PIP TEE
346	6878.15	7833.89	HYD. # 22
347	7828.46	7828.46	6" PIP TEE
348	6981.88	7896.59	BEND
349	6988.28	7788.79	BEND
350	7816.87	7865.17	BEND
351	7154.98	7842.52	6" PIP TEE
352	7185.42	7848.37	6" PIP TEE
353	7286.14	8288.37	BEND
354	7812.99	8102.19	6" PIP TEE
355	7808.13	8163.80	BEND
356	7808.09	8164.82	BEND
357	7813.29	8168.73	6" PIP TEE
358	7838.24	8141.14	45° BEND
359	7853.39	8019.57	6" PIP REDUCER
360	7712.86	8251.40	BEND
361	7782.31	8288.96	22.5° BEND
362	7851.89	8288.96	6" PIP TEE
363	8000.17	8473.24	22.5° BEND
364	8040.88	8486.04	22.5° BEND
365	7808.98	7481.30	VALVE BOX #23
366	7801.72	7481.32	6" PIP TEE
367	6486.77	8485.23	BEGIN ENCASUREMENT
368	7877.22	8485.23	END ENCASUREMENT
369	8028.51	7838.51	BEGIN ENCASUREMENT
370	7828.21	7838.70	END ENCASUREMENT
371	6988.63	7822.18	BEGIN ENCASUREMENT
372	6986.82	7850.95	END ENCASUREMENT

WATER MAIN QUANTITIES

PUBLIC WATER MAIN

12 EA.	-	STANDARD HYDRANT ASSEMBLY
11 EA.	-	8" VALVE BOX
4638 LF	-	8" D.I. CL 54
75 LF	-	6" D.I. CL 54
8 EA.	-	8" x 8" TEE
9 EA.	-	8" x 6" TEE
3 EA.	-	8" TO 6" REDUCER
208 LF	-	20" STEEL CASING

PRIVATE WATER SERVICES

2066 LF	-	1" TYPE K COPPER
48 EA.	-	CURB STOPS

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
W 061045 MAR27 '06

EXAMINED AND APPROVED FOR COMPLIANCE WITH ACT 205, P.A. 1976

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NOTE: ALL WATER MAIN SHALL BE 8" D.I. CL. 54 PIPE IN 20' WIDE EASEMENT, EXCEPT FOR 6" D.I. HYDRANT LEADS

REVISIONS

1-03-06	REVISED PER ENGINEERING REVIEW No. 3
12-16-05	REVISED PER CLIENT, TERRA-TECH, L.C.R.C. & LIVINGSTON COUNTY DRAIN COMMISSION
9-27-05	REVISED PER ENGINEERING REVIEW No. 1

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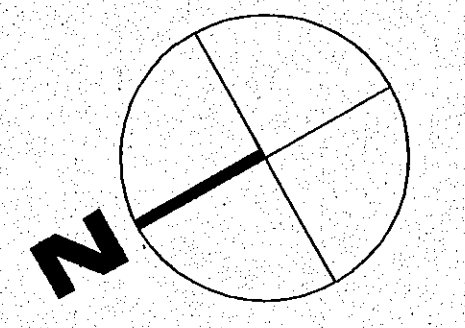
1853 E. Maple Road
Troy, MI 48063-4207
Phone: 248.689.5555
Fax: 248.689.5677
Web: www.rjdsurveyors.com

PROJECT NAME
WATER MAIN LAYOUT AND STATIONING "ASPEN GLEN" GENOA TOWNSHIP, MI

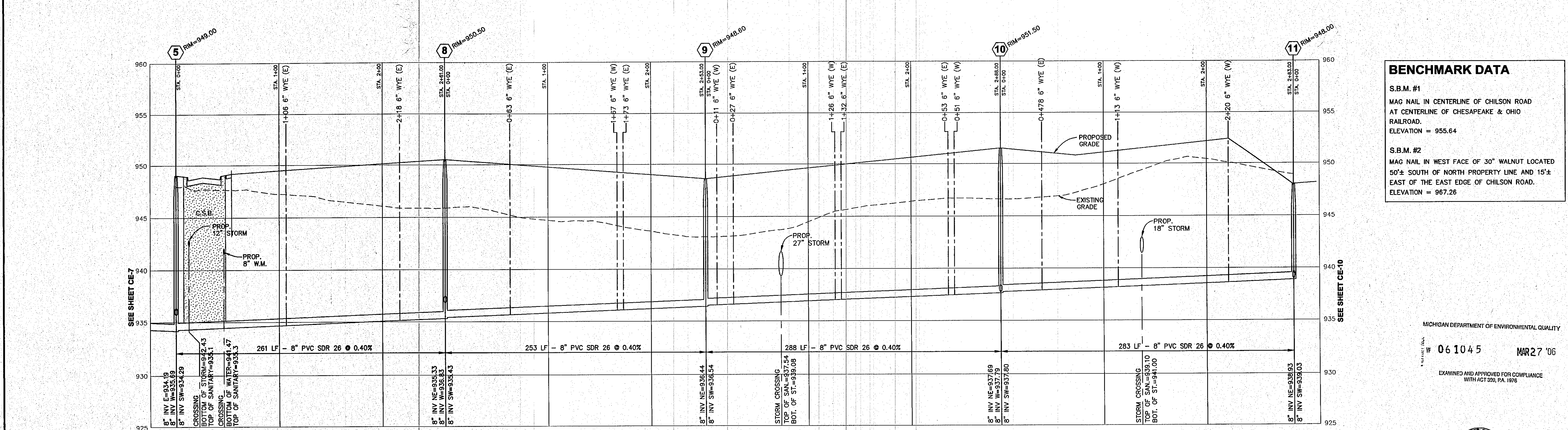
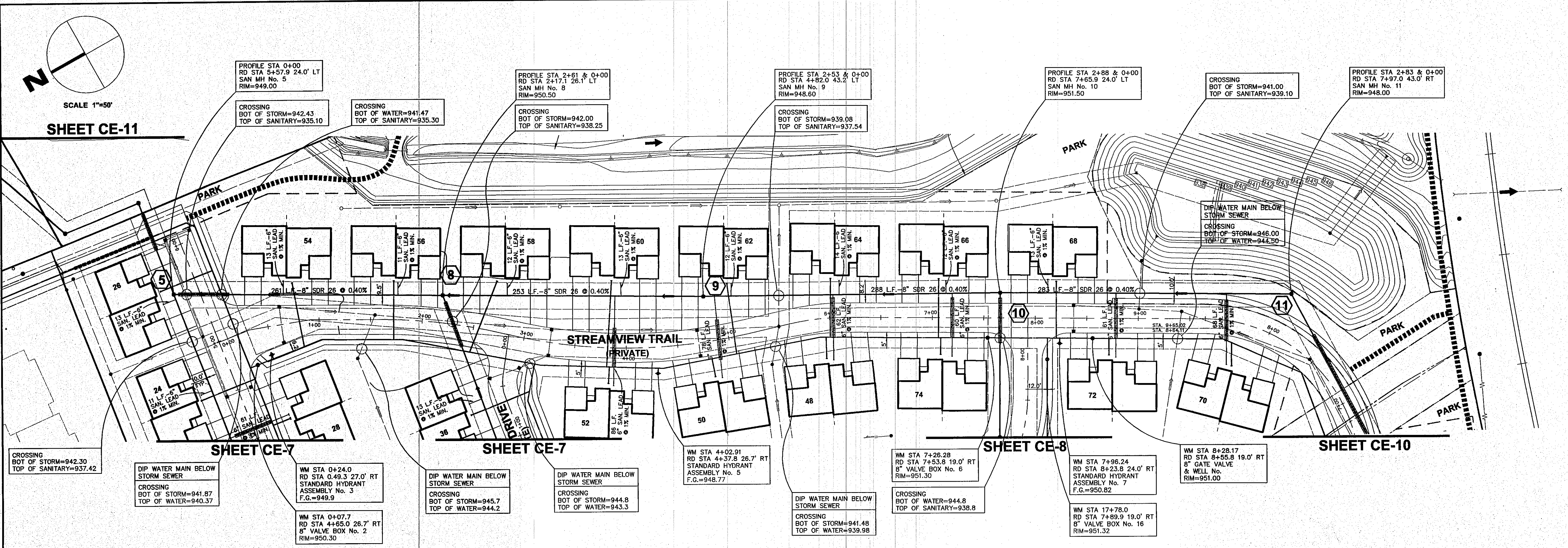
CLIENT
BAYFIELD OF HOWELL, INC.
54255 FOSS
MACOMB TOWNSHIP, MI 48042

DRAWN BY DATE SCALE
JEK 1-03-06 1"=60'

PROJECT SHEET
2004-156 CE-5

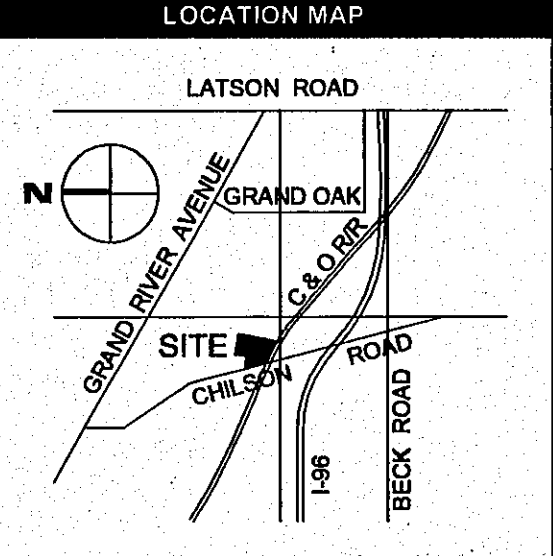


SHEET CE-11



SANITARY SEWER PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

STREAMVIEW TRAIL



- LEGEND**
- ABBREVIATIONS**
- FI FOUND IRON ROD
 - FIP FOUND IRON PIPE
 - FM FOUND CONCRETE MONUMENT
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REVISIONS

1-03-06 REVISED PER ENGINEERING REVIEW No. 3
 12-16-05 REVISED PER ENGINEERING REVIEW No. 2
 10-26-05 REVISED PER CLIENT, TETRA-TECH L.C.R.C. & LIVINGSTON COUNTY DRAIN COMMISSION
 9-27-05 REVISED PER ENGINEERING REVIEW No. 1

SEAL

BENCHMARK DATA

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 AT CENTERLINE OF CHESAPEAKE & OHIO
 RAILROAD.
 ELEVATION = 955.64

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 MAG NAIL IN WEST FACE OF 30" WALNUT LOCATED
 50'± SOUTH OF NORTH PROPERTY LINE AND 15'±
 EAST OF THE EAST EDGE OF CHILSON ROAD.
 ELEVATION = 967.26

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

061045 MAR 27 '06

EXAMINED AND APPROVED FOR COMPLIANCE WITH ACT 320, P.A. 1976



4 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171

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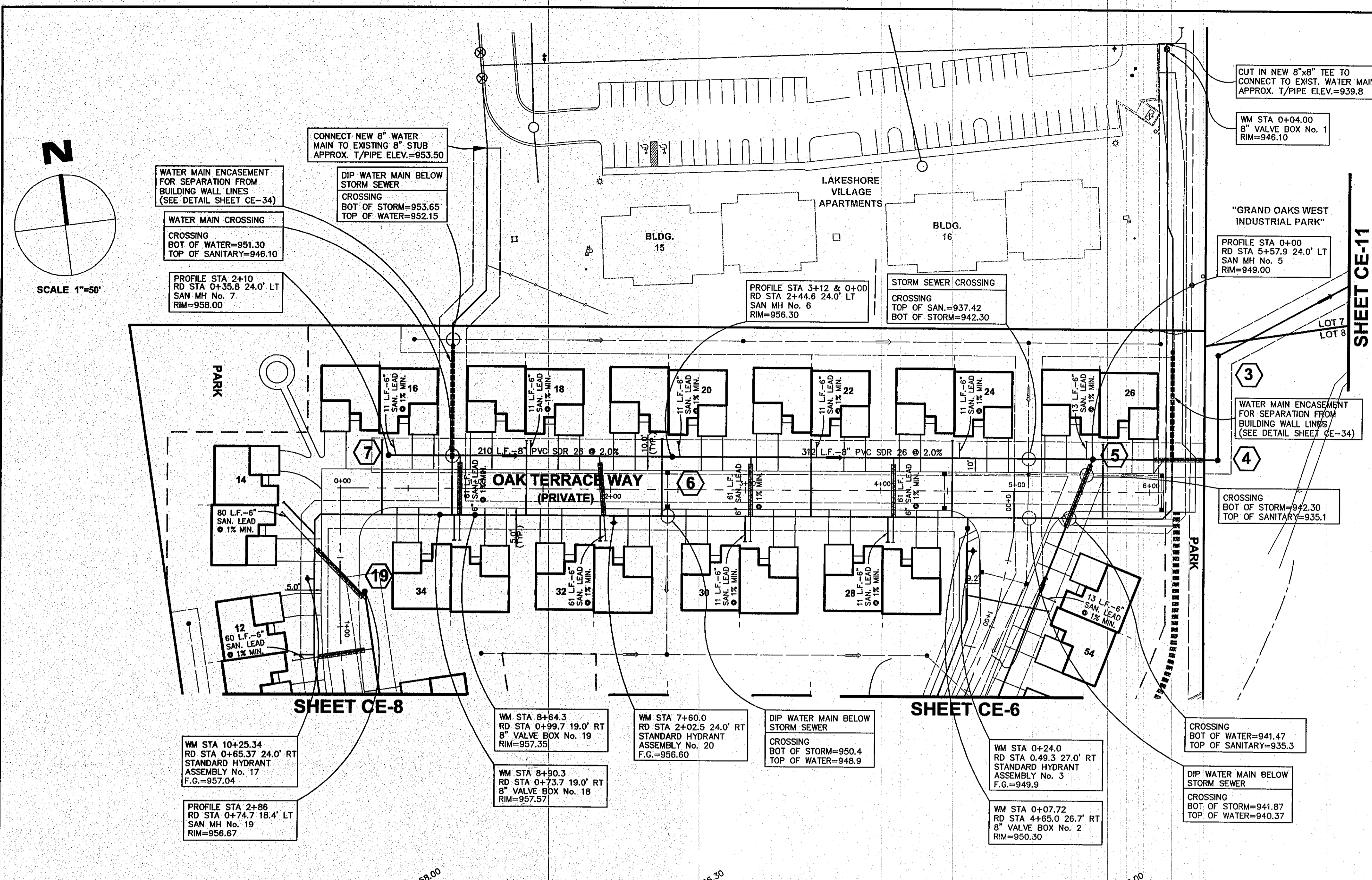
PROJECT NAME

SANITARY SEWER & WATER MAIN PLAN
"ASPEN GLEN"
 GENOA TOWNSHIP, MI

CLIENT

BAYFIELD OF HOWELL, INC.
 54255 FOSS
 MACOMB TOWNSHIP, MI 48042

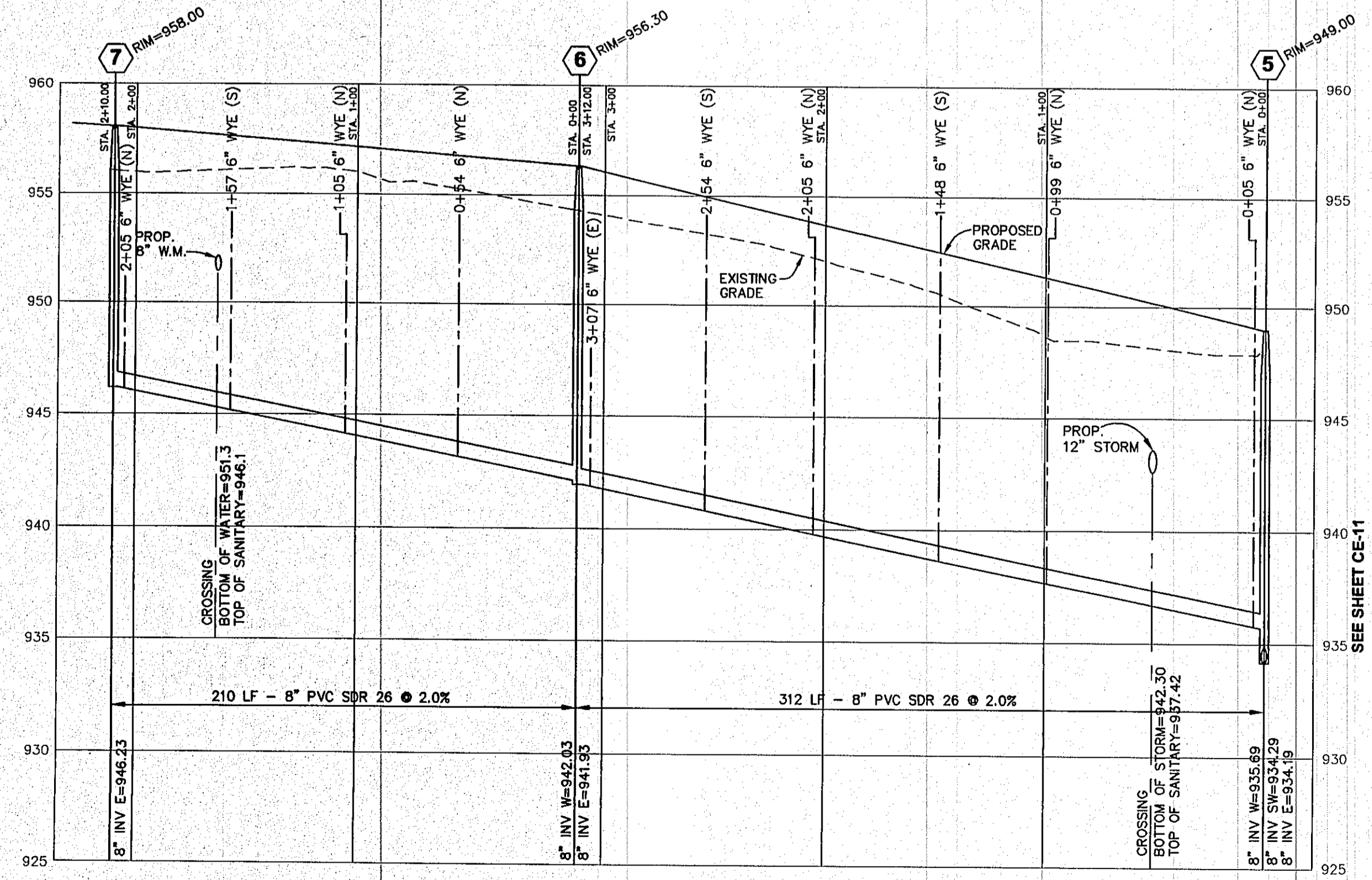
DRAWN BY	DATE	SCALE
GLB/JEK	1-03-06	1"=50'
PROJECT	SHEET	
2004-156	CE-6	



BENCHMARK DATA

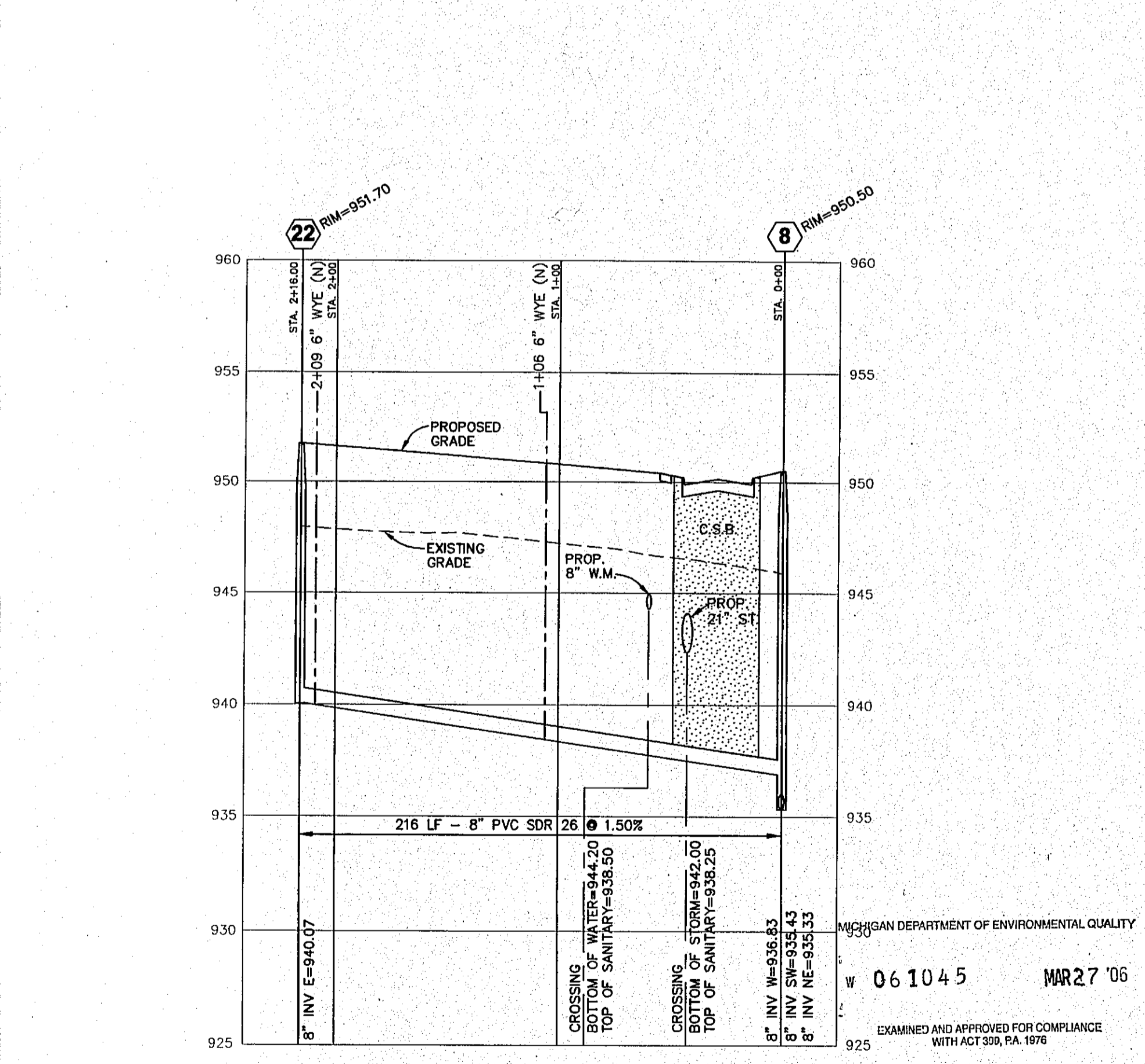
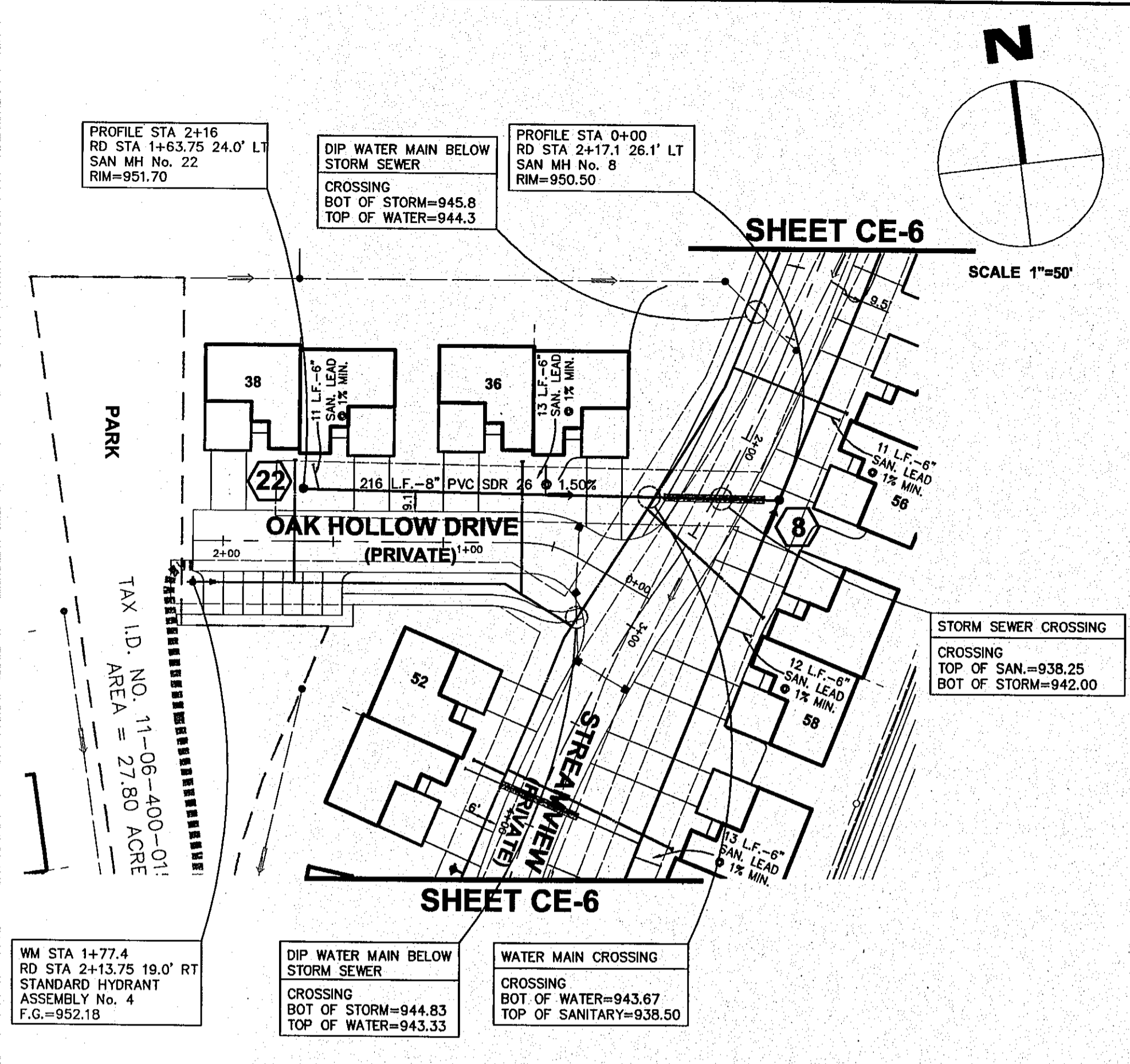
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SANITARY SEWER PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

OAK TERRACE WAY



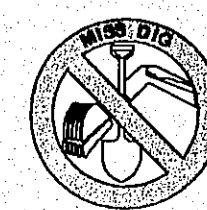
SANITARY SEWER PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

OAK HOLLOW DRIVE

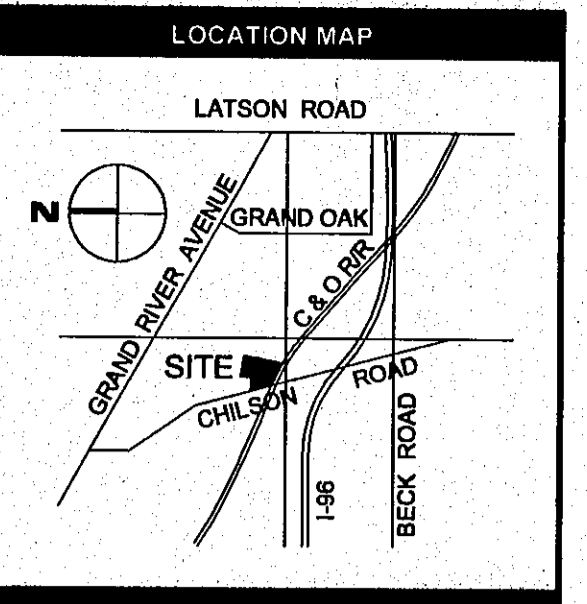
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4 WORKING DAYS
BEFORE YOU DIG
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1-800-482-7171



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- GA GUY WIRE & ANCHOR
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- SSW STORM SEWER
- T TELEPHONE
- TRC TRAVERSE/CONTROL POINT
- WM WATER MAIN

EXISTING CONTOURS

- 0.00
- 0.05
- 0.10

PROPOSED CONTOURS

- 0.00
- 0.05
- 0.10

REVISIONS

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12-16-05	REVISED PER ENGINEERING REVIEW No. 2
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9-27-05	REVISED PER ENGINEERING REVIEW No. 1

SEAL



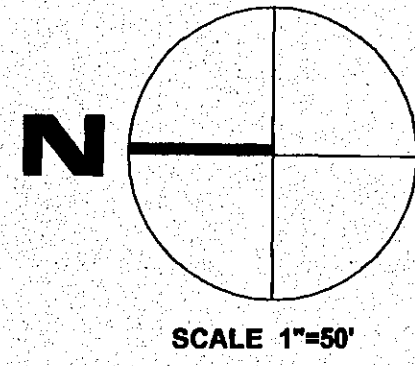
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Troy, MI 48063-4207
Phone: 248.689.5555
Fax: 248.689.5677
Web: www.rjdsurveyors.com

PROJECT NAME
SANITARY SEWER & WATER MAIN PLAN
"ASPEN GLEN"
GENOA TOWNSHIP, MI

CLIENT
BAYFIELD OF HOWELL, INC.
54255 FOSS
MACOMB TOWNSHIP, MI 48042

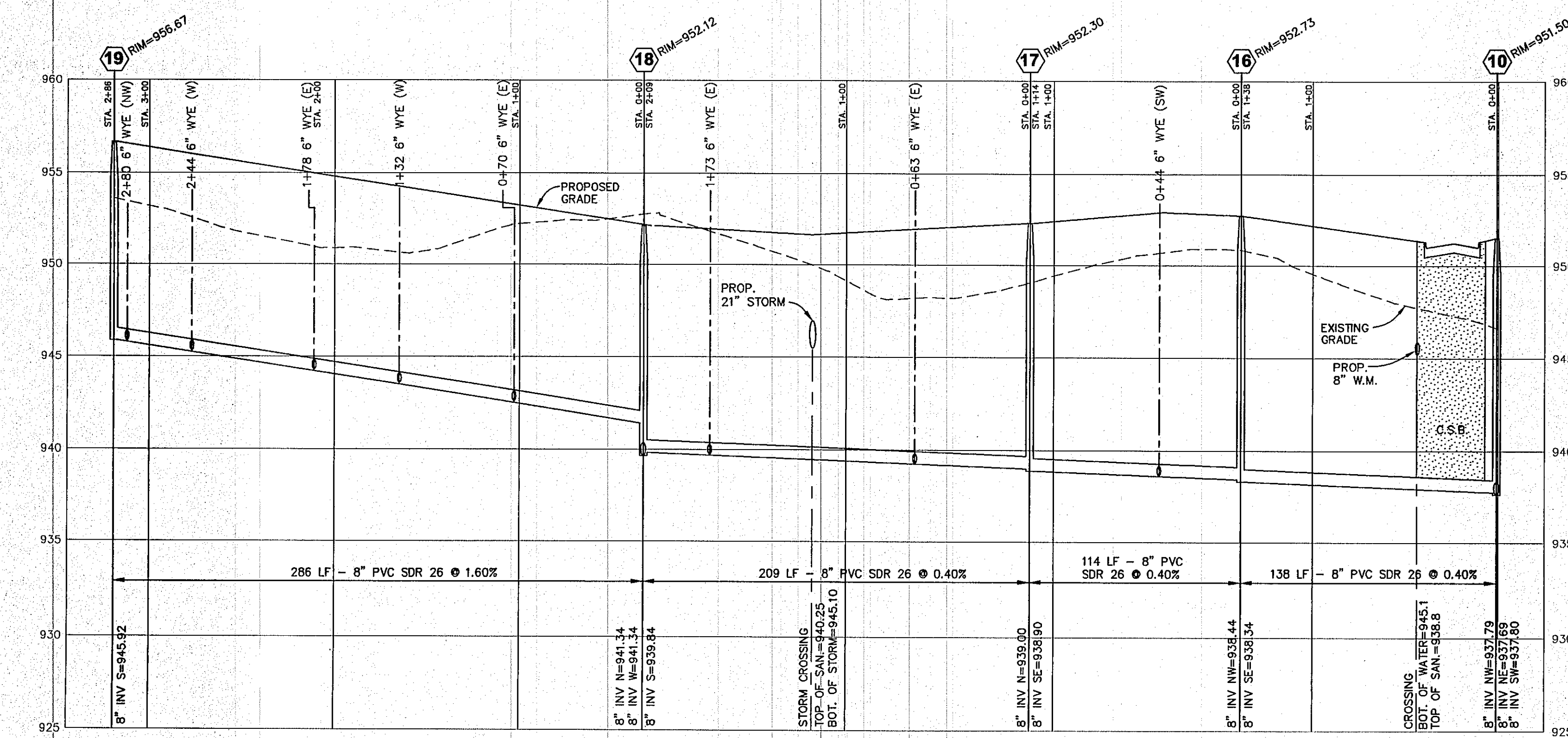
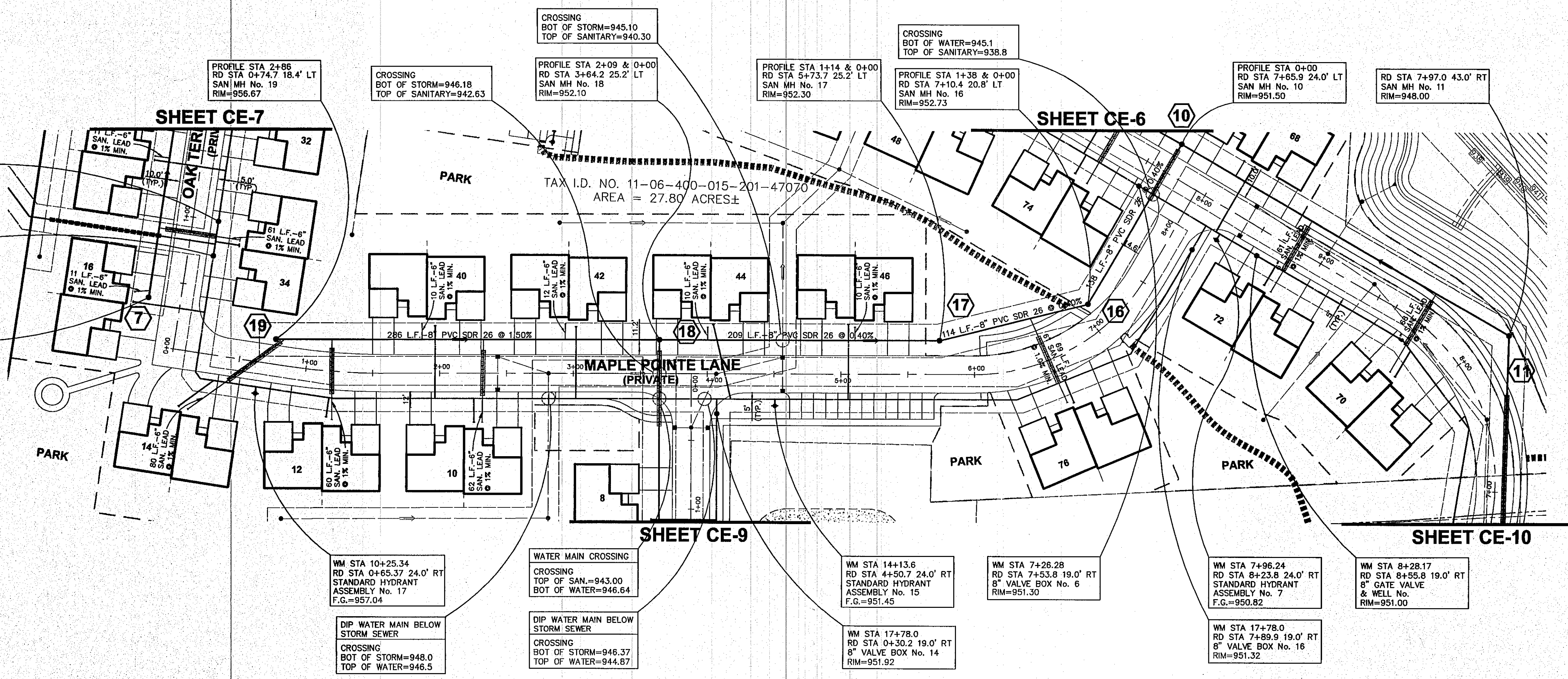
DRAWN BY	DATE	SCALE
GLB/JEK	1-03-06	1"=50'
PROJECT	SHEET	
2004-156	CE-7	



WM STA 8+64.3
RD STA 0+99.7 19.0' RT
8" VALVE BOX No. 19
RIM=957.35

WM STA 8+90.3
RD STA 0+73.7 19.0' RT
8" VALVE BOX No. 18
RIM=957.57

PROFILE STA 2+10
RD STA 0+35.8 24.0' LT
SAN MH No. 7
RIM=958.00



SANITARY SEWER PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

MAPLE POINTE LANE

BENCHMARK DATA

S.B.M. #1
MAG NAIL IN CENTERLINE OF CHILSON ROAD
AT CENTERLINE OF CHESAPEAKE & OHIO
RAILROAD.
ELEVATION = 955.64

S.B.M. #2
MAG NAIL IN WEST FACE OF 30" WALNUT LOCATED
50'± SOUTH OF NORTH PROPERTY LINE AND 15'±
EAST OF THE EAST EDGE OF CHILSON ROAD.
ELEVATION = 967.26

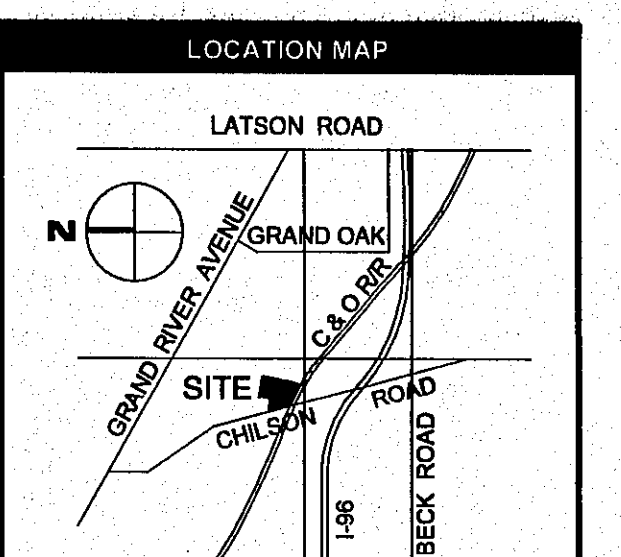
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
061045 MAR 27 '05



NOTE: UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL W-1-S-5-0-1-C

ANY INFORMATION OR DATA ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON EXTENSIONS OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADAPTATION BY THE SURVEYOR OR ENGINEER FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY OF LEGAL EXPOSURE TO THE SURVEYOR OR ENGINEER.

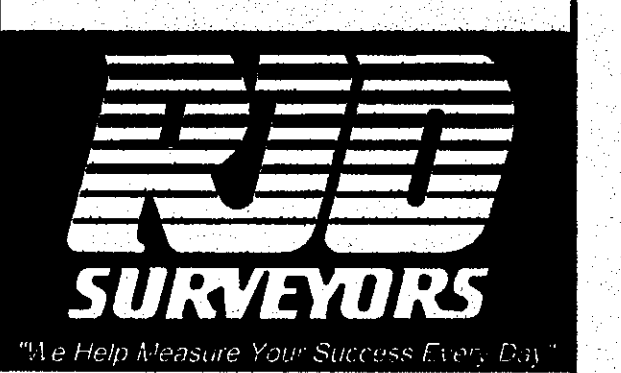


- LEGEND**
- ABBREVIATIONS**
- FI FOUND IRON ROD
 - PIP FOUND IRON PIPE
 - FCM FOUND CONCRETE MONUMENT
 - SI SET IRON ROD
 - C CALCULATED
 - M MEASURED
 - R RECORD
 - CLF CHAIN LINK FENCE
 - CB CATCH BASIN
 - CO CLEAN OUT
 - DN DOWNPOUT
 - FF FINISHED FLOOR
 - GV&W GATE VALVE & WELL
 - HYD HYDRANT
 - INL INLET
 - IE INVERT ELEVATION
 - LP LIGHT POLE
 - MH MANHOLE
 - NTS NOT TO SCALE
 - OH OVERHEAD
 - SB SOIL BORING
 - TC TOP OF CURB
 - UG UNDERGROUND
 - UP UTILITY POLE
- SYMBOLS**
- CABLE
 - ELECTRIC
 - FENCE
 - GAS
 - GUY WIRE & ANCHOR
 - SANITARY SEWER
 - STORM SEWER
 - TELEPHONE
 - △ TRAVERSE/CONTROL POINT
 - WATER MAIN
 - EXISTING CONTOURS
 - EXISTING ELEVATIONS
 - PROPOSED CONTOURS
 - PROPOSED ELEVATIONS

REVISIONS

1-23-06 REVISED PER ENGINEERING REVIEW No. 3
12-16-05 REVISED PER ENGINEERING REVIEW No. 2
10-28-05 REVISED PER CLIENT, TETRA-TECH, L.C.R.C. & LIVINGSTON COUNTY DRAIN COMMISSION
8-27-05 REVISED PER ENGINEERING REVIEW No. 1

SEAL



Raymond J. Donnelly & Associates, Inc.
Land Surveying, Mapping
Site Development Consulting
"Over 22 Years of Excellence"

1853 E. Maple Road
Troy, MI 48063-4207
Phone: 248.689.5555
Fax: 248.689.5677
Web: www.rjdsurveyors.com

PROJECT NAME
SANITARY SEWER & WATER MAIN PLAN
"ASPEN GLEN"
GENOA TOWNSHIP, MI

CLIENT

BAYFIELD OF HOWELL, INC.
54255 FOSS
MACOMB TOWNSHIP, MI 48042

DRAWN BY DATE SCALE
GLB/JUEK 1-03-06 1"=50'

PROJECT SHEET
2004-156 CE-8

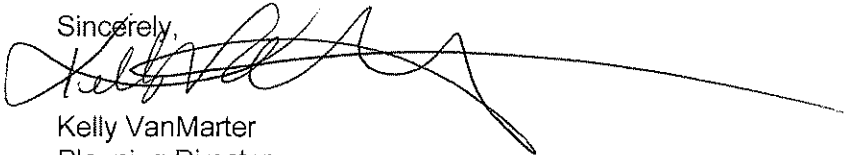
Memo

To: Planning Commissioners
From: Kelly VanMarter, Planning Director
Date: 3/21/2013
Re: Mountain Top Estates Site Plan Approval Extension

Dear Commissioners,

The site plan and impact assessment for the development known as "Mountain Top Estates" was originally granted approval in 2006. They have been granted 6 subsequent extensions as shown on the attached spreadsheet. As indicated in the attached letter from the petitioner, this project has not proceeded due to economic conditions. There have been no changes to the ordinance or master plan that would impact this project therefore staff recommends approval of the one-year extension.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kelly VanMarter', with a long horizontal flourish extending to the right.

Kelly VanMarter
Planning Director

ROBERT W. MOORE

Ms. Amy Ruthig
Genoa Charter Township
Planning and Zoning
2911 Door Rd.
Brighton, Mi. 48116

January 20, 2013

Re: Mountain Top Estates

Dear Ms. Ruthig;

By way of this letter, we are requesting another twelve-month extension of the site plan and impact approval originally granted by the Genoa Township Board for the above referenced project on May 1, 2006.

Economic conditions precluded a startup in 2012.

If you have any questions or wish to discuss this request, please feel free to call me.

Respectfully,


Robert W. Moore

Cc: Jeffrey J. Doyle

5923 Cunningham Lake Rd. Brighton, Mi. 48116

Phone 810/229-4569

W0604@comcast.net

MOUNTAIN TOP ESTATES SITE PLAN EXTENSIONS

DATE	TYPES OF APPROVAL
4/10/2006	Original approval by Planning Commission
5/1/2006	Approval of Board of Trustees
5/1/2007	Planning Commission
5/1/2008	Administrative
5/1/2009	Administrative
4/12/2010	Planning Commission
5/1/2011	Administrative
5/1/2012	Administrative



Site Plan Approval Extension

Genoa Charter Township
2911 Dorr Road, Brighton, Michigan 48116
Phone: (810) 227-5225, Fax: (810) 227-3420
www.genoa.org

Project Information:

Project Name: Mountaintop Estates **Property Address:** Cunningham Lake Road **Parcel No.:** 11-34-400-006 & 007

Owner Name: Robert & Yvonne Moore **Address:** 5923 Cunningham Lake Road **Phone:** 810-229-4569

Applicant Name: Doyle Homes **Address:** 4896 Chilson, Howell **Phone:** 810-229-7505

Type of Approval: Site Plan Ext. **Date of PC Approval:** 4/12/10 ^{EXTENSION} **Date of Board Approval:** 5/1/06
(KKW)

Valid Period for Original Approval: 5/1/06 - 5/1/07

Extension Record:

#1. **Date written application for an extension is filed:** 2/15/11 **Zoning Administrator Determination:**

Approval - there have been no changes to the Zoning Ordinance that would affect the site plan.
This extension is valid through: 5/1/11-5/1/12

Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: _____

Date: 3/29/2011

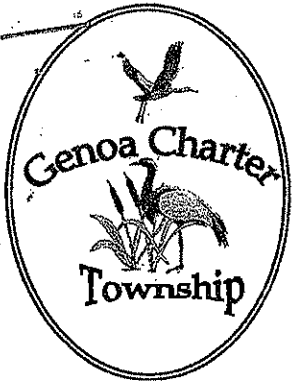
#2. **Date written application for an extension is filed:** 2/15/12 **Zoning Administrator Determination:**

Approval - there have been no changes to the Zoning Ordinance that would affect the site plan.
This extension is valid through:

Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: _____

Date: 2/16/2012



Site Plan Approval Extension

Genoa Charter Township
2911 Dorr Road, Brighton, Michigan 48116
Phone: (810) 227-5225, Fax: (810) 227-3420
www.genoa.org

Project Information:

Project Name: Mountaintop Estates **Property Address:** Cunningham Lake Road **Parcel No.:** 11-34-400-006 & 007

Owner Name: Robert & Yvonne Moore **Address:** 5923 Cunningham Lake Road **Phone:** 810-229-4569

Applicant Name: Doyle Homes **Address:** 4896 Chilson, Howell **Phone:** 810-229-7505

Type of Approval: Site Plan Ext. **Date of PC Approval:** 4/12/10 ^{EXTENSION} **Date of Board Approval:** 5/1/06
(KKW)

Valid Period for Original Approval: 5/1/06 - 5/1/07

Extension Record:

#1. **Date written application for an extension is filed:** 2/15/11 **Zoning Administrator Determination:**

Approval - there have been no changes to the Zoning Ordinance that would affect the site plan.
This extension is valid through: 5/1/11-5/1/12

Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: _____

Date: 3/29/2011

#2. **Date written application for an extension is filed:** 2/15/12 **Zoning Administrator Determination:**

Approval - there have been no changes to the Zoning Ordinance that would affect the site plan.
This extension is valid through:

Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: _____

Date: 2/16/2012

ROBERT W. MOORE

GENOA TOWNSHIP

MAR 21 2011

RECEIVED

Ms. Amy Ruthig
Genoa Charter Township
Planning and Zoning
2911 Door Rd.
Brighton, Mi. 48116

February 15, 2011

Re: Mountain Top Estates

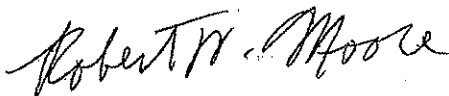
Dear Ms. Ruthig;

By way of this letter, we are requesting another twelve-month extension of the site plan and impact approval originally granted by the Genoa Township Board for the above referenced project on May 1, 2006.

Economic conditions precluded a startup in 2010.

If you have any questions or wish to discuss this request, please feel free to call me.

Respectfully,



Robert W. Moore

Cc: Jeffrey J. Doyle

5923 Cunningham Lake Rd. Brighton, Mi. 48116

Phone 810/229-4569

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
APRIL 12, 2010
6:30 P.M.**

AGENDA

CALL TO ORDER: At 6:30 p.m., the meeting of the Genoa Township Planning Commission was called to order. Present constituting a quorum were Diana Lowe, James Mortensen, Barbara Figurski, Chairman Doug Brown, and John McManus. Also present were Tesha Humphriss, Township Engineer, and Kelly VanMarter, Planning Director.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

WORK SESSION: No work session was requested.

APPROVAL OF AGENDA: Upon motion by Barbara Figurski and support by James Mortensen, the agenda was approved as submitted. **Motion carried unanimously.**

CALL TO THE PUBLIC: *(Note: The Board reserves the right to not begin new business after 10:00 p.m.)*

OPEN PUBLIC HEARING #1 ... Review extension of site plan approval for a proposed 16-unit single family site condominium development located north of Cunningham Lake Road, East of Sundance Trail in Section 34, petitioned by Doyle Homes, Inc. (Mountain Top Estates)

Planning Commission disposition of petition

A. Disposition of site plan extension.

Motion by Barbara Figurski to extend site plan for another year from May 1, 2010 to May 1, 2011. Support by Diana Lowe. **Motion carried unanimously.**

OPEN PUBLIC HEARING # 2... Review of sketch plan application and sketch plan for a proposed access road and canopy to convert the existing urgent care to a 24/7 emergency room located in the existing Woodland Health Care Facility at 7575 W. Grand River, Brighton, petitioned by Desine, Inc.

Wayne Perry addressed the Commission. The petitioner would like to combine the existing urgent care facility with an expansion that was previously built to

Memo

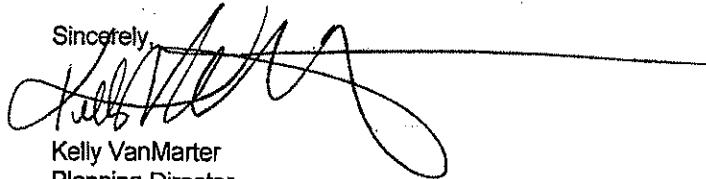
To: Planning Commissioners
From: Kelly VanMarter, Planning Director
Date: 4/8/2010
Re: Mountain Top Estates Site Plan Approval Extension

Dear Commissioners,

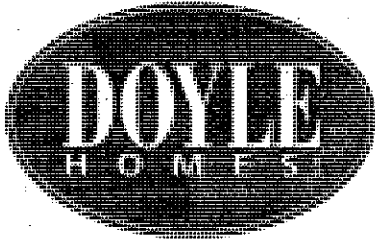
The Environmental Impact Assessment and site plan for the Mountain Top Estates development located in Section 34 north of Cunningham Lake Road, east of Sundance Trail was originally granted approval on May 1, 2006. Three extensions have been granted through 5/1/10.

Section 18.09 of the Genoa Charter Township Zoning Ordinance states that after two (2) years, additional extensions require Planning Commission approval. As indicated in the attached letter from the petitioner, this project has not proceeded due to economic conditions. There have been no changes to the ordinance or master plan that would impact this project therefore staff recommends approval of the one-year extension.

Sincerely,



Kelly VanMarter
Planning Director



The Builder You Can Trust

Ms. Amy Ruthig
Genoa Charter Township
Planning and Zoning
2911 Door Rd.
Brighton, MI 48116

March 1, 2010

Re: Mountain Top Estates

Dear Ms. Ruthig;

Doyle Homes Inc. is requesting another twelve-month extension of the site plan and impact assessment approval originally granted by the Genoa Township Board for the above referenced project on May 1, 2006.

Economic conditions precluded a startup in 2006, 2007, 2008 and 2009.

If you have any questions or wish to discuss this request, please feel free to call me.

Respectfully,

Jeffrey J. Doyle
President

cc:
Robert Moore
w0604@Comcast.net
5923 Cunningham Lake Rd.
Brighton, MI 48116

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
APRIL 13TH, 2009
6:30 P.M.**

AGENDA

CALL TO ORDER: At 6:30 p.m., the Genoa Township Planning Commission meeting was called to order. Present constituting a quorum were Chairman Doug Brown, Barbara Figurski, Diana Lowe, Dean Tengel, and Lauren Brookins. Also present were Jeff Purdy of LSL, Tesha Humphriss, Township Engineer, and Mike Archinal, Township Manager.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Upon motion of Barbara Figurski and support by Dean Tengel, the agenda was approved as submitted, with the exception that item number one is tabled. **Motion carried unanimously.**

WORK SESSION: No work session was required.

OPEN PUBLIC HEARING #1...Review of special use application, site plan and environmental impact assessment approval for a 21,000 square foot service center with 3 out-buildings, 2 vehicle ports, 3,2000 sq.ft. cold storage building and with outdoor storage of equipment and machinery, located on the west side of Grand Oaks Drive, south of Cleary Drive, Howell 48843, Sec. 5, petitioned by Consumers Energy.

Planning Commission disposition of petition

- A. Recommendation regarding special use application.**
- B. Recommendation regarding impact assessment.**
- C. Recommendation regarding site plan.**

Moved by Tengel, supported by Lowe to table the item until the May 14th, 2009 Planning Commission. **Motion carried unanimously.**

OPEN PUBLIC HEARING #2...Review extension of site plan approval for a proposed 16-unit single-family site condominium development located north of Cunningham Lake Road, East of Sundance Trail in Section 34, petitioned by Doyle Homes, Inc. (Mountain Top Estates)

No representative of petitioned was present. The petitioner submitted a letter requesting an extension due to economic conditions.

Planning Commission disposition of petition

- A. Recommendation regarding impact assessment extension.**
- B. Disposition of site plan extension.**

4-13-09 Unapproved PC minutes

Motion by Barbara Figurski to extend the site plan for another year and it will be approved as it was in May 2006 and April 1, 2008 and will be effective May 1, 2009. Support by Diana Lowe.
Motion carried unanimously.

OPEN PUBLIC HEARING # 3...Review of approval of an amendment to the Intech PUD, environmental impact assessment and PUD conceptual plan for property located on the South-west corner of Dorr Road and Sterling Road, Howell 48843, Sec. 15 to allow a proposed 84 bed nursing facility with future office/retail use in later phase, petitioned by Fusco, Shaffer and Pappas, Inc

Jim Pappas and Jack Runkle addressed the Commission. The facility is a skilled nursing facility. It is not age-related.

Jeff Purdy discussed his letter to the petitioner. This site was approved as a business park. That original concept plan for the business park needs to be replaced and then action would need to be taken on the final PUD site plan. Amendments to the PUD agreement must be accomplished.

50% of the total site should be open lands and wet lands. This site needs to comply with the Town Center requirements, but Jeff Purdy believes a deviation is justified. The wetland and drain that crosses the site cause issues with the right-of-way. Additionally, the nature of the use is unique (but allowable). The topography has very steep slopes, as well on the front of the site. The design of the building must also be taken into account and the building types should not be applied due to the uniqueness of this use.

The sidewalk along the front edge must be 8' wide. The plan specifies it as five. Petitioner indicates that due to the location, the topography and wetlands are causing problems with the sidewalk width. Petitioner will go 8', however.

The Town Center district requires ornamental lighting along the sidewalks. Petitioner agrees to do that.

The veneer around the garbage receptacle should match the building. Petitioner agrees to that.

Petitioner must provide confirmation of MDEQ permits regarding the drain and crossing the wetlands. Petitioner says new design mimics the old design.

Tesha Humphriss asks for clarification of what has been installed per the permit and petitioner discusses that with the Commission. This site is part of the Grand Beach district. She indicates the County Drain Commission is working with petitioner, since this district is under their supervision.

Jeff Purdy indicates that the authorized uses in the PUD agreement does not include this use and that should be clarified.

Petitioner indicates all of the items contained in the LSL letter are acceptable.

Tesha Humphriss discusses the items in her April 8, 2009 letter. MDEQ regulates the wetland buffers. Petitioner is proposing grading and storm water improvements within the buffer. Planning Commission approval would be required.



The Builder You Can Trust

Ms. Amy Ruthig
Genoa Charter Township
Planning and Zoning
2911 Door Rd.
Brighton, MI 48116

March 19, 2009

Re: Mountain Top Estates

Dear Ms. Ruthig;

Doyle Homes Inc. is requesting another twelve-month extension of the site plan and impact assessment approval originally granted by the Genoa Township Board for the above referenced project on May 1, 2006.

Economic conditions precluded a startup in 2006, 2007 and 2008.

If you have any questions or wish to discuss this request, please feel free to call me.

Respectfully,

Jeffrey J. Doyle

President

cc: Robert Moore



Site Plan Approval Extension

Genoa Charter Township
2911 Dorr Road, Brighton, Michigan 48116
Phone: (810) 227-5225, Fax: (810) 227-3420
www.genoa.org

Project Information:

Project Name: Mountaintop Estates **Property Address:** Cunningham Lake Road **Parcel No.:** 11-34-400-006 & 007

Owner Name: Robert & Yvonne Moore **Address:** 5923 Cunningham Lake Road **Phone:**

Applicant Name: Doyle Homes **Address:** 4896 Chilson, Howell **Phone:** 810-229-7505

Type of Approval: Site Plan **Date of PC Approval:** 4/10/06 **Date of Board Approval:** 5/1/06

Valid Period for Original Approval: 5/1/06 - 5/1/07

Extension Record:

#1. **Date written application for an extension is filed:** 4/6/07 **Zoning Administrator Determination:**

Approval - there have been no changes to the Zoning Ordinance that would affect the site plan.
This extension is valid through: 5/1/07 - 5/1/08

Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: PC 5-14-07 & BOARD 5-21-07

Date: _____

#2. **Date written application for an extension is filed:** 3/26/08 **Zoning Administrator Determination:**

Approval - there have been no changes to the Zoning Ordinance that would affect the site plan.
This extension is valid through: 5/1/08 - 5/1/09

Planning Commission review is required because there have been changes to the zoning ordinance that could affect the site plan therefore the Planning Commission for the site plan, and the Township Board for the impact assessment and special use, if applicable, should determine if an extension should be granted or if an amended site plan must be submitted for approval to comply with the new ordinance amendments.

Signature: Kelly Hunter

Date: 4/1/08



The Builder You Can Trust

Ms. Amy Ruthig
Genoa Charter Township
Planning and Zoning
2911 Door Rd.
Brighton, MI 48116

March 26, 2008

Re: Mountain Top Estates PUD

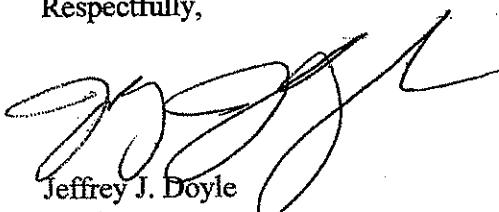
Dear Ms. Ruthig;

Doyle Homes Inc. is requesting another twelve-month extension of the site plan and impact assessment approval originally granted by the Genoa Township Board for the above referenced project on May 1, 2006.

Economic conditions precluded a startup in 2006 and 2007.

If you have any questions or wish to discuss this request, please feel free to call me.

Respectfully,



Jeffrey J. Doyle
President

cc: Robert Moore

EXTENSION

**Genoa Charter Township Board
Regular Meeting
May 21, 2007
6:30 p.m.**

Supervisor McCririe called the regular meeting of the Genoa Charter Township Board to order at 6:30 p.m. The Pledge of Allegiance was then said. The following persons were present constituting a quorum for the transaction of business: Gary McCririe, Paulette Skolarus, Jean Ledford, Steve Wildman and Jim Mortensen. Also present were Township Manager Michael Archinal and approximately ten persons in the audience.

A Call to the Public was made with no response.

Approval of Consent Agenda:

Moved by Ledford, supported by Wildman, to approve the all items under the Consent Agenda with the deletion of item 5 and the review and approval of the Payment of Bills under the regular agenda. The amended consent agenda was approved unanimously.

1. **Payment of Bills** (moved to the regular agenda for consideration)
2. **Approval of Minutes: May 7, 2007**
3. **Approval of Minutes: May 16, 2007 Special Meeting**
4. **Request to authorize a publication and set a public hearing for June 4, 2007 at 6:30 p.m., for approval of a revised Ordinance addressing the regulation of Solicitors and Peddlers within the Township.**
5. **Approval of the Township Hall Rental policy (deleted)**
6. **Approval of Mountaintop E.I.A. extension**
Granted an extension to the impact assessment approval for one year ending May 1, 2008.

Approval of Regular Agenda:

7. Payment of Bills

Moved by Mortensen, supported by Wildman, to approve for payment vouchers totaling \$294,076.20. The motion carried unanimously.

8. Public hearing for approval of Ordinance addressing Floodplain Management Provisions of the State Code.

A call to the public was made with Mike Keeland asking for clarification. Moved by Skolarus, supported by Ledford, to approve ordinance 070521 as requested. The motion carried as follows: Ayes – Ledford, Wildman, Mortensen, Skolarus and McCririe. Nay – None. Absent – Hunt and Smith.

EXTENSION

May 14, 2007 PC Minutes Unapproved

CALL TO THE PUBLIC: (Note: The Board reserves the right to not begin new business after 10:00 p.m.)

Monica, a student from Howell High School introduces herself as an observer for government class.

OPEN PUBLIC HEARING # 1... Review of extension of site plan approval for a proposed 16-unit single-family site condominium development located north of Cunningham Lake Road, East of Sundance Trail in Section 34, petitioned by Doyle Homes, Inc. (Mountain Top Estates) (07-12)

Petitioner present and requests an extension of one year. Jeff Purdy and Tesha Humphriss have no objections and advise that this meets with the ordinance.

Planning Commission disposition of petition

- A. Recommendation of impact assessment extension.
- B. Disposition of site plan extension.

Motion by James Mortensen to recommend to the Township Board that they extend the impact assessment for Mountain Top Estates for one year. This impact assessment was reviewed by the Planning Commission on 4/10/06. Support by Steve Morgan. **Motion carried unanimously.**

Motion by James Mortensen to adopt the site plan extension reviewed by the Planning Commission on 4/10/06 for one year. Support by Teri Olson. **Motion carried unanimously.**

OPEN PUBLIC HEARING # 2... Review of a site plan application, impact assessment and site plan for a 7,000 sq. ft. retail auto parts store located at 2797 E. Grand River, Sec. 6, petitioned by WXY Retail Group. (07-07)

David Barbour, Attorney for applicant is present. Brad McLean of WXY Retail Group is present, as well. Additionally, Keith Talto, the consultant is present.

Mr. Barbour addresses the Planning Commission's concerns regarding the driveway easement and how it aligns with that of the dealership across Grand River. He believes petitioner's peak hours will be late afternoon and Saturdays and Sundays, first thing in the morning. He believes the precedent set by CVS/Big Boy's driveway conflict is different in that there is a constant flow of traffic, rather than peak hours. If the driveway is moved east, the driveway would be too close to the driveway of the property to the east. He requests that the site plan be approved as proposed.

Brad McLean addresses the Planning Commission and indicates that the peak hour typically has thirty-five trips per hour. This would be thirteen entering trips



The Builder You Can Trust

GENOA TOWNSHIP

APR 09 REC'D

RECEIVED

Ms. Amy Ruthig
Genoa Charter Township
Planning and Zoning
2911 Door Rd.
Brighton, MI 48116

April 6, 2007

Re: Mountain Top Estates PUD

Dear Ms. Ruthig:

Doyle Homes Inc. is requesting a twelve-month extension of the site plan and impact assessment approval originally granted by the Genoa Township Board for the above referenced project on May 1, 2006.

Economic conditions precluded a startup in 2006. We anticipate that construction will begin within the one-year extension period requested.

If you have any questions or wish to discuss this request, please feel free to call me.

Respectfully,

A handwritten signature in black ink, appearing to read "Jeffrey J. Doyle". The signature is stylized and fluid, with a long horizontal stroke extending to the right.

Jeffrey J. Doyle
President

cc: Michael Archinal; Robert Moore

GENOA CHARTER TOWNSHIP BOARD

Regular Meeting

May 1, 2006

6:30 p.m.

MINUTES

Supervisor McCririe called the regular meeting of the Genoa Charter Township Board to order at 6:30 p.m. The Pledge of Allegiance was then said. The following persons were present constituting a quorum for the transaction of business: Gary McCririe, Paulette Skolarus, Robin Hunt, Todd Smith, Jean Ledford, Steve Wildman and Jim Mortensen. Also present were Township Manager Michael Archinal and approximately ten persons in the audience.

A Call to the Public was made with the following response: Jim Bolden – I recently purchased the property at 1824 Hughes. The lot next to me was for sale. It is my understanding that the township purchased this property for a private park for the residents across the street and that purchase allows for seven boat slips. How do you justify the use of public money to purchase property for private residents? I feel that my property value is now diminished. McCririe – The Township did not use public funds to buy a park. We purchased drainage. The township purchased one lot. Before that purchase the parcel was subject to easements for many other parcels – this is simply a continuation of that easement right. The number of boat slips was determined by judgment. Bolden – The Township raised my property taxes 50%. Have the taxes of those seven homeowners been raised accordingly? McCririe – The township assessor will review the matter during the normal course of business. Bolden – How can the township attorney represent both the township and the seven residents in this case? I don't like how the township money was used. You could have sold the remainder of that land to an adjoining property owner.

Theresa Brennan – I am a long time resident of Genoa Township. I was appointed judge this past July and wanted to introduce myself to the board.

Rona Szydzik – I live at 5714 Eggert Place and am concerned with my property line in the back of my parcel. I want to be assured that the developer doesn't take down trees that belong to me and that he does not trespass. McCririe – We can address your concern when the Doyle petition is heard.

Approval of Consent Agenda:

Moved by Ledford, supported by Smith, to approve items 1 thru 5 on the consent agenda. The motion was voted and carried unanimously.

1. Payment of Bills.

2. Approval of Minutes: April 17, 2006.

FINAL APPROVAL

GENOA TOWNSHIP APPLICATION FOR SITE PLAN REVIEW	RECEIVED MAR - 1 2009
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TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD

APPLICANT: Doyle Homes Inc.

OWNER'S ADDRESS: 5923 Cunningham Lake Road

SITE ADDRESS: same

TAX CODE NUMBER: 11-34-400-007 and 11-34-400-006

PHONE: 810.229.7505 (Doyle Homes)

LOCATION AND BRIEF DESCRIPTION OF SITE:
Site is 25 acres in size and is located on the north side of Cunningham Lake Road in Section 34

THE PROPERTY IS OWNED BY: Robert & Yvonne Moore

BRIEF STATEMENT OF PROPOSED USE:
Single family residential development

THE FOLLOWING BUILDINGS ARE PROPOSED:
16 single family homes on 1 acre (minimum) lots

I hereby certify that all information and data attached to and made part of this application is true and accurate to the best of my knowledge and belief.

BY: [Signature]

ADDRESS: 5896 Chilson Road Howell, NJ, 08843

[Signature]
ARCHITECT OR ENGINEER'S SIGNATURE

[Signature]
*AGENT (acting for owner) SIGNATURE

* A letter of Authorization from Property Owner is needed. (ATTACHED)

Contact Information - Review Letters and Correspondence shall be forwarded to the following:		
1.) <u>Robert P. Doyle</u>	of <u>Doyle Homes Inc.</u>	at <u>810.229.7529</u>
<small>Name</small>	<small>Business Affiliation</small>	<small>Fax No.</small>

FINAL APPROVAL

GENOA CHARTER TOWNSHIP – Regular Meeting & Public Hearing – May 1, 2006

3. Request to authorize a publication and set a public hearing for May 15, 2006 at 6:30 p.m., for approval of a rezoning application and impact assessment for .96 acres at 895 Grand Oaks Drive (11-05-301-003) from Regional Commercial District (RCD) to Industrial (IND), petitioned by Kubinec Strapping, and discussed by the Planning Commission 04/10/06.

4. Request to authorize a publication and set a public hearing for May 15, 2006 at 6:30 p.m., for approval of a Genoa Township initiated rezoning application and impact assessment for 2.24 acres of vacant land located on Grand Oaks Drive, (11-05-301-004) from Regional Commercial District (RCD) to Industrial (IND), and discussed by the Planning Commission 03/27/06.

5. Request for approval for an extension of site plan approval for a 30,000 square foot private elementary school and daycare (Brighton Country Day) located in Section 23 at the northeast corner of Bauer Road and Challis Road as recommended by the Planning Commission. Petitioned by Brighton Country Day Schoolhouse Facilities, L.L.C., and discussed by the Planning Commission 04/10/06.

Approval of Regular Agenda:

Moved by Mortensen, supported by Hunt, to approve for action items 6 thru 11 on the regular agenda – changing item 7 as follows: Request to approve a proposal dated 04/28/06 from Tetra Tech to prepare a formal design build contract for drainage work and gravel resurfacing on Golf Club west of Hacker at an estimated cost of \$54,750.00. The amended agenda was voted and carried unanimously.

6. Request for approval of the impact assessment, corresponding to the final site plan for a proposed 16-unit single-family site condominium development located north of Cunningham Lake Road, East of Sundance Trail in Section 34, petitioned by Doyle Homes, Inc. (Mountain Top Estates), and discussed by the Planning Commission 04/10/06.

The petitioner advised the board that he would be happy to meet with Ms. Szydzik when the construction phase of the development begins. He also advised the board that he has no intention to clear any of that site abutting her property with the exception of the building envelope and that will be determined when the home design is complete.

Moved by Smith, supported by Skolarus, to approve the impact assessment (04/20/06) corresponding to the final site plan for Doyle Homes, contingent upon the following:

1. Any deviation in landscaping from what is shown on the plan will require approval of the Township staff and/or revision of the site plan with the Planning Commission.
2. The master deed should be revised to indicate the financial responsibility for maintaining the joint driveway on lots 15 & 16.
3. The requirements of the Township Engineer, as outlined in Tetra Tech's letter dated April 5, 2006, will be complied with.

FINAL APPROVAL

GENOA CHARTER TOWNSHIP – Regular Meeting & Public Hearing – May 1, 2006

The motion carried unanimously.

7. Request to approve a proposal dated 04/28/06 from Tetra Tech to prepare a formal design build contract for drainage work and gravel resurfacing on Golf Club Road west of Hacker at an estimated cost of \$54,750.00.

Moved by Smith, supported by Skolarus, to approve the proposal for Golf Club Road contingent upon the following:

1. Receipt of a permit from the Livingston County Road Commission.
2. Approval from the Oceola Township Board for the cost sharing project.

The motion carried unanimously.

8. Request to consider approval of a contract with the Livingston County Road Commission for limited drainage work and limestone resurfacing on Kellogg Road between McClements and Grand River, with the total Project cost not exceed \$141,680.

Moved by Ledford, supported by Smith, to table the request to allow Tetra Tech a chance to review the project and submit an alternate proposal. The motion carried unanimously.

9. Public Hearing on the State Street Road Improvement Project.

Skolarus advised the board and audience that a petition was presented by the residents of State Street asking that their existing road be updated. They had received a bid from D & H asphalt in the amount of \$18,900.00 for removal of the existing asphalt and the placing of 2 – 1 ½ inch lifts of 20AAA bituminous leveling and wearing coats. In addition, the township will support this project out of the General Fund for up to 25% of the cost. The second public hearing on the project is scheduled for 6:30 p.m. at the Genoa Township Hall.

A call to property owners and the public was made with the following response: Joseph Boivin – Is it in the township charter that the township should pay 100% for any improvements? McCririe - The roads are owned by the county. The only way you will ever see an improvement is if your homeowner's association chooses to go forward with a special assessment district. The township will financially support your project up to 25% of the entire cost.

10. Request for approval of Resolution No. 2 (To proceed with the project, approve the plans and details and direct the preparation of the special assessment roll) for the State Street Road Improvement Project No. 1.

Moved by Hunt, supported by Ledford, to approve Resolution No. 2, establishing a public hearing date of May 15, 2006 at 6:30 p.m. The motion carried by roll call vote as follows: Ayes – Ledford, Smith, Hunt, Wildman, Mortensen, Skolarus and McCririe. Nays – None. Absent – None.

Moved by James Mortensen to recommend to the Township Board that the extension of the impact assessment be granted. Support by Barbara Figurski.

Motion carried unanimously.

Moved by James Mortensen that the extension of the site plan approval for one year be granted. Support by Dean Tenge.

Motion carried unanimously.

OPEN PUBLIC HEARING #2: Review of final site plan application and impact assessment for a proposed 16-unit single family site condominium development located north of Cunningham Lake Road, West of Sundance Trail in Sec. 34, petitioned by Doyle Homes, Inc. (06-06)

Robert Doyle and Jeff Doyle of Doyle Homes present. Petitioner requests approval of final site plan. Petitioner advises that the issue of the trees on lots 8 and 9 is driven by the profile of the road. In prior site plans, lot 8 was to be a topsoil stockpile area and would have been cleared anyway. The proposed grade is no longer close enough to the existing grade to save the trees. No tree survey was done and accordingly the plans are drawn up without specificity with trees and the trees at lots 8 and 9 are predominately black locust trees. The landscape plans would reflect that lots 8 and 9 would be planted with canopy trees pursuant to ordinance once the black locust trees were removed.

Brian Borden indicates that would be fine, but he would prefer to have an approved landscape plan rather than performing off-the-cuff replacements, which would be difficult for the Township staff. Additionally, it should be noted that black locust trees are on the prohibited species list.

James Mortensen clarifies that the landscape plan currently is approved, but any changes must be approved by the Planning Commission.

Brian Borden indicates that the remaining County approvals must be obtained prior to Planning Commission approval. The Drain Commission and Road Commission approvals are outstanding. Petitioner indicates the Drain Commission's approval is awaiting Tetra Tech's approval. Tesha Humphriss indicates that she is in contact with the Drain Commissioner's office and that is correct. Petitioner indicates the Road Commission has approved their plans, but then they were later contacted with some questions regarding discrepancies. Steve Morgan asks what that discrepancy is. Petitioner indicates that the Drain Commission wants to insure that the drain water runoff is released at the same rate as undeveloped property. The Road Commission requires same rate and volume as pre-development.

Brian Borden indicates that the three ground mounted lights are the only lights proposed. Petitioner confirms that.

Brian Borden proposes that a prohibition on tree removal within the rear and side yards be incorporated. Petitioner objects to that. Petitioner suggests that the by-laws reflect that approval be required to remove any tree greater than 8".

Brian Borden discusses the Cunningham Lake greenbelt and detention pond and confirms that they would be preserved and off-limits.

James Mortensen discusses what power the Township has as opposed to the power of the Association. Chairman Pobuda indicates that this has been problematic before. The Master Deed was reviewed by the Township Attorney pursuant to Petitioner.

Tesha Humphriss refers to the April 5th letter. The Health Department issued a preliminary approval letter and a formal approval should be forwarded to the Township.

Kelly VanMarter requests that the Exhibit B drawings be submitted and approved by the Township.

Steve Morgan inquires as to who will share the maintenance of the driveway for Lot 15. Petitioner indicates it's a good question and he will look into that.

Chairman Pobuda inquires about lot 15 with the existing house on it. Petitioner indicates he went to the Z.B.A. because the barn was an accessory structure and approval has been given for them to keep the barn.

Barbara Figurski asks about the deed restriction reflecting approval for 16 sites, but that more sites may be developed. Petitioner indicates one lot may be split, but there is no permission to do that at this point.

Dust control is issued on sheet 5, the erosion control plan.

Chairman Pobuda asks if the entryway is large enough to accommodate emergency vehicles. Petitioner indicates that it is per Road Commission standards. Chairman Pobuda suggests they revisit that and make sure the entry is large enough.

Chairman Pobuda requests that Petitioner consider adding watering capabilities for the entryway planting area.

Planning Commission disposition of petition

- A. Recommendation of impact assessment.
- B. Recommendation of site plan.

Moved by Barbara Figurski to recommend approval to the Township Board of the environmental impact assessment and date it as of today. Support by Curt Brown.

Motion carried unanimously.

Moved by James Mortensen recommend to the Township Board that the site plan be approved subject to the following:

1. Any deviation in landscaping from what is shown on plan will require approval of Township Administration staff and/or revision of site plan.
2. The Master Deed should be revised to indicate the financial responsibility for maintaining the shared driveway of lots 15 and 16.
3. The landscaping at the subdivision entrance will be irrigated.
4. The requirements of the Township Engineer as outlined in Tetra Tech letter dated April 5, 2006 be complied with.

Support by Barbara Figurski.

Steve Morgan requests clarification of irrigation provision. James Mortensen indicates it is irrigation for the landscaping at the entrance.

Motion carried unanimously.

OPEN PUBLIC HEARING #3: Review of site plan application and impact assessment to occupy existing building located at 895 Grand Oaks Drive, Petitioned by Kubinec Strapping. (06-08)

Cathy Riesterer, Attorney for Petitioner is present with Bob & Shirley Kubinec, 4777 New Haven Drive, Howell, Michigan and Michael Siterlet, Construction Manager, 247 Victoria Park, Howell, Michigan.

Petitioner seeks site plan approval.

Petitioner indicates that the cost of connecting to public water and excavation would total approximately \$7,000.00. It is suggested that water usage would be minimal with a strapping business and would approximate five gallons per day. Petitioner would rather utilize those monies in landscaping and improvement of facade.

James Mortensen inquires about the smaller building indicated behind the primary building in the plans. Petitioner indicates there is no future building foreseen. James Mortensen indicates any approval at this point does not include that. Chairman Pobuda indicates any approval regarding setbacks is grandfathered in. Therefore, any expansion that would increase any nonconformity would be prohibited and would require approval.

Brian Borden goes over the April 4th letter and the concerns outlined therein. The subject property is currently under review to industrial and that has not been approved yet. Therefore, any action taken tonight should be subject to that. Applicant has already

Final #2



LSL Planning, Inc.

Community Planning Consultants

April 4, 2006

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Subject: Mountain Top Estates – final site condominium plan review (#2) for a 16-unit residential site condominium development
Location: North side of Cunningham Lake Road, east of Chilson Road
Applicant: Doyle Homes, Inc.
4896 Chilson Road
Howell, MI

Dear Planning Commission:

At your request, we have reviewed the final site condominium plan with a revision date of 3/17/06, for a 16-unit residential site condominium development. The site is located on the north side of Cunningham Lake Road, east of Chilson Road, and is currently zoned LDR Low Density Residential. Single family detached dwellings on lots of 1 acre or more are permitted in the LDR district. The proposed project has been reviewed in accordance with the Genoa Township Zoning Ordinance and Subdivision Regulations.

A. Summary of Issues

1. The previous landscape plan identified 17 existing trees that were to be preserved on Lots 8 and 9 that have been removed from the current plan.
2. The applicant must receive the necessary County approvals prior to approval of the final plan.

B. Process

The Township's condominium approval process, described in the Zoning Ordinance, is identified below. The applicant is requesting approval of both the final site condominium plan. Preliminary approval was granted in October 2005. The applicant is at step 3 of the following process:

Step	Review	Planning Commission	Township Board
1	Preliminary Site Plan and EIA	Recommendation to Board	Approval
2	Preliminary County and State Permits		
3	Final Site Plan Approval	Recommendation to Board	Approval

C. Site Condominium Plan Review

- Streets:** The proposed access to the development is via Mountain Top Drive, which will be a private road connecting to Cunningham Lake Road. Private roads are subject to the design standards of Section 15.05.03 of the Zoning Ordinance. A 50-foot right-of-way was approved as part of the preliminary site condominium plan review.

The roadway proposed is 24 feet wide, paved and will provide concrete curb and gutter.

As part of the preliminary site condominium plan review, the Planning Commission permitted the 1,300 foot cul-de-sac due to the potential for a future road connection at the end of the cul-de-sac. As discussed during review of the preliminary plan, lots 1 and 16 cannot be accessed via Cunningham Lake Road.

- Lots:** The LDR district requires minimum lot areas of 1 acre and minimum lot widths of 150 feet. Lots 1 and 15 are flag lots that were approved as part of the preliminary plan. All of the proposed lots conform to the minimum area and width requirements and are consistent with the preliminary site plan.
- Landscaping:** The Subdivision Regulations and Zoning Ordinance require the following landscaping for site condominium developments. The landscape plan also provides for entry landscaping with 4 canopy trees, 5 evergreen trees, 40 shrubs and entrance signage.

Location	Amount Required	Amount Provided	Additional Required
Cunningham Lake Road greenbelt	20-foot greenbelt; 18 canopy trees	20-foot greenbelt; existing vegetation	(a)
Street Trees	32 canopy trees	11 canopy trees; 7 canopy trees; 38 existing trees	Requirement met
Cul-de-sac	2 canopy trees	None	(b)
Detention pond (N)	12 canopy trees OR 12 evergreen trees; 120 shrubs	14 existing trees; 6 evergreen trees	120 shrubs (a)
Detention pond (S)	8 canopy trees OR 8 evergreen trees; 80 shrubs	4 canopy trees; 4 evergreen trees; 80 shrubs	Requirement met

- The applicant has requested that the greenbelt tree planting and detention pond (N) shrub planting requirements be waived by the Planning Commission due to the presence of existing vegetation. The Planning Commission granted this request as part of the preliminary plan review.
- During the preliminary plan review, both the Township Engineer and Fire Department required the removal of the cul-de-sac island and landscaping.
- The Fragrant Sumac and Red Twig Dogwood shrub plantings must be mixed so they do not exceed the 33% requirement for mixing of species.

- (d) The previous landscape plan identified 17 existing trees that were to be preserved on Lots 8 and 9 that have been removed from the current plan. We recommend that these trees be preserved, or the applicant explains their removal to the satisfaction of the Planning Commission.
4. **Utilities:** Each of the proposed lots will be served by private septic systems and wells. The plan also provides for storm water retention and detention areas. The detention ponds are fenced due to the steep slopes. During review of the preliminary plan it was recommended that the ponds utilize shallower slopes so that no fencing would be required. The applicant has requested to retain the steep slopes in an effort to limit the need for site clearing and to preserve trees. The plan also provides 20-foot wide easement for access to the pond at the rear of lots 5 and 6, as discussed during preliminary plan review.
 5. **Lighting:** The site plan itself does not identify any exterior lighting. The detail of the entrance feature on the landscape plan identifies 3 ground mounted lights directed at the entry sign. A detail provided with the submittal identifies the use of 50 watt metal halide lighting. The applicant should also confirm that this is the only lighting proposed for the site.
 6. **Easements:** The plan provides a 12-foot wide easement across the front of the lots for private utilities. Easements ranging in width from 20 to 50 feet for storm water are also provided south of Lots 1, 10, 14 and 15, as well as east of Lot 10. There is also an easement located between Lots 5 and 6 for access to the storm water retention area.
 7. **Natural Features:** The site contains a significant amount of existing vegetation. The landscape plan identifies a number of trees that are to be preserved in front yards outside of building envelopes and also around the northerly detention pond. The grading plan includes a typical tree protection detail and the location of tree protection fencing to be provided, as discussed during review of the preliminary plan. However, there is no fencing shown for the trees to be preserved on Lots 3-8. The applicant has indicated that silt fencing to be placed at the limits of grading will protect the trees to be preserved in these areas. The location of silt fencing is not shown on the grading plan, but is shown on Sheet 5.
 8. **Impact Assessment:** The impact assessment was previously approved as part of the preliminary site condominium review.
 9. **Master Deed and By-Laws:** The applicant has provided a draft copy of the Master Deed and By-Laws for Planning Commission review. The preliminary site plan approval included a condition restricting tree removal outside of the building envelopes by individual owners. Article VI, Section 15 of the By-Laws restricts the removal of trees greater than 8-inches from any unit or common element without the approval of the developer or association. Although restricted by this language, we recommend that tree removal be prohibited within the rear and side yards.

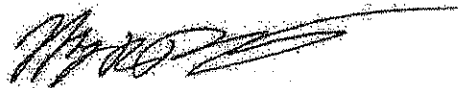
D. Agency Coordination

The applicant has received preliminary approval from the Livingston County Health Department (see letter dated 3/10/06). The applicant has also indicated that *remaining county approvals required are pending and should be in place in the near future*. Copies of the following approvals need to be obtained prior to final site plan approval:

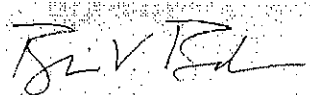
1. Livingston County Drain Commission
2. Livingston County Road Commission

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Sincerely,
LSL PLANNING, INC.



Jeffrey R. Purdy, AICP
Partner



Brian V. Borden, AICP
Project Planner II



TETRA TECH, INC.

April 5, 2006

Ms. Kelly Van Marter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Mountain Top Estates
Final Site Plan Review #2**

Dear Ms. Van Marter:

As requested, we have performed a review of the above-referenced final site plan as prepared by Advantage Civil Engineering dated March 17, 2006. This site is located on the north side of Cunningham Lake Road. The petitioner is proposing 16 site condominium units over a 23.67 acre site. The following comments remain for your consideration:

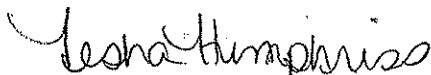
1. Approval from the Livingston County Road Commissioner is required for the proposed private road approach. A copy of the approval should be forwarded to the Township.
2. Individual onsite wells and septic systems are proposed for this site. The Livingston County Health Department has issued preliminary approval for the individual wells and septic systems in a March 10, 2006, correspondence. A copy of the final approval should be forwarded to the Township.
3. The petitioner should provide finalized easement documents for the proposed utilities and road system. Exhibit B drawings should be submitted for our review and approval.

In addition, we have performed a review of the construction plans dated March 17, 2006. At this time all of the outstanding comments noted in our March 8, 2006, letter have been addressed.

We recommend the Township consider the above issues prior to taking action on the final site plan.

Please call if you have any questions.

Sincerely,


Tesha L. Humphriss, P.E.
Project Manager

:cpl 0144646.17

Copy: Mr. Gary McCrie, Genoa Township
Mr. Patrick Keough, Advantage Civil Engineering
Mr. Ken Recker, Livingston County Drain Commission

K:\LETTERS\Genoa Twp Mountain Top 3.doc

123 Brighton Lake Road, Suite 203
Brighton, MI 48116
Tel 810.220.2112 Fax 810.220.0094



Brighton Area Fire Department

615 W. Grand River
Brighton, Michigan 48116
810-229-6640 Fax: 810-229-1619

April 4, 2006

Re: Mountain Top Estates

Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Dear Amy Ruthig,

SUBJECT: SITE PLAN REVIEW

The Brighton Area Fire Department has received a set of plans on the above mentioned project to determine if they are in compliance with the International Fire Code and local fire department requirements. Upon review of these plans it was determined that they are in compliance with the requirements.

Sincerely,

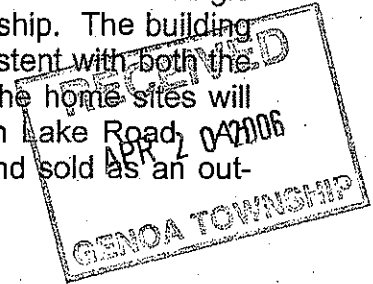
A handwritten signature in black ink, appearing to read "T. King", with a long horizontal stroke extending to the right.

Inspector Tim King, C.F.I.
Brighton Area Fire Department - Fire Marshal Division
cc: File

Final Approval

Environmental Impact Assessment

Mountain Top Estates is a 25 acre site that is proposed to become a 16 lot single family site condominium located in Section 34 of Genoa Township. The building sites are proposed to be a minimum of one acre in size, consistent with both the current zoning and the community's master land use plan. The home sites will be located on a private road which connects to Cunningham Lake Road, an existing historic home located on the site will be preserved and sold as an out-parcel with direct access to Cunningham Lake Road.



Impact on Natural Features

The site slopes upwards from all sides to a central hill top. From the low point of the site near Cunningham Lake Road to the high point, there is over 90 feet of grade change. Soils on the site are all within the Fox-Boyer complex. This soil type is sand and sandy loams, characterized by good permeability. Seven test holes were dug on the site by the applicant to a depth of eight feet and medium to coarse sands were uncovered.

Vegetative cover on the site can be divided into three types; open field; woodland; and transition areas of young volunteer tree growth. A review of archive aerial photographs indicate that the site was cleared for agricultural purposes (prior to 1940) with a few trees in existence along property boundaries and within the southern third of the site.

Open grassland meadow is found at the top of the hill and along the central ridge of the site. This area likely provides habitat for small mammals and rodents.

The southern and central parts of the site include a mixed age stand of (mostly) deciduous trees, including red oak, white oak, hickory and maple. The woodland also includes a number of mature evergreen trees (primarily spruces). Most trees are approximately 20 to 40 years of age and range from four to eighteen inches in diameter. The southern third of the site has a scattered sampling of larger (24 to 36 inches in diameter) red and white oaks.

The woodland at the north central and northeast portion of the site is dominated by black locust trees from four to fifteen inches in diameter. Other trees growing in this area include poplar, box elder and black cherry. The northwest corner of the site contains a stand of scotch pines approximately six to eighteen inches in diameter.

The woodland portions of the site likely provide shelter and feeding habitat for mammals such as white tailed deer, groundhogs, opossum and fox as well as habitat for raptors and songbirds. While the existing habitats provide localized value for wildlife, these habitats are not unique in southeast Michigan or the area surrounding the site.

To minimize habitat and woodland impacts, the site plan focuses development in the central parts of the site, leaving the steeply sloping wooded perimeter of the site largely intact as habitat and corridor for wildlife. In addition, the applicant is proposing 3:1 side slopes for the proposed road to minimize disturbance of wooded areas.

No wetlands, ponds or streams exist on the site.

Impacts on Surrounding Land Uses

The site is bordered by 1 acre lot subdivisions, large lot residential, and Brighton State Recreation Area land (to the south).

The proposed plan is consistent with current zoning and the Genoa Township Master Plan and does not represent a conflict with surrounding land uses.

Impacts on Public Facilities and Services

Given the limited number of new homes proposed, impacts to the public schools, recreation facilities, police protection, fire protection and emergency services are not anticipated.

Impacts on Public Utilities

The proposed homes will be served by private, individual septic systems and wells.

Storm water runoff from the site will be managed by retention and detention basins located on-site. Storm water calculations are provided on the site plans.

During the construction phase of the project the appropriate erosion control measures will be installed and maintained pursuant to the direction of Livingston County Drain Commission. Measures will include silt fence and stone check dams. Vegetative cover will be established on the site immediately following finish grading of the site. The building contractor will be required to manage on-site conditions to control emissions of dust by use of water or other measures.

Traffic Impact

Access to the site will be from Cunningham Lake Road, a public road maintained by the Livingston County Road Commission. The entry to the site has been located to maximize the sight distance for safe ingress and egress to the development.

Given the small number of new homes proposed, any impacts to local traffic are anticipated to be minor and limited in scope.

Construction traffic will be directed to use Cunningham Lake Road for ingress and egress to minimize impacts to nearby established neighborhoods.

Historic and Cultural Resources

The existing historic home (built in 1891) on the site will be preserved and sold separately from the development on a lot sized to conform to existing zoning.

Preparer

Robert R. Doyle, a landscape architect registered in the State of Michigan (No. 1050) prepared this environmental impact statement. Mr. Doyle has practiced landscape architecture in Michigan for the past 20 years, 11 of which were spent at the nationally known landscape architecture/environmental-planning firm of Johnson, Johnson and Roy/Inc., which is located in Ann Arbor. Mr. Doyle's address is: 210 S. Washington/ Ypsilanti, Michigan/ 48197



ADVANTAGE
CIVIL
ENGINEERING

110 E. Grand River, Howell, MI. 48843 517 545-4141 Fax 517 545-4146

PROJECT: MOUNTAIN TOP ESTATES
SUBJECT: DRAINAGE CALCS
JOB NUMBER: 05049
BY: P.C.F.
PAGE _____ of _____ DATE: 8-8-05

(4)	<u>OFFSITE CULVERT ANALYSIS</u>	RECEIVED SEP - 7 2005
	PRE-DEVELOPMENT AREA TO CULVERT <u>GENOA TOWNSHIP</u> ACRES	
	PRE-DEVELOPMENT AREA WITHIN PROJECT BOUNDARIES THAT DRAINS TO CULVERT = 9.42 ACRES	
	CULVERT CAPACITY = 9.16 CFS	
	$Q = \frac{1.486 (1.227) (0.46) (1.0578)^{1/2}}{1022}$	
	ALLOWABLE CULVERT CAPACITY FROM DEVELOPMENT = $\frac{9.42}{12.85} = 9.16 = 6.71$ CFS	
	POST DEVELOPMENT AREA TO CULVERT FROM PROJECT = 17.81 ACRES	
	USE $Q_0 = 0.2$ CFS/ACRE \times 17.81 ACRES = 3.56 CFS $<$ 6.71 CFS (OK)	

NOTE: Figures in Columns (3) and (4) are valid where the intensity is computed by the formula $I = \frac{275}{t+25}$ (i.e., 100-yr. curve), appropriate revisions shall be made for geographical areas where this formula does not apply.

* Allowable outflow rate Q_0 to be one of the following:

Case 1: Q_0 = capacity of existing discharge conduit or channel.

Case 2: Q_0 = $q \times A$ where q = Permissible Discharge Rate per Acre of Tributary Area = _____ cfs/acre.

Final Site Plan of MOUNTAIN TOP ESTATES

Site Condominium

SECTION 34 T2N-R5E, GENOA TWP.
LIVINGSTON COUNTY, MICHIGAN

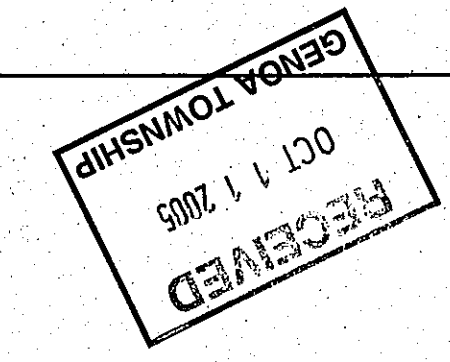
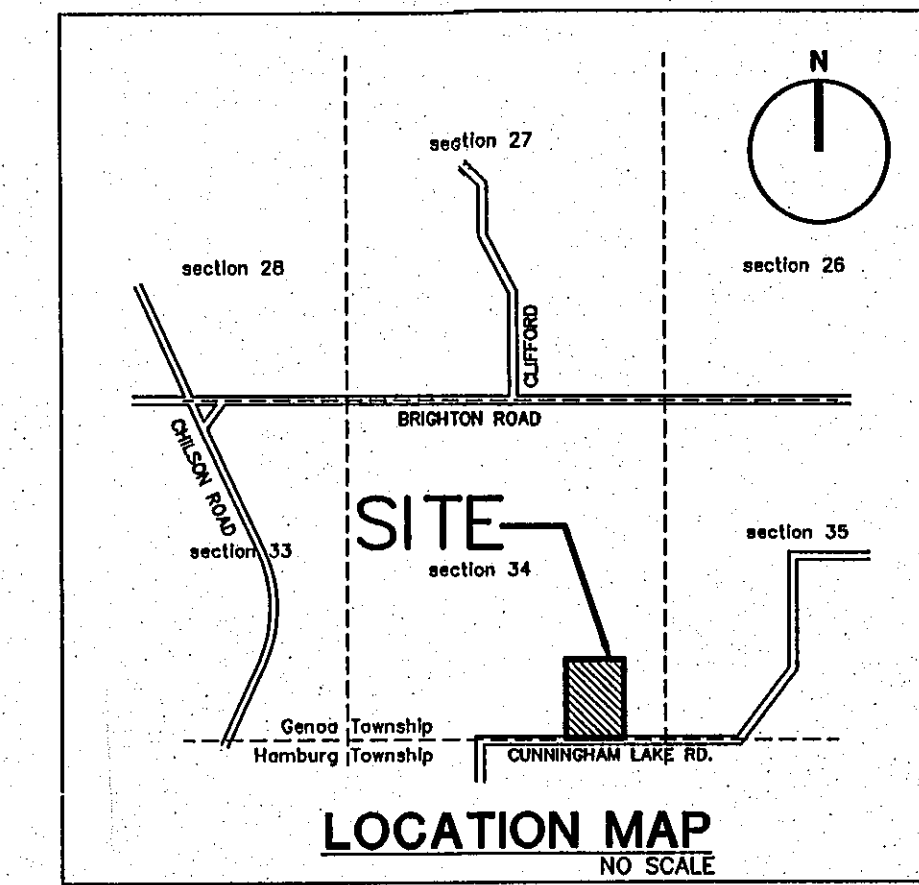
LEGAL DESCRIPTIONS

Legal description(as surveyed, 23.67±Acres-Gross):

A parcel of land located in the Southeast quarter of Section 34, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, said parcel more fully described as: Commencing at the Southeast corner of Section 34, T2N-R5E; thence South 87° 27' 50" West(rec. as: South 87° 34' 57" West), 620.79 feet on South line of said section to the POINT OF BEGINNING; thence continuing South 87° 27' 50" West(rec. as: South 87° 34' 57" West), 699.88 feet; thence North 02° 41' 06" West, 1150.07 feet in part on the East line of "Copperleaf" (L.3924,pg.7604) a site condominium; thence North 87° 30' 35" East, 951.63 feet on the South line of "Mystic Lake Hills Subdivision", as recorded in Liber 18 of Plats, pages 28 through 32, Livingston County records; thence South 02° 33' 20" East, 902.29 feet(rec. as: South 02° 31' 12" East); thence South 87° 27' 50" West, 249.06 feet; thence South 02° 32' 10" East, 247.02 feet to the POINT OF BEGINNING, said parcel contains 23.67 acres, more or less, being subject to easements and restrictions of record, if any, including the rights of the public within the public right of way of "Cunningham Lake Road".

DRAWING INDEX

NO.	TITLE
1.	COVER SHEET
2.	SITE PLAN
3.	GRADING PLAN
4.	ROADWAY PLAN AND PROFILE
5.	EROSION CONTROL PLAN
6.	DRAINAGE AREA MAPS
7.	DETAILS
8.	LANDSCAPE PLAN



NOTES:

- ZONING OF SITE = LOW DENSITY RESIDENTIAL (LDR)
MINIMUM LOT AREA = 43,560 SQ. FT (1 ACRE)
MINIMUM LOT FRONTAGE = 150 FEET
MAXIMUM BLDG HEIGHT = 35 FT
- ALL ROADS WITHIN THE DEVELOPMENT SHALL BE PRIVATE.
- ALL LOTS TO BE SERVICED BY INDIVIDUAL WATER WELLS AND SEPTIC FIELDS.
- TYPICAL BUILDING SETBACKS - FRONT YARD = 50 FEET
SIDE YARD = 30 FEET
REAR YARD = 60 FEET
- THIS PROJECT SHALL BE DEVELOPED IN ONE PHASE.
- ALL UTILITIES SHALL BE UNDERGROUND
- SOILS ARE PREDOMINANTLY FOX & FOX BOYER SAND AND SANDY LOAMS AND ARE SUITABLE FOR RESIDENTIAL DEVELOPMENT
- ALL ENCLOSED STORM DRAINAGE SHALL HAVE A 20' WIDE STORM EASEMENT.
- EASEMENTS FOR STORM WATER DETENTION WILL BE PROVIDED.
- ALL STORM DRAINAGE STRUCTURES, PIPING & DETENTION FACILITIES SHALL BE UNDER THE JURISDICTION OF THE SITE CONDOMINIUM ASSOCIATION.
- THE SITE CONDOMINIUM ASSOCIATION SHALL MAINTAIN ALL OF THE PRIVATE ROADWAY FACILITIES.

REVISIONS:
REVISED FOR THE REVIEW
REVISED FOR THE RECORD

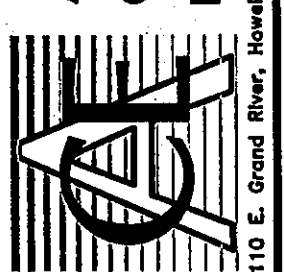
OWNER/DEVELOPER:

DOYLE HOMES
886 CHILSON ROAD
HOWELL, MI 48116
810 229-7505

MOUNTAIN TOP ESTATES
SITE CONDOMINIUM

COVER SHEET

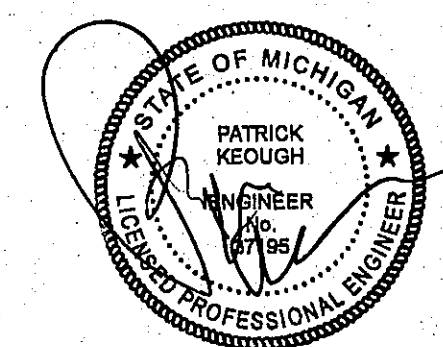
ADVANTAGE
CIVIL
ENGINEERING



DATE: 7-25-06
DRAWN BY: TAH
CHECKED BY: PCK
JOB No. 06049

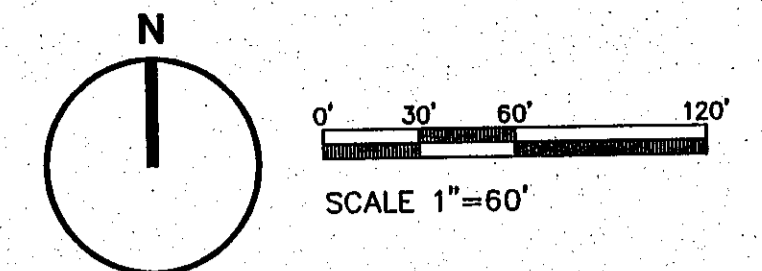
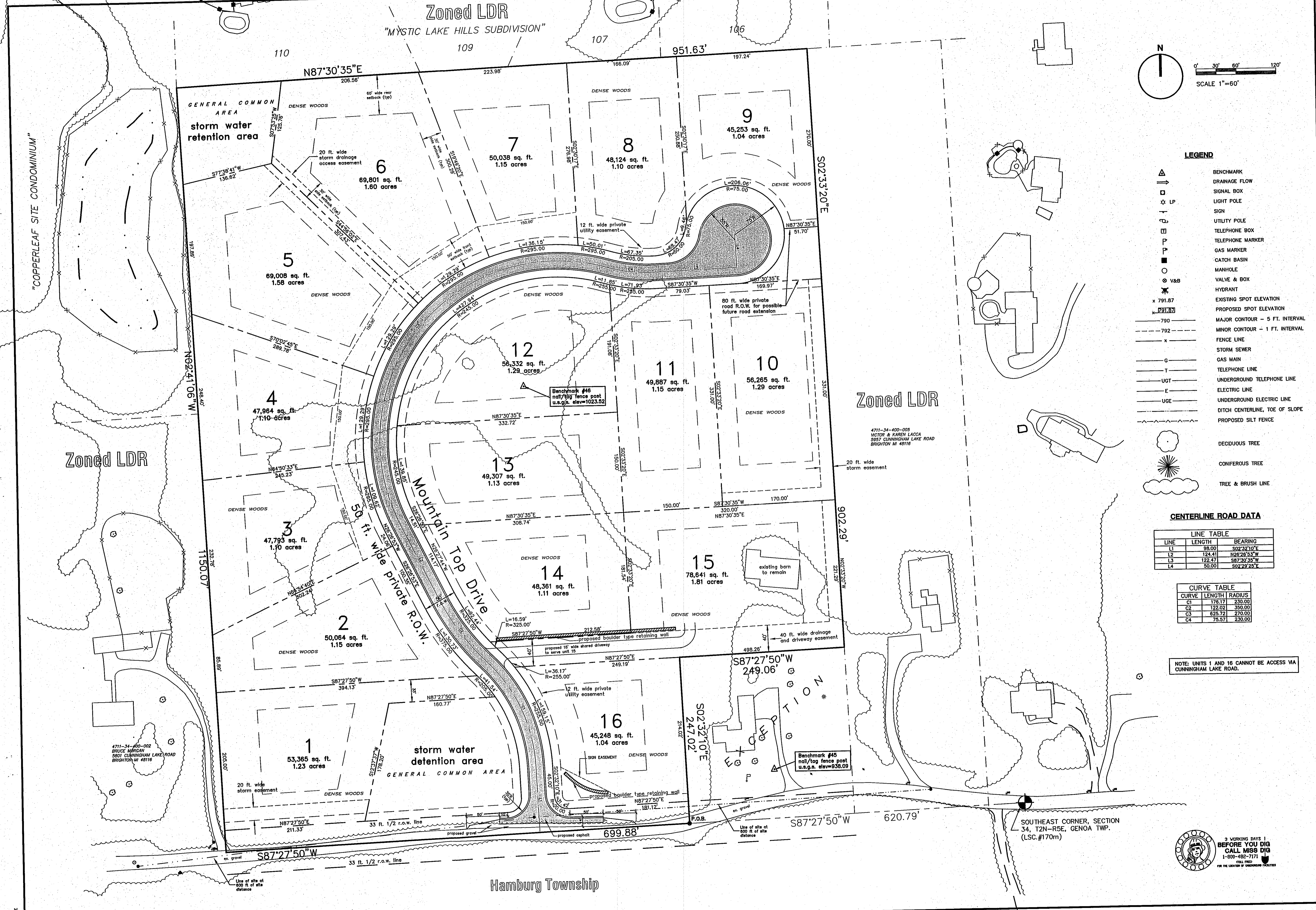
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OCT 10 2005

Preliminary
GENOA TOWNSHIP
SITE PLAN APPROVED
10/11/05 Board
9/26/05 PC



- LEGEND**
- BENCHMARK
 - DRAINAGE FLOW
 - SIGNAL BOX
 - LIGHT POLE
 - SIGN
 - UTILITY POLE
 - TELEPHONE BOX
 - TELEPHONE MARKER
 - GAS MARKER
 - CATCH BASIN
 - MANHOLE
 - VALVE & BOX
 - HYDRANT
 - EXISTING SPOT ELEVATION
 - PROPOSED SPOT ELEVATION
 - MAJOR CONTOUR - 5 FT. INTERVAL
 - MINOR CONTOUR - 1 FT. INTERVAL
 - FENCE LINE
 - STORM SEWER
 - GAS MAIN
 - TELEPHONE LINE
 - UNDERGROUND TELEPHONE LINE
 - ELECTRIC LINE
 - UNDERGROUND ELECTRIC LINE
 - DITCH CENTERLINE, TOE OF SLOPE
 - PROPOSED SILT FENCE
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - TREE & BRUSH LINE

CENTERLINE ROAD DATA

LINE	LENGTH	BEARING
L1	98.00	S02°32'10"E
L2	124.41	N26°28'53"W
L3	122.47	S87°30'35"W
L4	50.00	S02°29'29"E

CURVE	LENGTH	RADIUS
C1	176.17	230.00
C2	122.02	350.00
C3	625.72	270.00
C4	75.57	230.00

NOTE: UNITS 1 AND 16 CANNOT BE ACCESS VIA CUNNINGHAM LAKE ROAD.

REVISIONS:

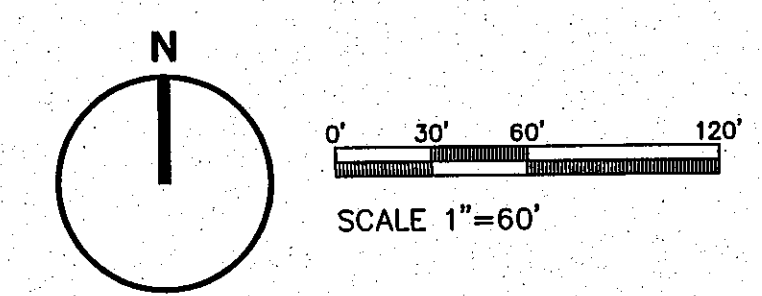
NO.	DATE	DESCRIPTION
1	7-25-05	ISSUED FOR PERMITS
2	7-25-05	REVISED PER TWP. P.C. MEETING

OWNER/DEVELOPER:
DOYLE HOMES
 4896 CHILSON ROAD
 HOWELL, MI 48843
 810 259-7505

ADVANTAGE CIVIL ENGINEERING
 110 E. Grand Blvd., Howell, MI 48843 317 545-4141 Fax 317 545-4148

DATE: 7-25-05
 DRAWN BY: TAH
 CHECKED BY: PKG
 JOB No. 05049
 DRAWING No. 2

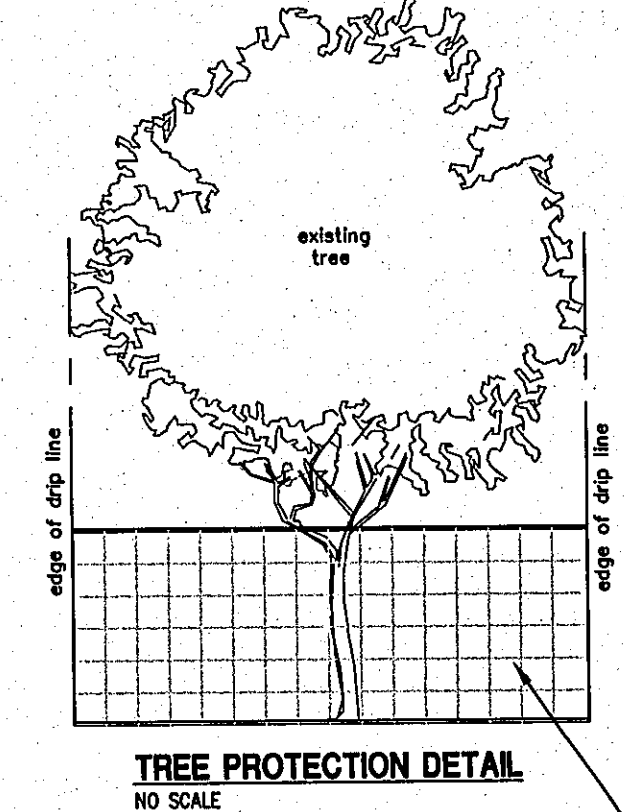
Zoned LDR
"MYSTIC LAKE HILLS SUBDIVISION"



LEGEND

- BENCHMARK
- DRAINAGE FLOW
- PROPOSED WELL
- LIGHT POLE
- SIGN
- UTILITY POLE
- TELEPHONE BOX
- TELEPHONE MARKER
- GAS MARKER
- CATCH BASIN
- MANHOLE
- VALVE & BOX
- HYDRANT
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- MAJOR CONTOUR - 10 FT. INTERVAL
- MINOR CONTOUR - 2 FT. INTERVAL
- FENCE LINE
- STORM SEWER
- GAS MAIN
- TELEPHONE LINE
- UNDERGROUND TELEPHONE LINE
- ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE
- DITCH CENTERLINE, TOE OF SLOPE
- PROPOSED SILT FENCE
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE & BRUSH LINE
- PROPOSED SEPTIC FIELD
- TREE PROTECTION FENCE LINE

- Note:
1. The finish floor elevations shown are for general information purposes only. The actual finish floor elevations may change based on the actual building and location for each site.
 2. All disturbed areas with slopes greater than 1:4 shall be stabilized with hydroseed as necessary to control erosion.
 3. All storm sewer flared end sections shall have Rip-Rap placed Per the Detail on Sheet 7.



REVISIONS:

NO.	DATE	DESCRIPTION
1	7-25-05	ISSUED PER TEMP. REVIEW
2	8-10-05	REVISED PER TEMP. REVIEW
3	10-10-05	REVISED PER TEMP. P.C. MEETING

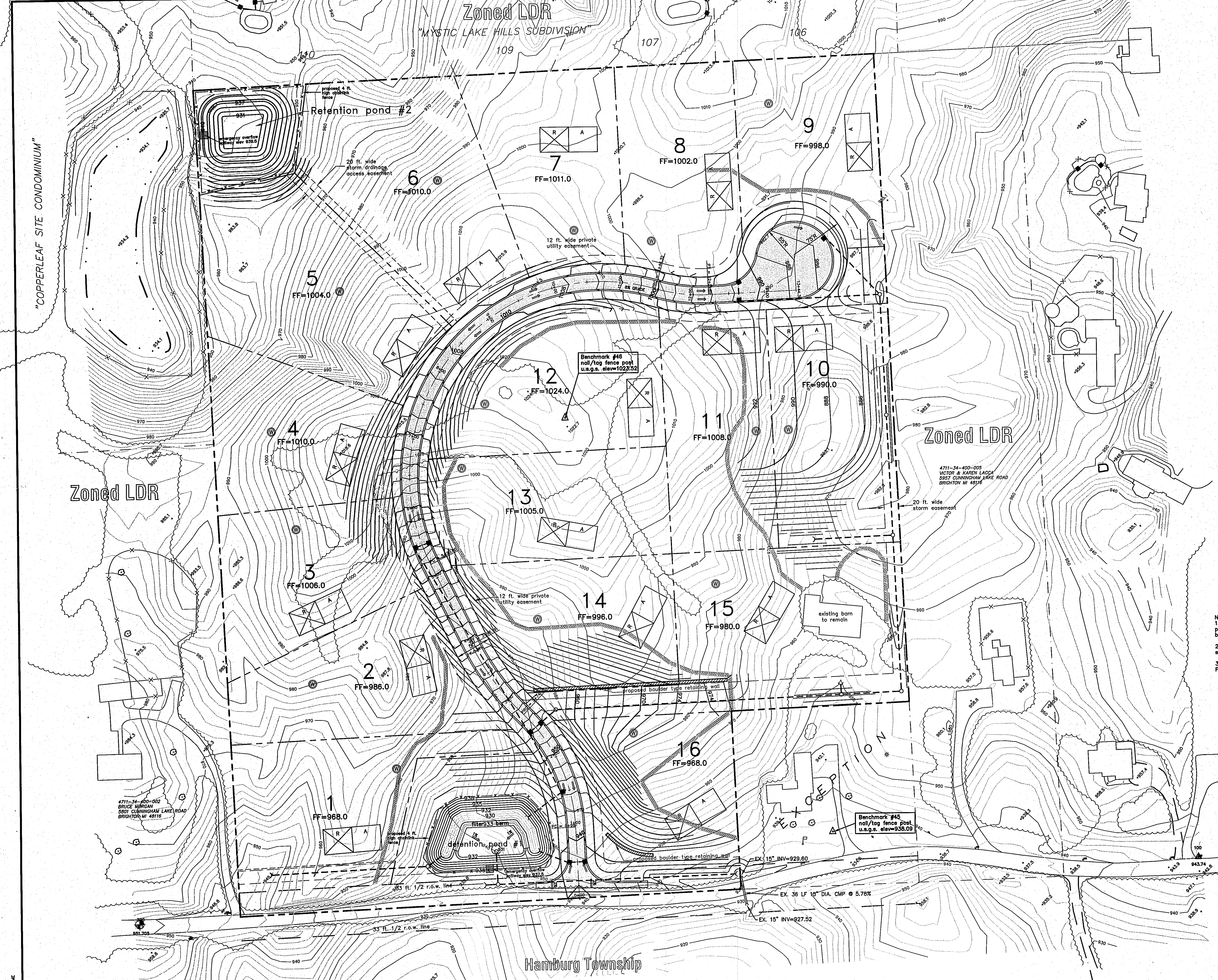
OWNER/DEVELOPER:
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4896 CHILSON ROAD
HOWELL, MI 48843
810 229-7505

MOUNTAIN TOP ESTATES
SITE CONDOMINIUM
GRADING PLAN

ADVANTAGE CIVIL ENGINEERING
110 E. Grand River, Howell, MI 48843 817 545-4141 Fax 817 545-1148

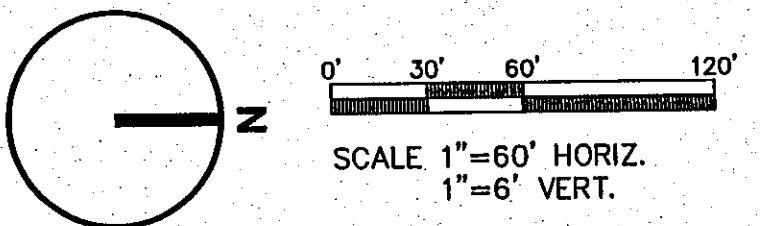
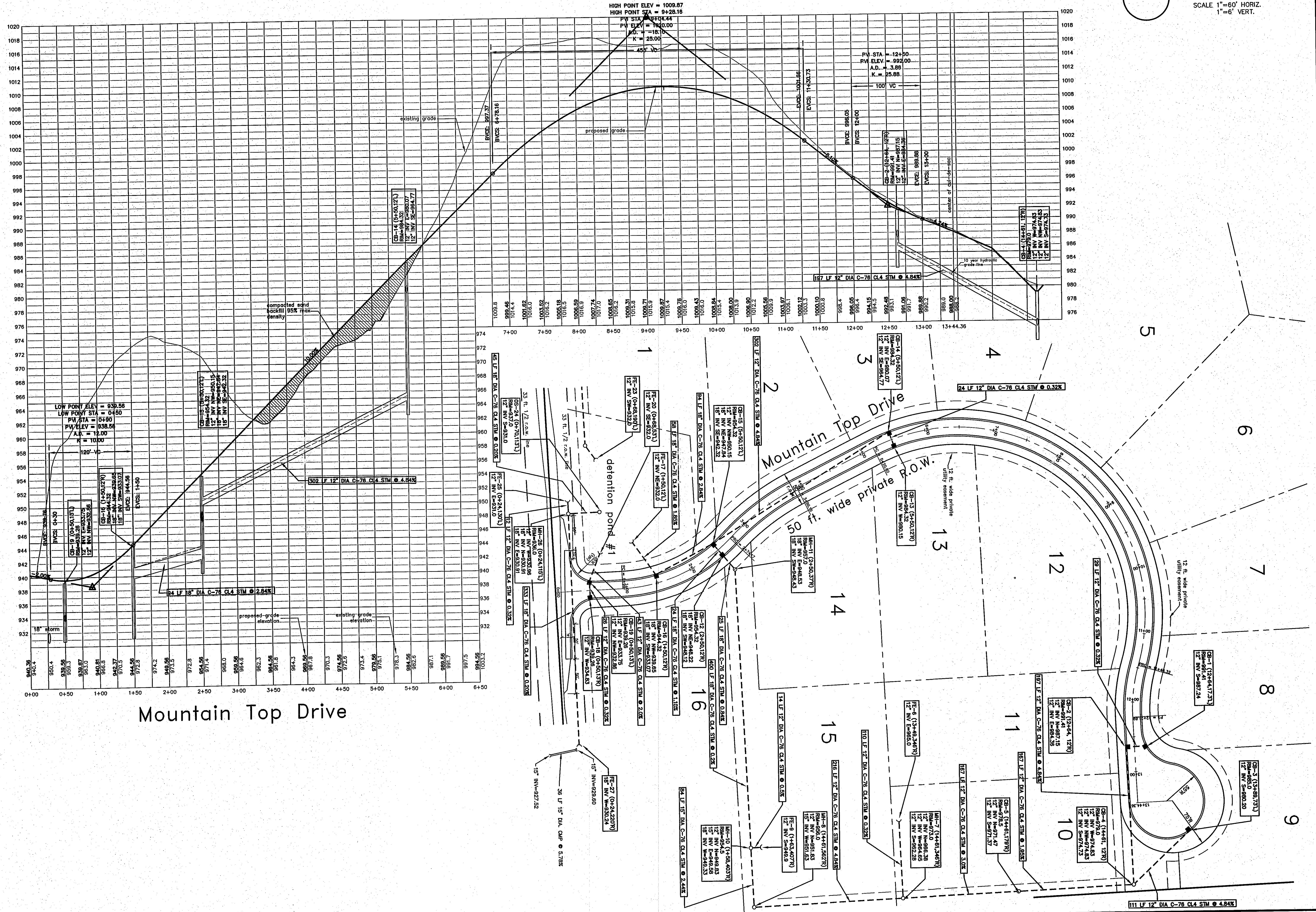
DATE: 7-25-05
DRAWN BY: TAH
CHECKED BY: PCK
JOB No. 06049

PRAWING No.



Hamburg Township

DRAWN



REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	7-25-05	TAK	ISSUED FOR PER. P.O. MEETING
2	7-25-05	PCK	REVISED PER. P.O. MEETING

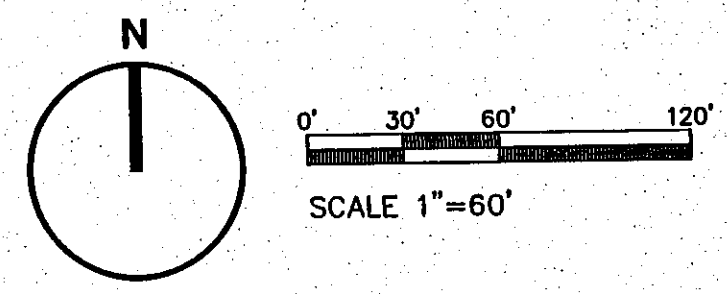
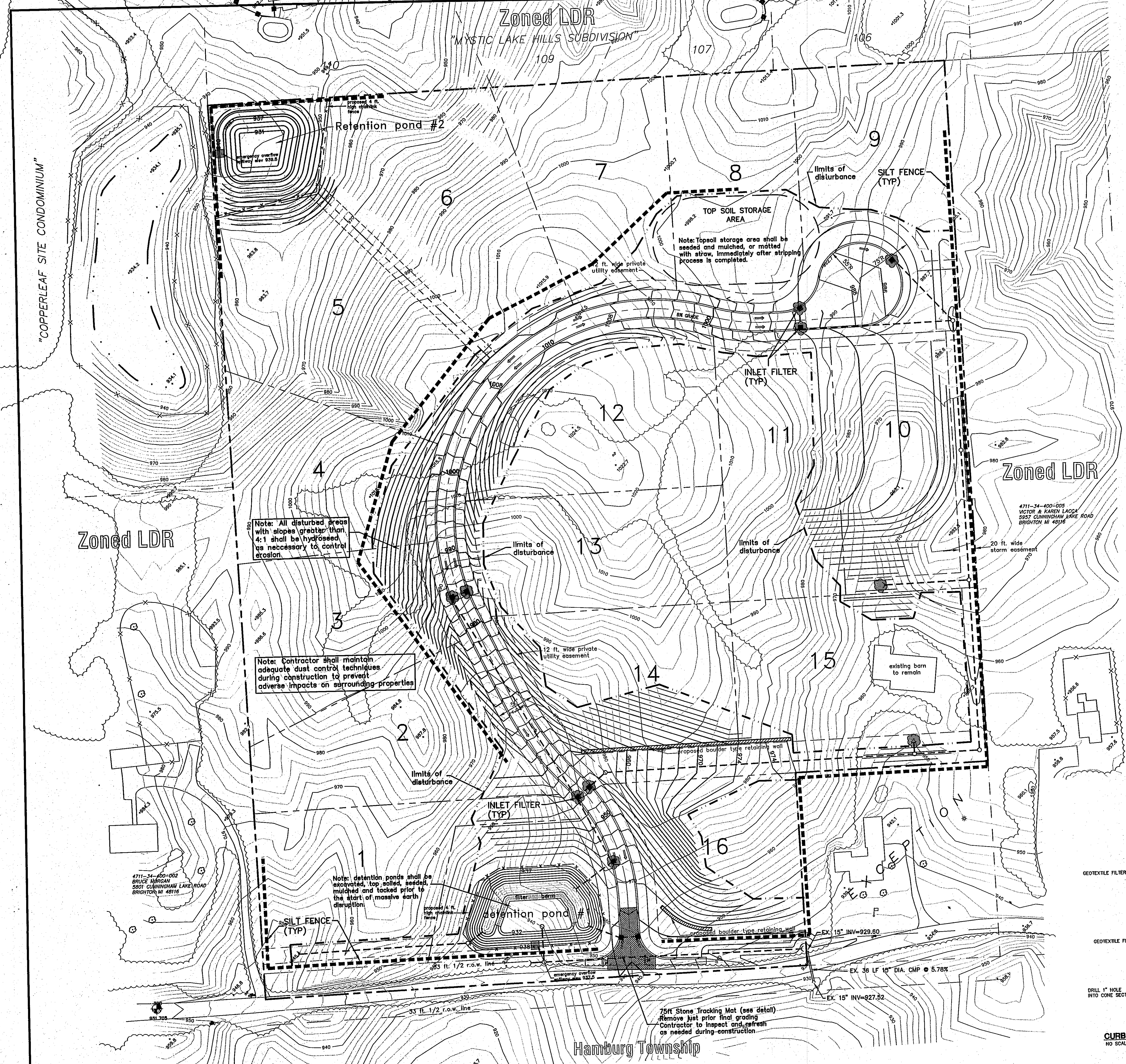
OWNER/DEVELOPER:
DOYLE HOMES
 4896 CHILSON ROAD
 HOWELL, MI 48843
 810 259-7505

MOUNTAIN TOP ESTATES
 SITE CONDOMINIUM
ROADWAY PLAN AND PROFILE

ADVANTAGE CIVIL ENGINEERING
 110 E. Grand River, Howell, MI, 48843 817 545-4141 Fax 817 545-1148

DATE: 7-25-05
 DRAWN BY: TAK
 CHECKED BY: PCK
 JOB No. 06049

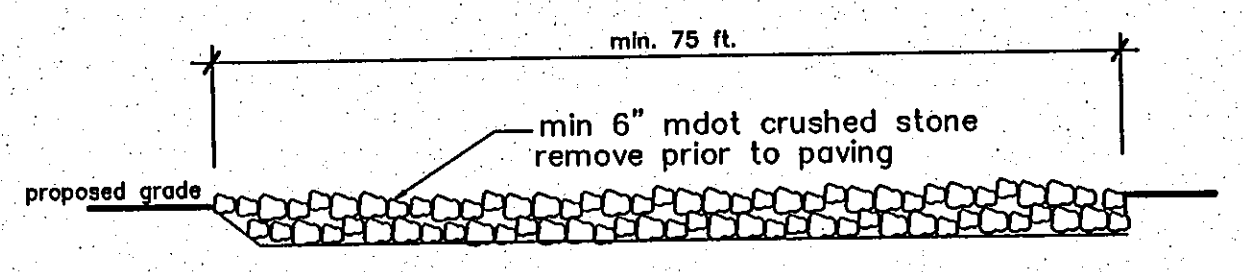
PRAWING No. 4



EROSION CONTROL SEQUENCE

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Install silt fence												
Construct sediment ponds												
Construct det. ponds												
Cut entrance road												
Install stone diaper												
Strip topsoil/trees												
Mass grade site												
Construct utilities												
Install inlet filters												
Install and section sediment filters												
Install silt traps												
Place curb & gutter												
Place pavement												
Finish grading												
Landscaping and seeding												

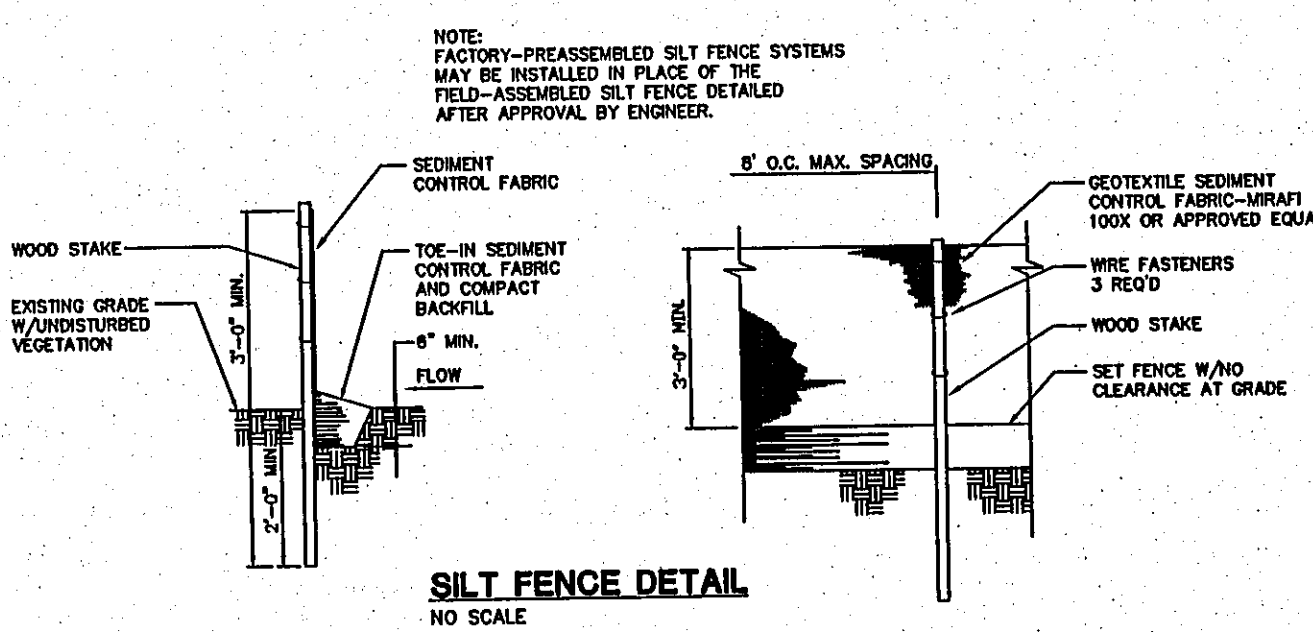
TOTAL AREA OF DISTURBANCE = 10.12 ACRES



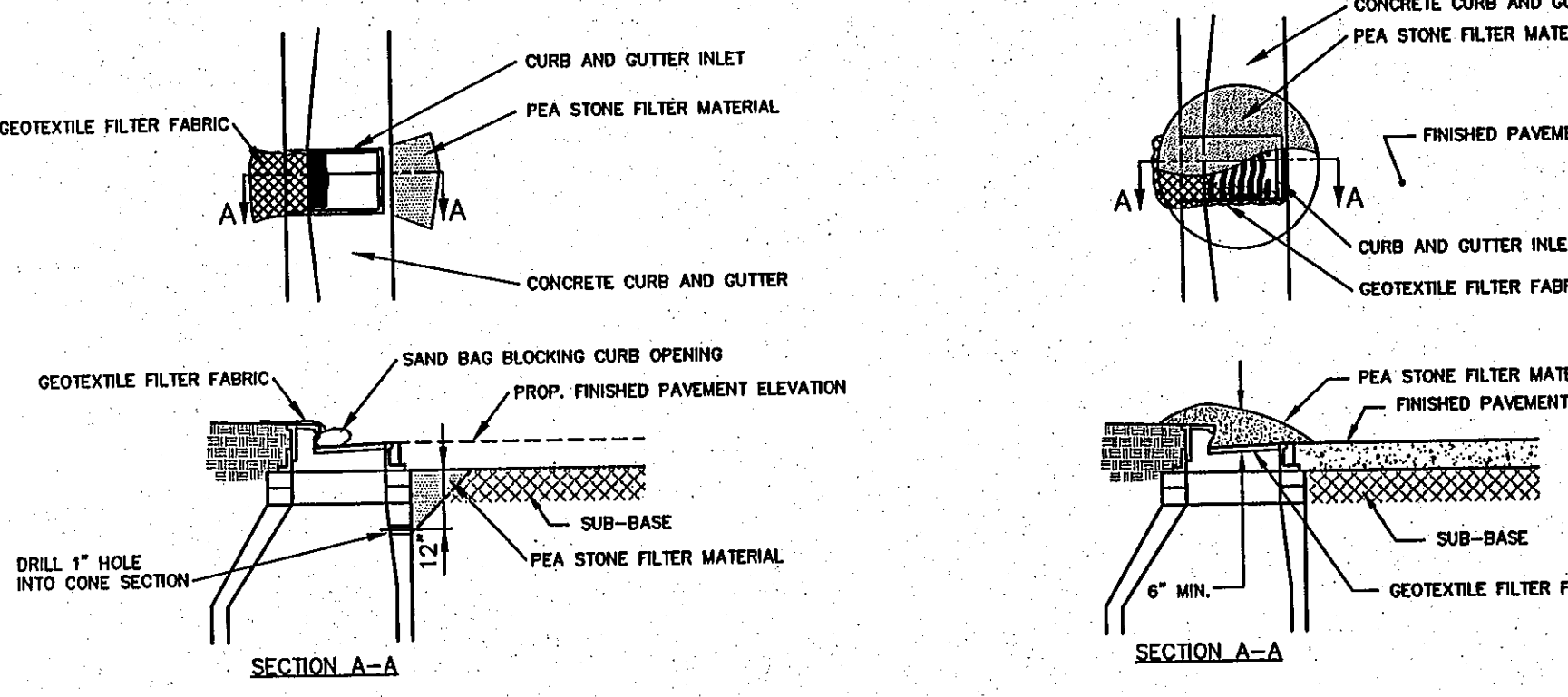
TRACKING MAT DETAIL
NO SCALE

SOIL EROSION CONTROL NOTES:

- All erosion and sediment control work shall conform to standards and specifications of the Livingston County Drain Commissioner.
- Daily inspections shall be made by Contractor for effectiveness of erosion and sedimentation control measures, and when necessary, repairs shall be performed without delay.
- site and not allowed to collect on any off-site areas or in waterways. Waterways include both natural and man-made open ditches, streams, storm drains, lakes and ponds.
- Contractor shall apply temporary erosion and sedimentation control measures as shown on these plans in the following sequence:
 - Install silt fence
 - Cut entrance road and place stone tracking mat
 - Strip topsoil and stockpile on site
 - Mass grade site
 - Install inlet filters & end section filters
 - Remove stone tracking mat and asphalt proposed roads
 - Finish grade landscaped areas, topsoil, seed and mulch
 - Remove silt fence and inlet filters upon establishment of vegetation
- The Contractor shall preserve natural vegetation as much as possible.
- All areas disturbed during construction shall be restored with a minimum 3" of topsoil, seeded and mulched.



SILT FENCE DETAIL
NO SCALE



CURB AND GUTTER INLET FILTER (BEFORE PAVING)
NO SCALE

CURB AND GUTTER INLET FILTER (AFTER PAVING)
NO SCALE

OWNER/DEVELOPER:
DOYLE HOMES
4896 CHILSON ROAD
HOWELL, MI 48843
810 229-7505

ADVANTAGE MOUNTAIN TOP ESTATES
SITE CONDOMINIUM
EROSION CONTROL PLAN

ADVANTAGE CIVIL ENGINEERING
110 E. Grand Street, Howell, MI 48843 817 545-4141 Fax 817 545-4148

DATE: 7-25-06
DRAWN BY: TAH
CHECKED BY: PCK
JOB No. 06049
DRAWING No. 5

REVISIONS:

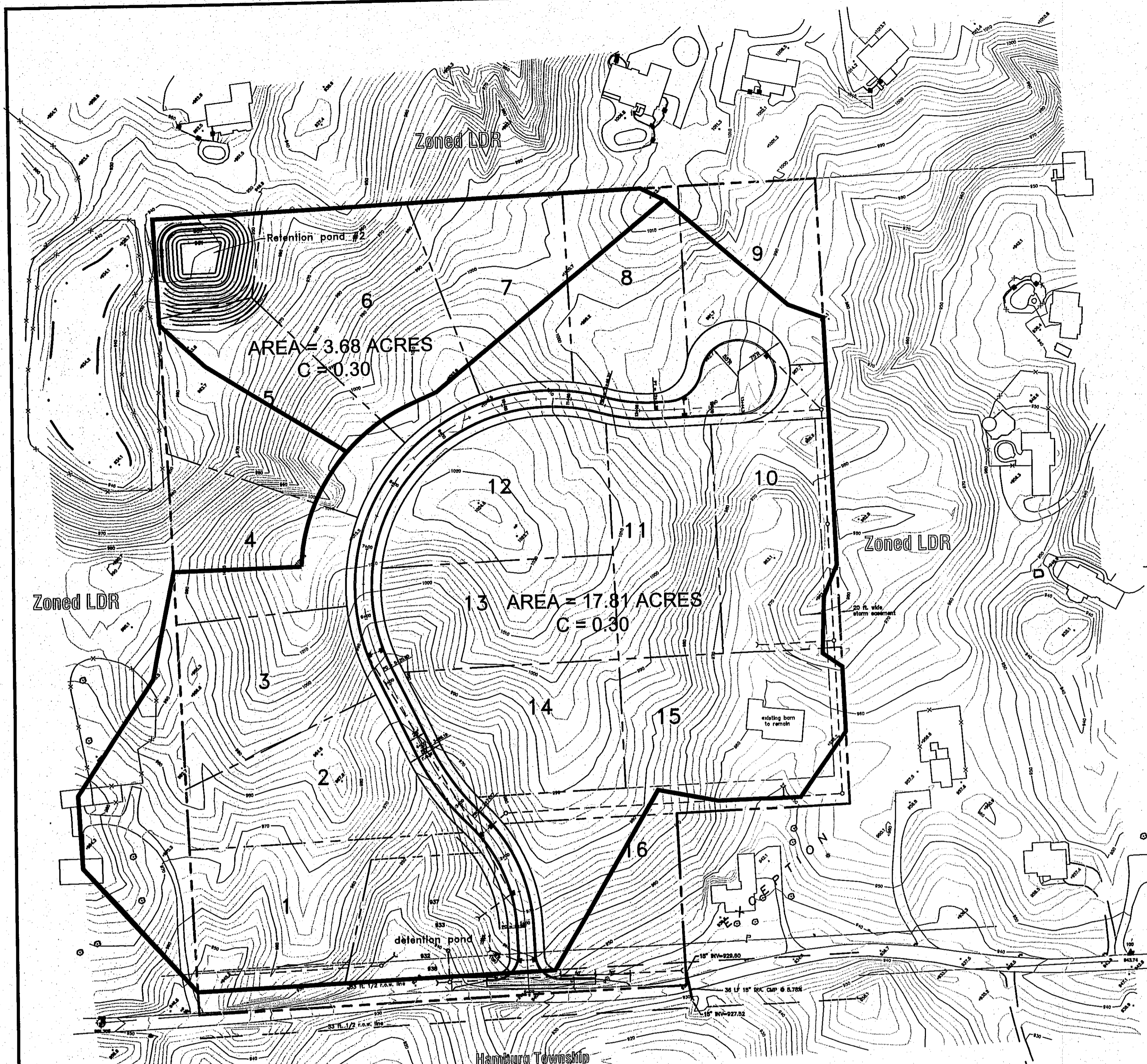
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 HOWELL, MI 48843
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MOUNTAIN TOP ESTATES
 SITE CONDOMINIUM
DRAINAGE AREA MAPS

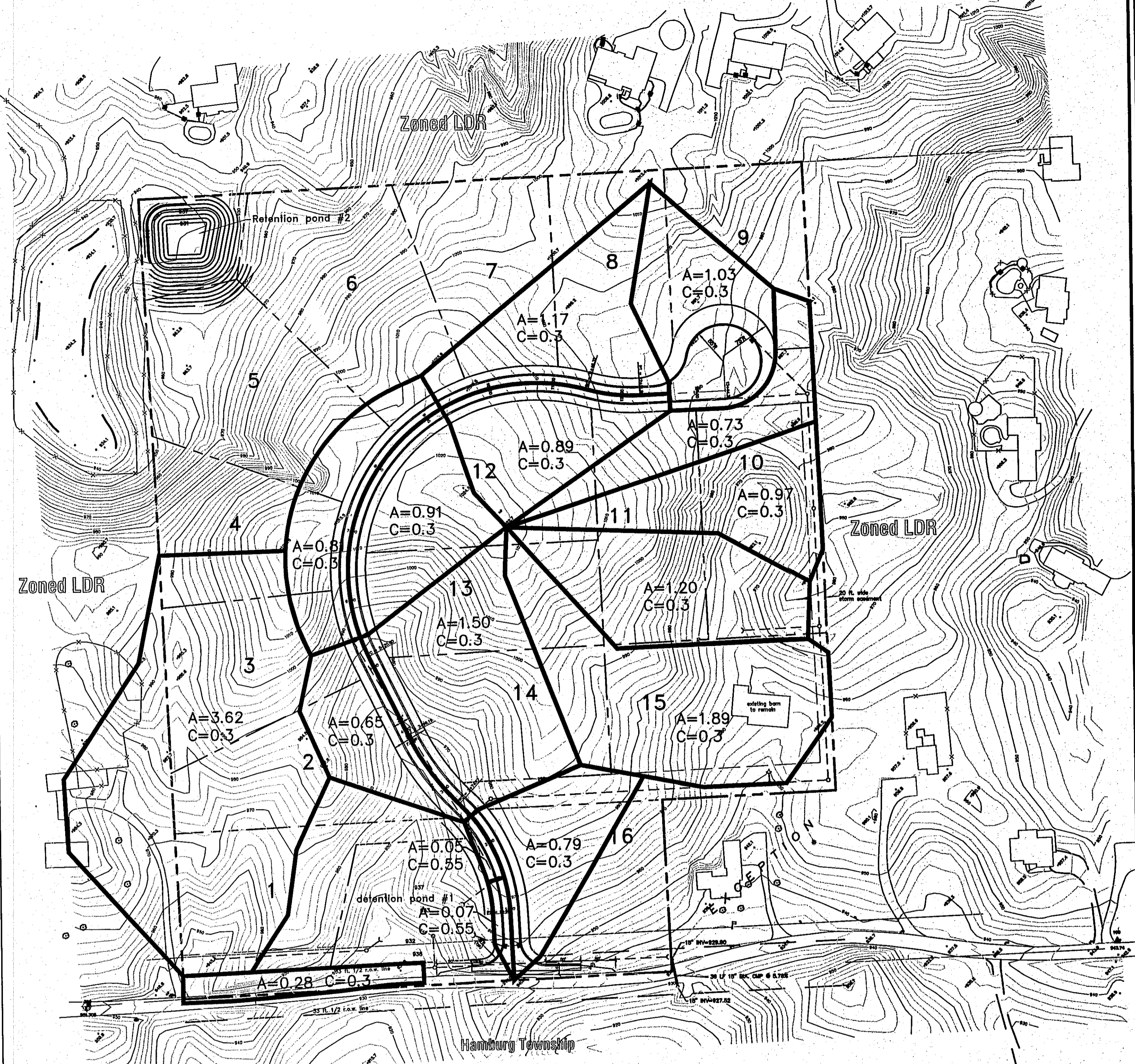
ADVANTAGE
 CIVIL
 ENGINEERING

DATE:
 7-25-05
 DRAWN BY:
 TAH
 CHECKED BY:
 PCK
 JOB No.
 06049

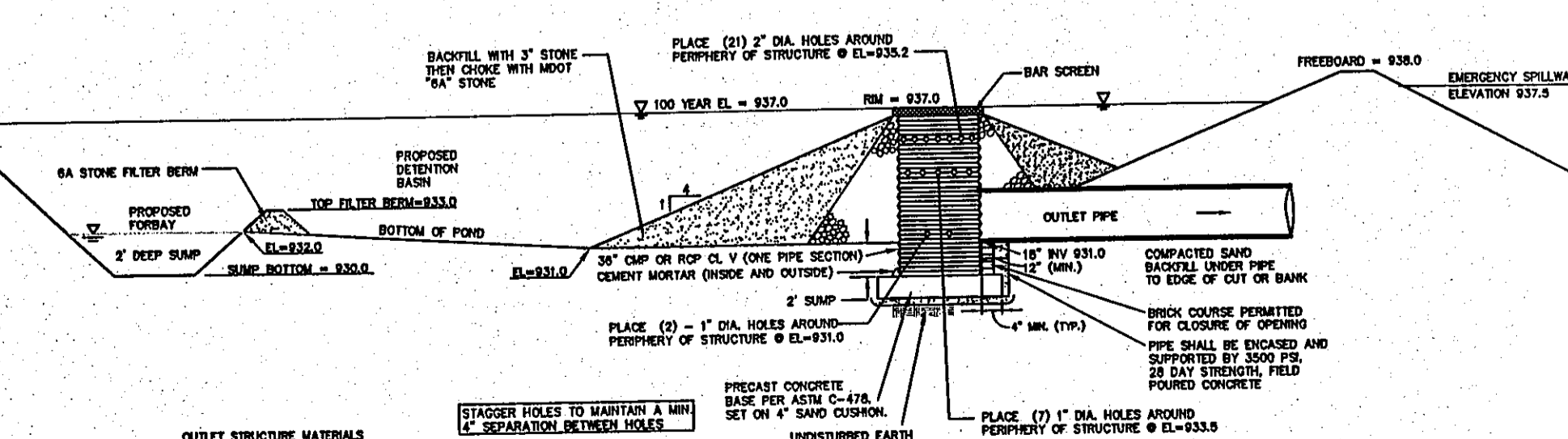
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DRAINAGE ARE MAP FOR PONDS



DRAINAGE ARE MAP FOR STORM SEWERS



DETENTION POND OVERFLOW STRUCTURE (OS-24)

DETENTION POND #1
 DRAINAGE AREA = 17.81 ACRES COMPOUND "C" VALUE = 0.30
 ROADWAY = 0.97 ACRES X 0.9 = 0.873
 DRIVEWAYS = 18 X 2000 SF = 0.73 X 0.9 = 0.657
 HOUSES = 18 X 2200 SF = 0.81 X 0.9 = 0.729
 LAWN = 15.30 ACRES X 0.2 = 3.06
A = 0.817 (17.81) = 0.298
 (USE C=0.3)
 ALLOWABLE OUTFLOW = 17.81 X 0.20 CFS/ACRE = 3.56 CFS
 VOLUME REQUIRED @ T=90 MIN = 49,894 C.F.
 VOLUME PROVIDED: 49,8245 C.F.

ELEVATION	SURFACE AREA	VOLUME	TOTAL VOLUME
932	2800	3636	3636
933	4282		

ELEVATION	SURFACE AREA	VOLUME	TOTAL VOLUME
931	0	1650	1650
932	3300	3762	5412
933	4044	8326	13738
934	9917	10527	24265
935	11136	11774	36039
936	12412	13079	49118
937	13745		62863

ORIFICE CALCULATIONS:
 FIRST FLUSH
 Q = 9699/85400 = 0.112 CFS
A=Q/C(SQRT(2GH))
 C=0.62
 H = (933.5 - 931.0) = 2.5
A = 0.0142 SF
 2 HOLES REQUIRED @ ELEVATION = 931.0
 ACTUAL RATE OF FLOW WITH 2 - 1" HOLES
 AT H=2.5 = 0.086 CFS

BANKFULL
 RATE OF FLOW THROUGH FIRST FLUSH HOLES
 AT BANK FULL ELEVATION = 0.111 CFS
 Q = CA SQRT(2GH)
 C = 0.62
 A = 2 X 0.00545 = 0.0109 SF
 H = (935.2 - 931.0) = 4.2
AMOUNT OF FLOW THROUGH FIRST FLUSH HOLES
 IN 40 HOUR PERIOD = 57,500 S X 0.111 CFS PLUS
 96400 S X 0.086 CFS = 13,824 C.F.

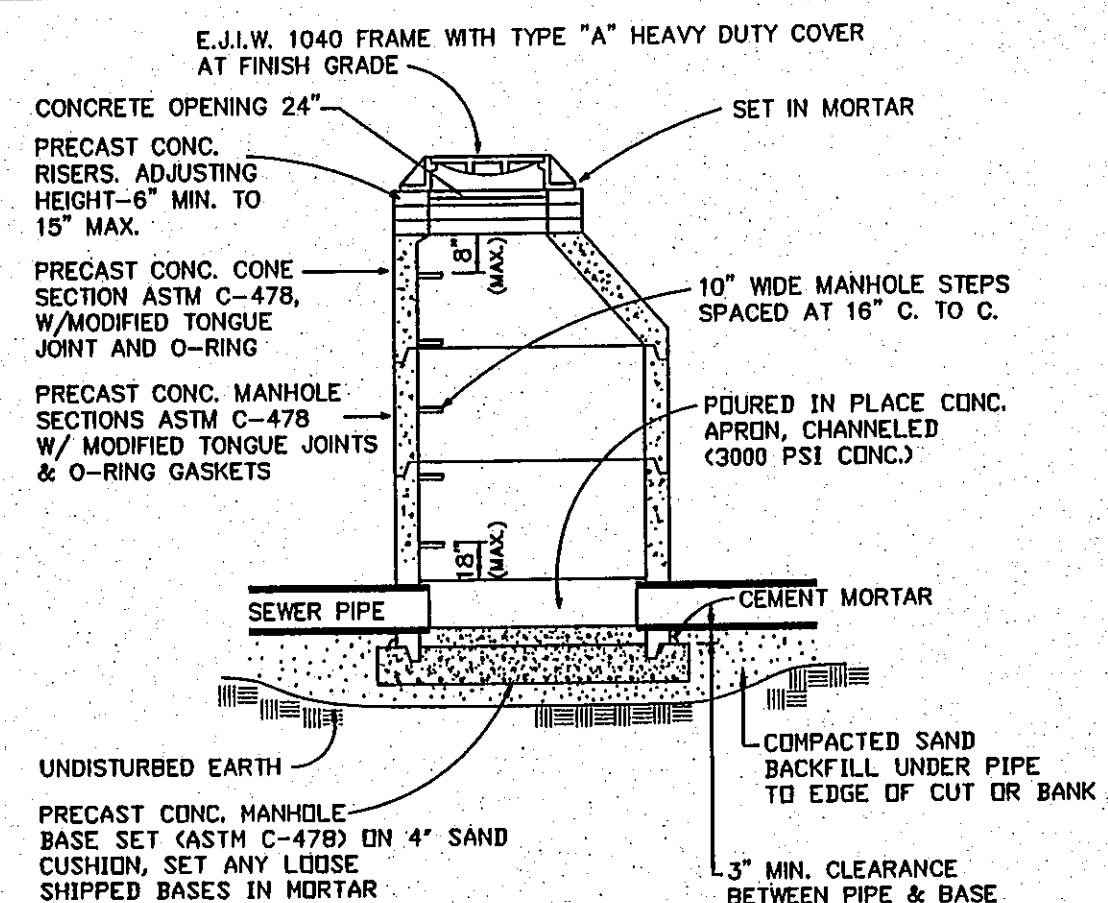
AMOUNT OF FLOW THAT MUST PASS THROUGH
 BANK FULL HOLES BETWEEN 24 AND 40 HOUR
 PERIOD = 22720 C.F. = 13824 C.F. = 13,746 C.F.
 RATE OF FLOW THROUGH BANK FULL HOLES =
 13,746 C.F./57600 S = 0.239 CFS
A=Q/C(SQRT(2GH)) = 0.0368 SF
 Q = 0.239
 C = 0.62
 H = (935.2 - 933.5) = 1.7
USING 1" DIA. HOLES WITH A=0.02945 SF
 7 HOLES REQUIRED AT ELEVATION = 933.5

RETENTION POND #2
 DRAINAGE AREA = 3.68 ACRES
 VOLUME REQUIRED = 3.68 X 43560 X 2/12 = 26717 C.F.
 VOLUME PROVIDED: 27,553 C.F.

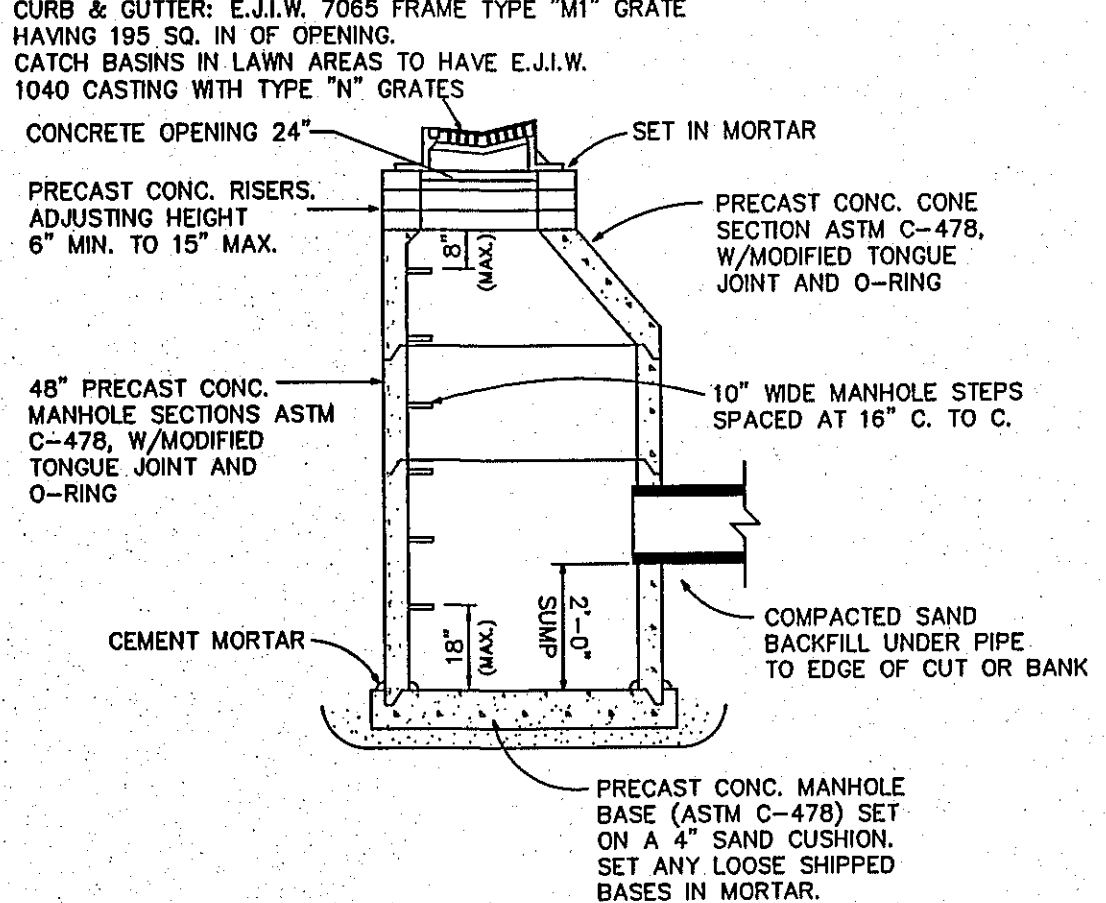
ELEVATION	SURFACE AREA	VOLUME	TOTAL VOLUME
931	2400	2706	2706
932	3011	3345	6051
933	3678	4040	10091
934	4402	5093	15184
935	5783	5902	21086
936	6020	6467	27553
937	6913		

STORM SEWER CALCULATIONS

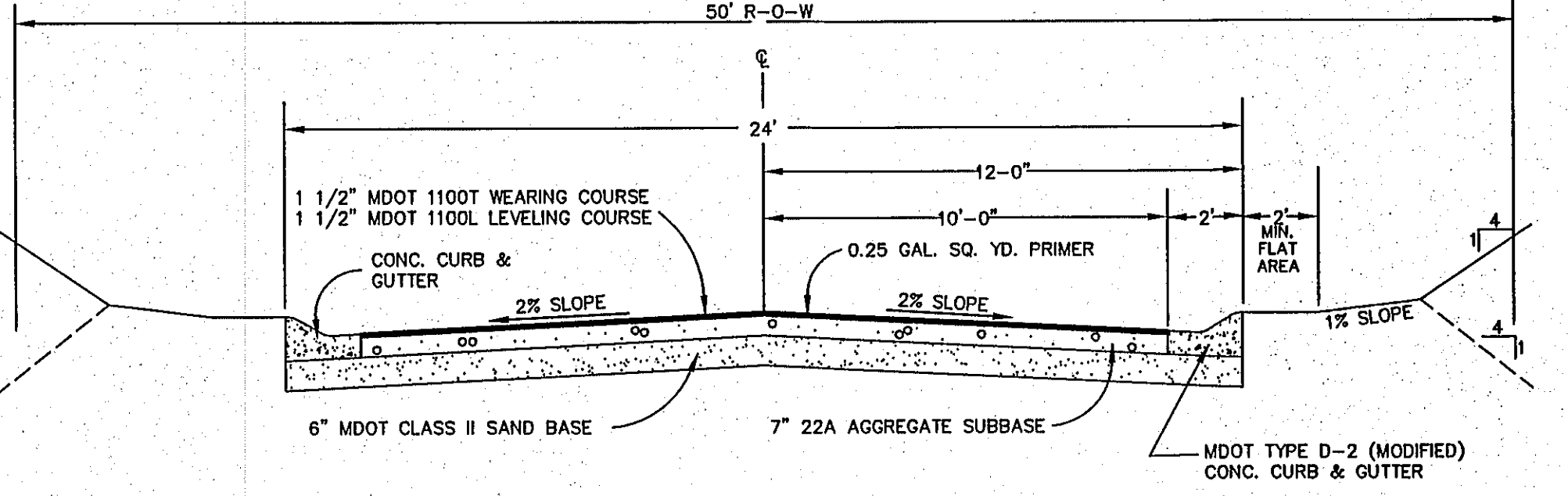
FROM MH CB OR INLET	TO MH CB OR INLET	INCREMENT ACRES "A"	"C"	EQUIVALENT AREA 1000 ACRES CA	TOTAL AREA 1000 ACRES CA	T. TIME MIN.	INCHES PER HOUR	Q CFS C.I.A.	DIAMETER OF PIPE IN.	SLOPE OF PIPE %	LENGTH OF LINE FT.	VELOCITY OF FLOW FT/SEC	TIME OF FLOW MIN.	PIPE CAPACITY C.F.S.	H.O. ELEV UPPER END	UPPER INVERT ELEV	LOWER INVERT ELEV	UPPER RM ELEV
CB-1	CB-2	1.17	0.3	0.35	0.35	15	4.38	1.53	12	0.32	29	2.6	0.2	2.01	987.99	987.24	987.15	991.41
CB-2	CB-4	0.89	0.3	0.27	0.62	15.2	4.35	2.70	12	4.84	197	10.0	0.3	7.84	984.76	984.28	974.83	991.41
CB-3	CB-4	1.03	0.3	0.31	0.31	15	4.38	1.36	12	4.84	111	10.0	0.2	7.84	980.50	980.20	974.83	985.0
CB-4	CB-5	0.73	0.3	0.22	1.15	15.5	4.32	4.97	12	1.95	167	6.3	0.4	4.97	975.73	974.73	971.47	979.0
CB-5	MH-7	0.97	0.3	0.29	1.44	15.9	4.28	6.18	12	3.0	167	7.9	0.4	6.17	972.37	971.37	966.38	978.5
FE-6	MH-7	1.20	0.3	0.36	0.36	15	4.38	1.58	12	0.32	110	2.6	0.7	2.01	985.58	985.00	984.65	984.5
MH-7	MH-8	0	NA	NA	1.8	16.3	4.23	7.61	12	4.84	216	10.0	0.4	7.84	984.40	982.28	951.83	973.0
MH-8	MH-10	0	NA	NA	1.8	16.7	4.20	7.56	15	2.44	84	6.2	0.2	10.07	954.54	951.83	949.58	958.0
MH-10	MH-11	0	NA	NA	2.37	16.9	4.18	9.91	18	15.8	400	5.6	1.2	5.91	953.39	949.83	948.83	949.5
FE-9	MH-11	1.89	0.3	0.57	0.57	15	4.38	2.50	12	0.5	14	3.2	0.1	2.52	950.9	949.9	948.83	949.5
MH-11	MH-12	0	NA	NA	2.37	18.1	4.06	9.62	18	0.84	25	5.4	0.1	9.62	949.83	948.33	948.33	949.5
CB-12	CB-15	1.5	0.3	0.45	2.82	18.2	4.05	11.42	18	1.18	24	6.4	0.1	11.42	949.82	948.12	947.84	954.32
CB-13	CB-14	0.91	0.3	0.27	0.27	15	4.38	1.16	12	0.32	24	2.8	0.2	2.01	980.80	980.15	980.07	984.32
CB-14	CB-15	0.81	0.3	0.24	0.51	15.2	4.35	2.22	12	4.84	302	10.0	0.5	7.84	984.42	984.77	950.15	984.32
CB-15	CB-16	0.65	0.3	0.20	3.53	18.3	4.04	14.26	18	2.84	94	10.0	0.2	17.70	944.45	942.32	939.85	954.32
CB-16	FE-17	0.05	0.3	0.02	3.55	18.5	4.02	14.27	18	1.85	58	8.1	0.1	14.28	935.27	933.07	932.0	944.32
CB-18	CB-19	0.79	0.3	0.24	0.24	15	4.38	1.05	12	0.32	26	2.8	0.2	2.01	935.38	934.83	933.75	939.0
CB-19	FE-20	0.07	0.3	0.02	0.26	15.2	4.35	1.13	12	2.0	43	6.4	0.1	5.03	934.24	932.80	932.0	939.0
FE-21	MH-22	3.82	0.3	1.09	1.09	15	4.38	4.77	12	4.67	218	9.8	0.4	7.70	944.65	944.0	933.85	954.0
MH-22	FE-23	0	NA	NA	1.09	15.4	4.33	4.72	12	2.0	23	6.4	0.1	5.03	934.60	932.46	932.0	938.0
OS-24	MH-26	17.81	0.3	5.34	5.34	90	1.94	10.38	18	15.0	45	8.4	0.1	10.38	934.0	931.0	930.91	937.0
FE-25	MH-26	0.28	0.3	0.08	0.08	15	4.38	0.35	12	0.32	15	2.8	0.1	2.01	933.57	931.0	930.96	954.0
MH-26	FE-27	0	NA	NA	5.42	90	1.94	10.51	18	0.2	333	6.8	0.6	10.51	933.57	930.91	930.24	936.0



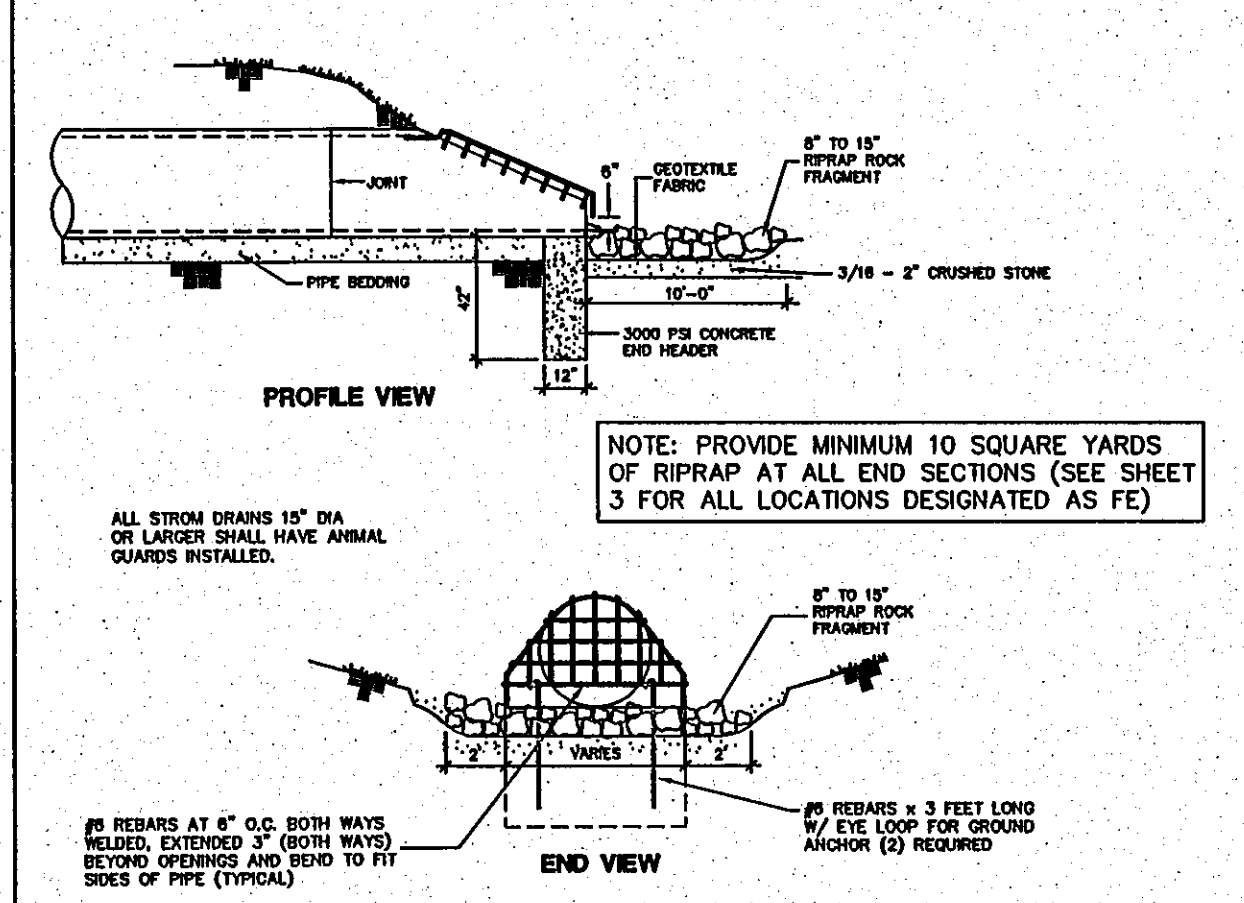
FOUR FOOT DIA. STORM MANHOLE
NO SCALE



4 FOOT DIA. CATCH BASIN DETAIL
NO SCALE



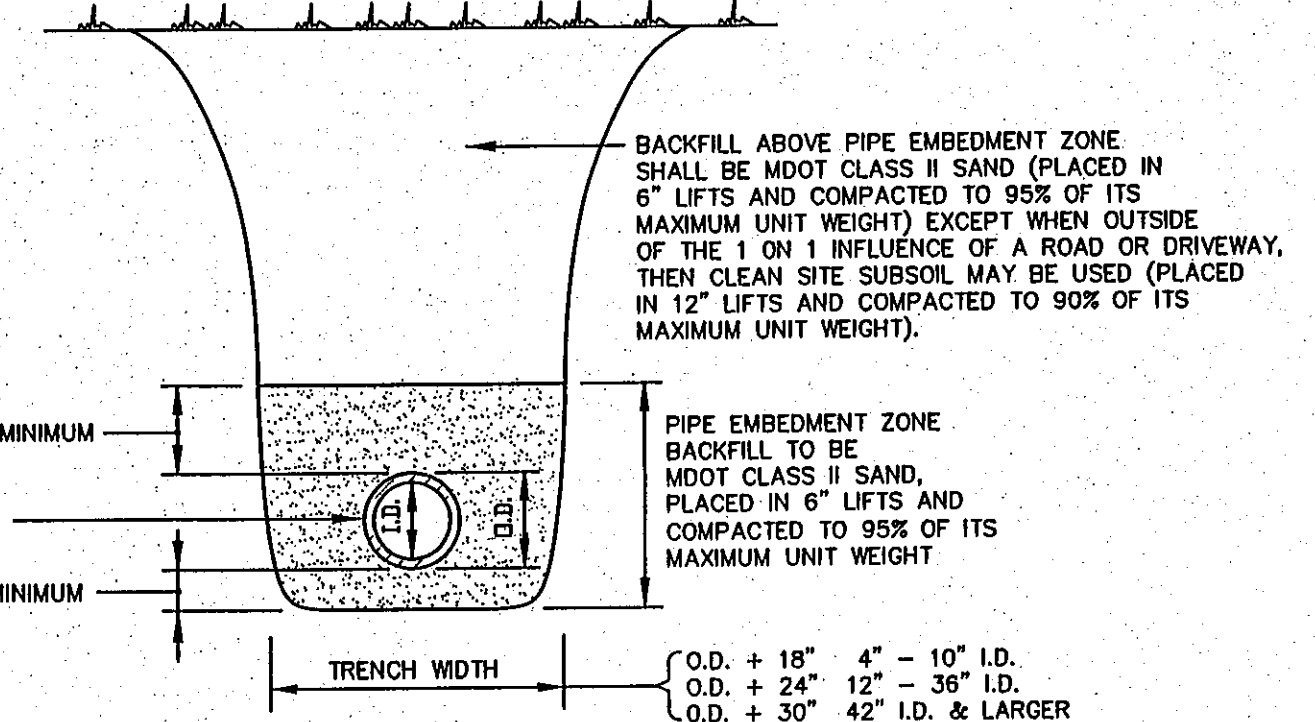
TYPICAL PRIVATE ROAD CROSS SECTION
NO SCALE



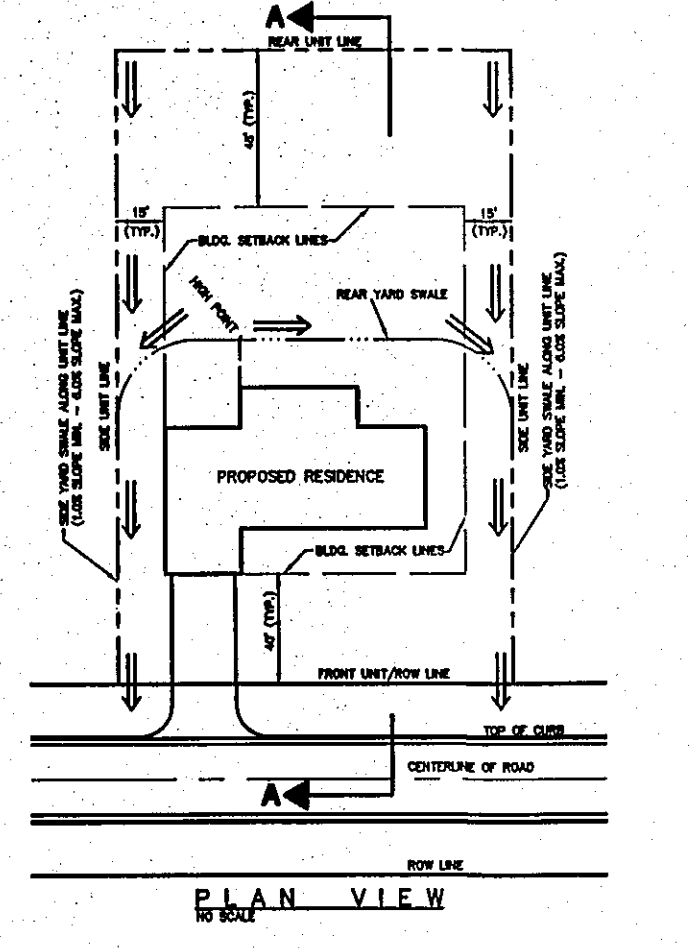
END SECTION DETAIL
NO SCALE

MANHOLE, CATCH BASIN AND INLET NOTES

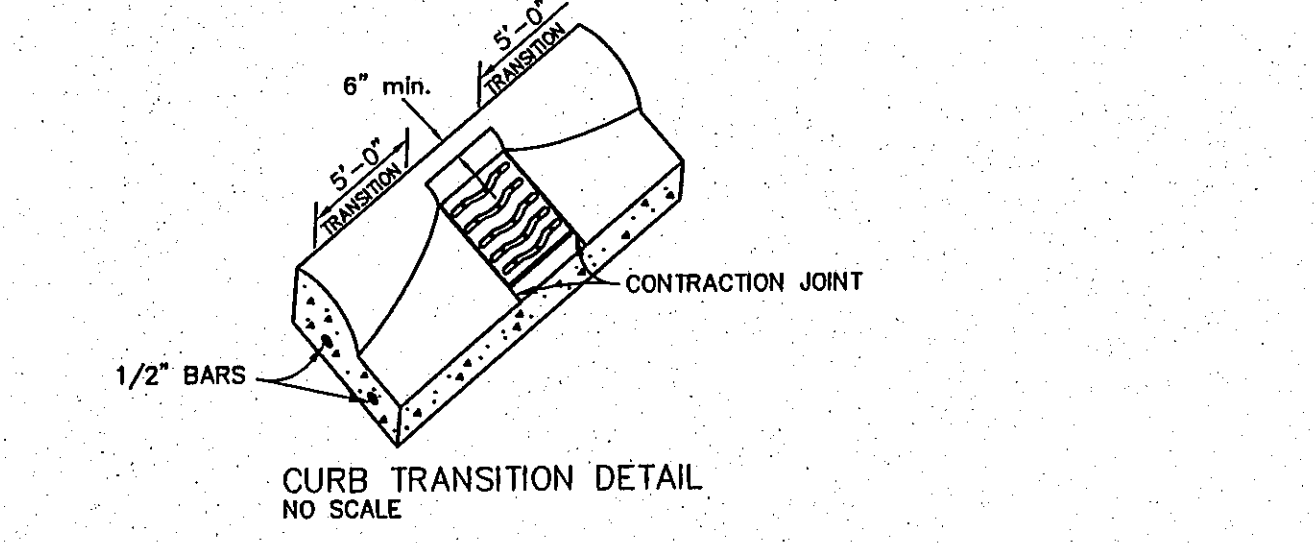
1. THE JOINTS AROUND THE INSIDE CIRCUMFERENCE OF THE STRUCTURE SHALL BE POINTED WITH CEMENT MORTAR.
2. ALL HOLES PROVIDED FOR LIFTING AND HANDLING SHALL BE FILLED WITH MORTAR AND MADE WATERTIGHT.
3. MANHOLE STEPS SHALL BE ASPHALT-COATED CAST IRON (EAST JORDAN 8500) OR STEEL REINFORCED, HIGH DENSITY POLYPROPYLENE PLASTIC (M. A. INDUSTRIES PS-1-PF) MEETING CURRENT OSHA REQUIREMENTS. THE STEPS SHALL BE A MINIMUM OF 10" WIDE AND SHALL BE INSTALLED DURING MANHOLE MANUFACTURE. PLACE STEPS AT 16" ON CENTER AND AT 45° FROM THE SEWER.



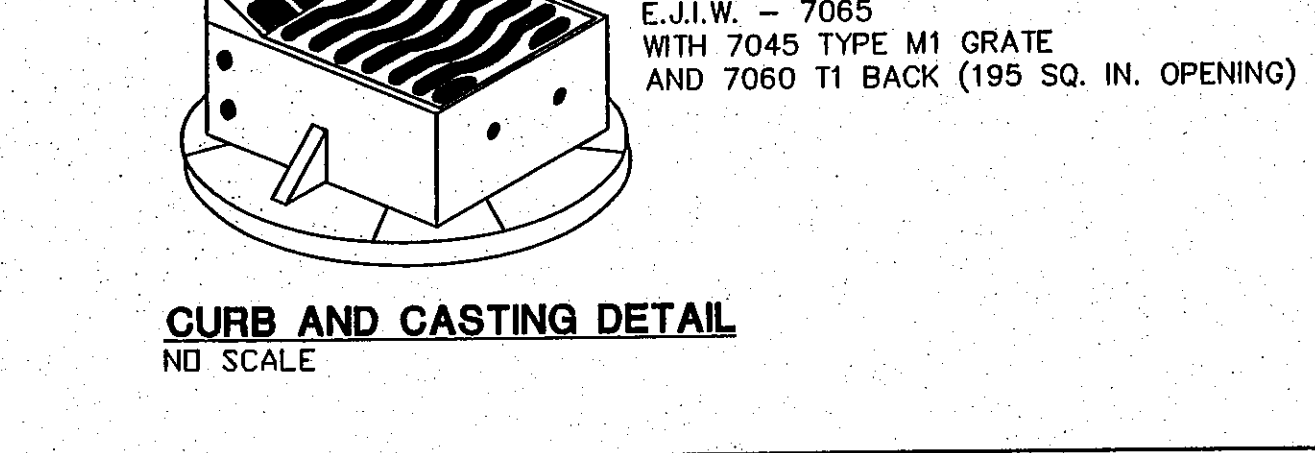
TRENCH BACKFILL & BEDDING DETAIL
NO SCALE



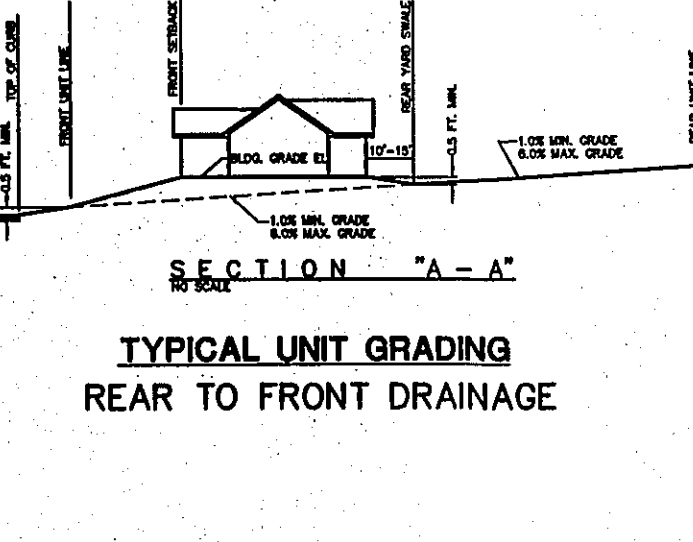
TYPICAL UNIT GRADING REAR TO FRONT DRAINAGE



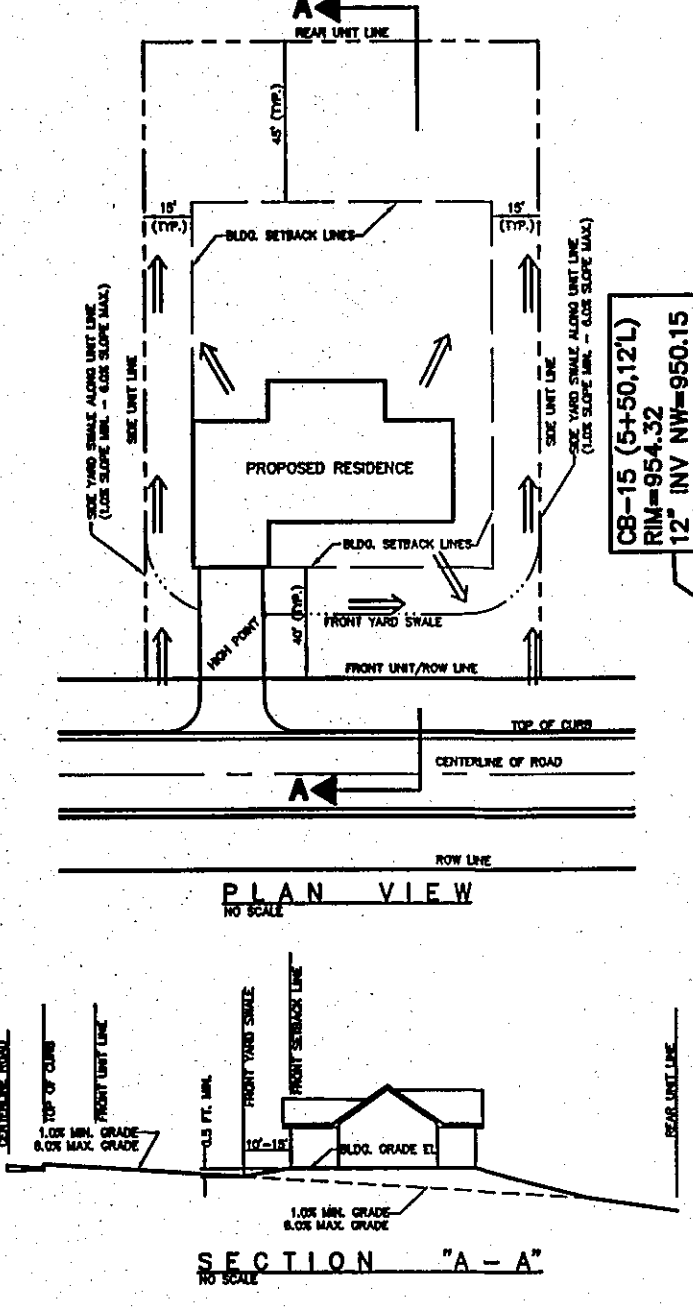
CURB TRANSITION DETAIL
NO SCALE



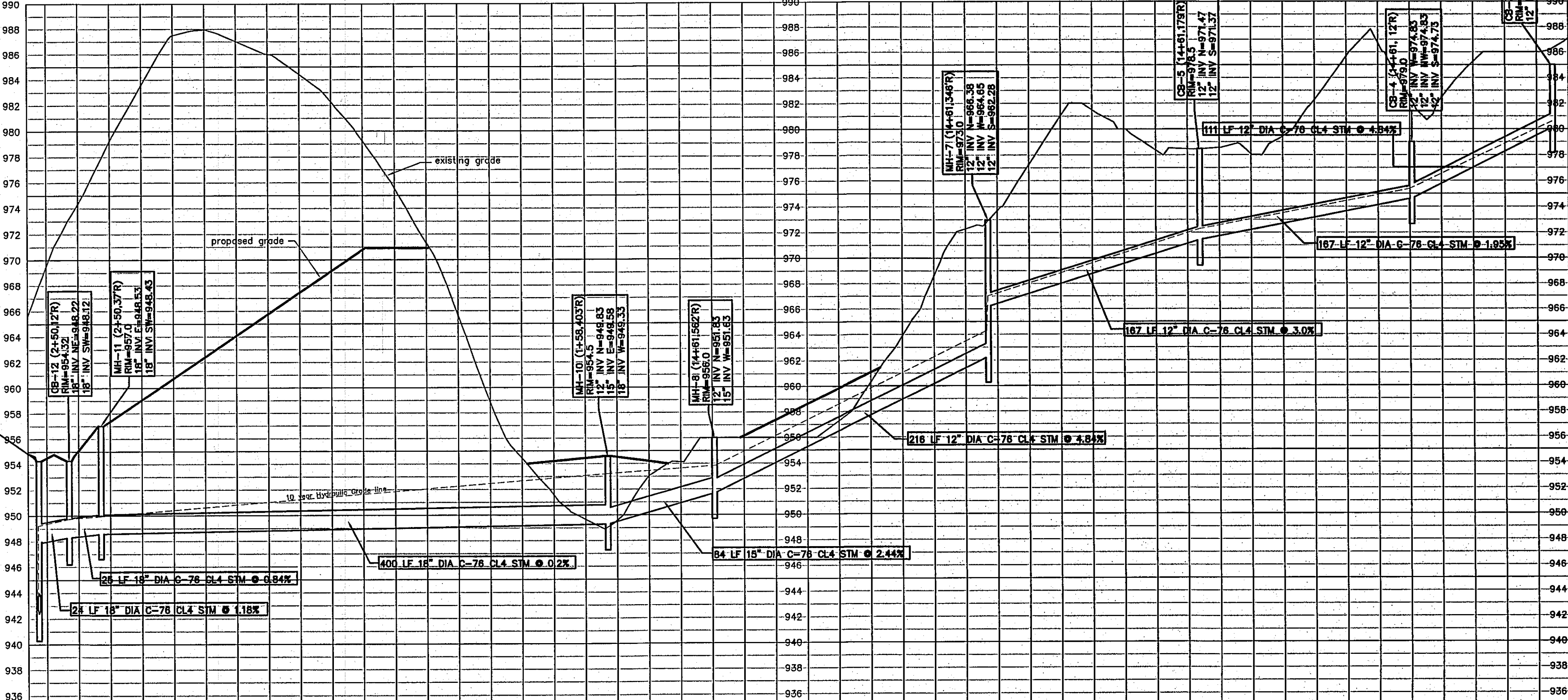
CURB AND CASTING DETAIL
NO SCALE



TYPICAL UNIT GRADING FRONT TO REAR DRAINAGE



TYPICAL UNIT GRADING FRONT TO REAR DRAINAGE



STORM PROFILE CB-3 to CB-15

0' 30' 60' 120'
SCALE 1"=60' HORIZ.
1"=6' VERT.

REVISIONS:
3-1-05
10-10-05
REVISED PER THE REVIEW
REVISED PER THE P.C. MEETING

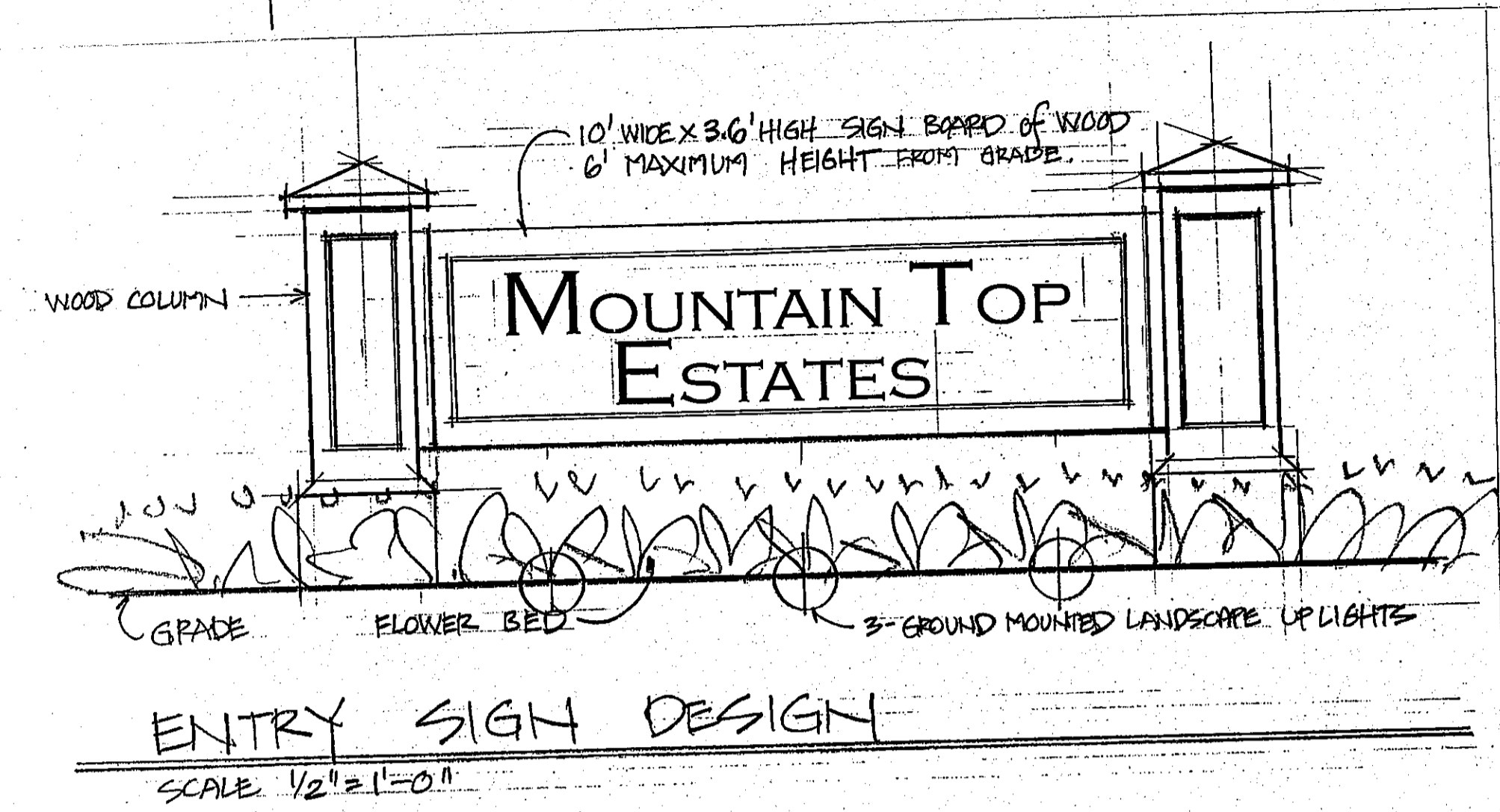
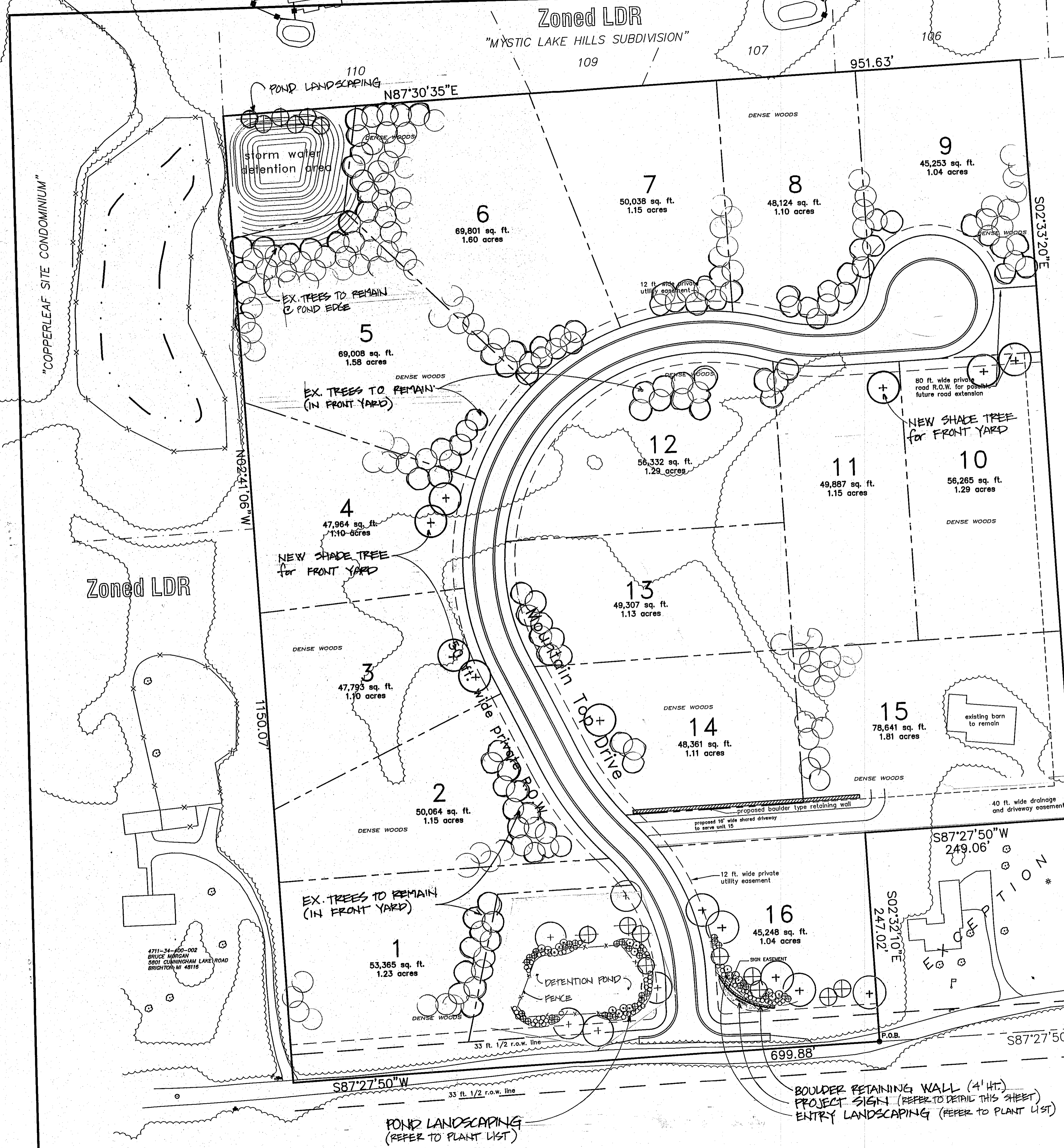
OWNER/DEVELOPER:
DOYLE HOMES
4886 CHILSON ROAD
HOWELL, MI 48843
810 228-7505

MOUNTAIN TOP ESTATES
SITE CONDOMINIUM
DETAILS

ADVANTAGE CIVIL ENGINEERING
110 E. Grand Street, Howell, MI 48843 317 245-4141 Fax: 317 545-4146

DATE: 7-25-06
DRAWN BY: TAH
CHECKED BY: PCK
JOB No. 05049

DRAWING No. 7



PLANT LIST

PLANT SYMBOL	COMMON NAME	MINIMUM SIZE	QUANTITY FOR POND LANDSCAPE	QUANTITY FOR OTHER LANDSCAPE
+	RED OAK, SUGAR MAPLE, and BASSWOOD	2.5' CALIPER	4	14
⊕	WHITE SPRUCE, CANADIAN HEMLOCK, and SCOTCH PINE	6' HEIGHT	10	5
⊗	SERICEBERRY, and DOUBLE FILE VIBURNUM	2' HEIGHT	12	7
⊗	SPREADING YEW, and PRITZER JUNIPER, and BLACK CHOKEBERRY	2' HT./SPREAD	20	9
⊗	FRAGRANT SUMAC, and RED TWIG DOGWOOD	2' HEIGHT	42	24

LANDSCAPE NOTES:

- 1) PLAN SHOWS WHERE DEVELOPER ANTICIPATES THAT TREES CAN BE PRESERVED IN FRONT YARD SETBACKS TO MEET ORDINANCE REQUIREMENTS (SEC. 12.02.02). ACTUAL NUMBER OF TREES TO BE PLANTED TO MEET REQUIREMENTS WILL BE DETERMINED AT COMPLETION OF HOME BUILDING ON EACH LOT.
- 2) SHRUB & TREE SPECIES WILL BE SELECTED FROM PLANT LIST AND THE SPECIES MIX WILL MEET ORDINANCE REQUIREMENTS (SEC. 12.02.04)
- 3) STORMWATER POND FENCING WILL BE 4 FT. HIGH, VINYL COATED, CHAIN-LINK FENCE WITH 10 FT. WIDE GATES FOR MAINTENANCE ACCESS.

ADVANTAGE CIVIL ENGINEERING
 MOUNTAIN TOP ESTATES SITE CONDOMINIUM LANDSCAPE PLAN
 PREPARED BY ROBERT DOYLE, MICHIGAN P.E. # 1050
 DOYLE HOMES 4886 CHILSON ROAD HOWELL, MI 48843 810 229-7505
 DATE: 7-25-05
 DRAWN BY: TAH
 CHECKED BY: PCK
 JOB No.: 06049
 DRAWING No.: 8

**GENOA TOWNSHIP
APPLICATION FOR SKETCH PLAN REVIEW**

TO THE GENOA TOWNSHIP PLANNING COMMISSION:

APPLICANT NAME & ADDRESS*: Kathy Kaminsky 5000 E. Grand River, Howell

OWNER'S NAME & ADDRESS*: BRIGHTON LAND LLC 5000 E Grand River, Howell

SITE ADDRESS: 7885 GRAND RIVER PARCEL #(s): 4711-13-400-026

APPLICANT PHONE: (517) 545-8800 Ext. 103 OWNER PHONE: (810) 577-7156

LOCATION AND BRIEF DESCRIPTION OF SITE: SITE IS ON THE NORTH SIDE OF GRAND RIVER JUST WEST OF HACKER. SITE IS CHAMPION BUICK GMC, AN AUTOMOBILE DEALERSHIP

BRIEF STATEMENT OF PROPOSED USE: NO CHANGE IN PROPOSED USE

THE FOLLOWING IMPROVEMENTS ARE PROPOSED: TWO WALLS SIGNS SQUARE FOOTAGE OF BOTH 69.87 #

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: Kathy Kaminsky Kathy Kaminsky
ADDRESS: 5000 E. Grand River, Howell, MI

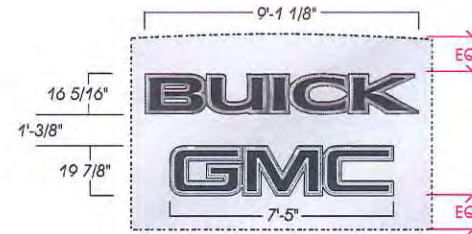
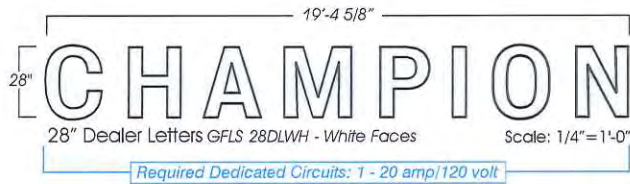
**If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

Contact Information - Review Letters and Correspondence shall be forwarded to the following:
1.) Kathy Kaminsky of Brighton Land at (517) 545-0241
Name Business Affiliation Fax No.

FEE EXCEEDANCE AGREEMENT

All sketch plans are allocated one (1) consultant review and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal for a Land Use Permit. By signing below, applicant indicates agreement and full understanding of this policy.

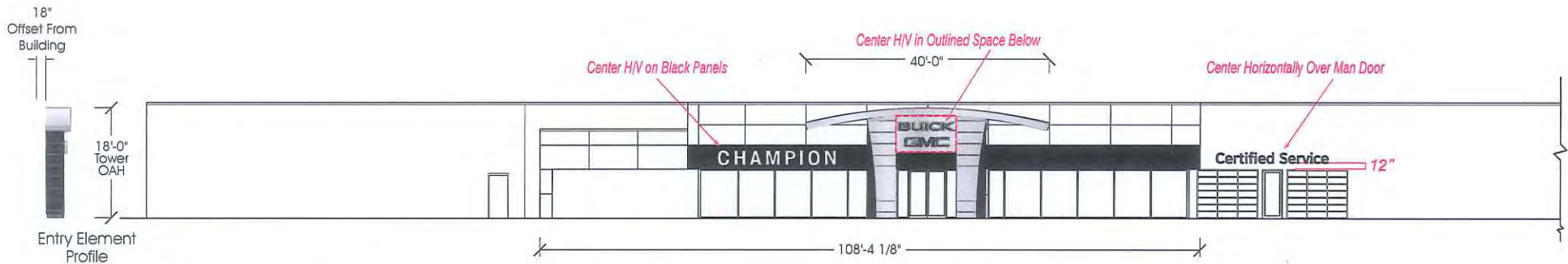
SIGNATURE: _____ DATE: _____
PRINT NAME: _____ PHONE: _____



17" Buick Signature (Unibody Sign)
GFEM 17BUMC - Monochrome Face
20" GMC Signature (Unibody Sign)
GFEM 20GCMC - Monochrome Face

Scale: 1/4"=1'-0"
Required Dedicated Circuits:
1 - 20 amp/120 volt

ELEMENTS					
ELEMENT	SIZE (HEIGHT)	LENGTH	SQUARE FT.	WEIGHT	ELECTRICAL
Buick Signature - Unibody Sign- Monochrome	16 5/8"	9'-1 1/8"	12.36	41 lbs	1 amp
GMC Signature - Unibody Sign- Monochrome	19 7/8"	7'-5"	12.28	35 lbs	1 amp
Dealer Name Letters	28"	19'-4 5/8"	45.23	12lbs/ltr	.5 amps/ltr
Certified Service Letters	22"	18'-5 1/4"	33.8	80 lbs	1 amp



SIGNATURE REQUIRED TO VALIDATE ORDER

DEALER APPROVAL

Date: ___/___/___



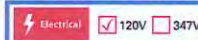
410 N. CEDAR BLUFF RD. • SUITE 101 • KNOXVILLE, TN 37923
• Tel (865) 693-1105 • Fax (888) 694-1106 • Toll Free (866) 218-1976

Pattison Sign Group recommends signage based on the Design Intent Drawings provided by Genster. If your final approved design documents differ from the original scale or size it is recommended that your General Contractor send the revised dimensions of your building facade for additional review. The size and placement of the ACM reveals (seams) is a vital part of our recommendation process to comply with General Motors design guidelines.



This sign intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

Pattison Sign Group illuminated signs contain Fluorescent, Neon and/or LED Lamps. These lamps contain Mercury (Hg) and other hazardous materials. Dispose of these lamps according to Local, Provincial, State, or Federal Laws.



www.pattisonsign.com

BAC#:	272405
Client:	Champion Buick GMC
Site:	Brighton, MI
Date:	03-08-13
Draftsman:	A. Matthews
Scale:	as noted
Rev. #:	
Page:	1/1



March 20, 2013

Planning Commission
Genoa Charter Township
2911 Dorr Road
Brighton, Michigan 48116

2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

Subject: Champion Buick/GMC Signs Review - Sketch Plan Amendment
Location: 7885 Grand River – north of Grand River Avenue, west of Hacker Road
Zoning: GCD General Commercial District
Applicant: Kathy Kaminsky on behalf of Brighton Land, LLC

Dear Planning Commission:

I have reviewed the request for three (3) wall signs for Champion Buick GMC located at 7885 Grand River Avenue. The business is located on the north side of Grand River west of Hacker Road. I have reviewed the request based upon the standards of the Township Zoning Ordinance.

A. Summary of Issues

1. The Planning Commission has the discretion to permit two wall signs for buildings which are determined to require additional visibility.
2. The applicant must obtain a variance for a third wall sign.
3. The maximum wall sign area may be increased to 150 square feet if the Planning Commission determines that the structure contains one use, has 201-400 linear feet of frontage on a public street, and has a public entrance.
4. The dimensions and calculations for the “Buick GMC” sign should be revised as defined in the ordinance.
5. The applicant shall verify how the signs will be lit and how far they will project from the wall of the building.

B. Proposal

The applicant proposes three wall signs on the building. The signs consist of the dealer name (“Champion”), the brands sold (“Buick GMC”), and the service location (“Certified Service”). All three signs are proposed on the Grand River Avenue side of the building. The “Champion” signage is shown as 45 square feet, the “Buick GMC” sign is 46 square feet (estimated) and the “Certified Service” sign is 33.8 square feet.

SUPERVISOR

Gory T. McCririe

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

H. James Mortensen

Jean W. Ledford

Todd W. Smith

Linda Rowell

MANAGER

Michael C. Archinal

C. Sketch Plan Review

1. **Location.** The Champion Buick GMC business is located between Grand River Avenue and Hacker Road. The proposed signs are to be located on the west or Grand River building elevation.
2. **Dimensional Requirements.** The following table summarizes the proposed wall signs associated with this application.

Name of Sign	Sign Area	Comments
"Champion"	19'4 ⁵ / ₈ " x 28" = 45.23 sq. ft.	This sign is permitted by right.
"Buick GMC"	Approx. 8'4 ¹ / ₂ " x 5' 5" = 46 sq. ft.	The area for this sign was estimated. Reduced drawings were difficult to scale. This sign will require the Planning Commission to determine that this building requires additional visibility as described below.
"Certified Service"	22" x 18' 5 ¹ / ₄ " = 33.8 sq. ft.	This sign will require a variance from the Zoning Board of Appeals.

The wall sign regulations for businesses in the General Commercial zoning district state that one (1) wall sign be permitted per business not to exceed 10% of front façade or 100 sq. ft. whichever is less. The ordinance provides for deviation from this requirement under certain situations and at the discretion of the Planning Commission. The applicant is requesting the Planning Commission's discretion as authorized in the ordinance and summarized below:

Planning Commission Discretion for Wall Signs	
Table 16.1 Footnote (2)(b)	Two wall signs may be permitted for businesses located on an interior lot which under certain circumstances, such as obstructed views and building orientation, require additional visibility. The total collective sign area of the two signs may not exceed one-hundred (100) square feet.
Table 16.1 Footnote (2)(c)(1)	For commercial structures containing one use, as determined by the Planning Commission, with 201-400 linear feet of building frontage facing a public street and having a public entrance may increase the size of the sign to 150 square foot maximum wall sign area.

Wall sign area square footage shall be determined by enclosing the portion of the wall which contains a message, lettering, symbol and/or logo within a parallelogram or rectangle. The dimensions of the "Buick GMC" sign should be revised on the plans and recalculated as defined in the ordinance.

The applicant has submitted a request for variance to the Zoning Board of Appeals (ZBA). This is scheduled to go before the ZBA on April 16, 2013.

3. **Materials.** The drawings provided indicate that the “Champion” and “Certified Service” signs will be channel letters and the “Buick GMC” sign will be a unibody sign. The letters themselves will be black or white in color.
4. **Lighting.** The plans indicate that the signs require circuits and will be lit. The applicant should clarify the type of lighting proposed.
5. **Projection.** The Zoning Ordinance permits wall signs to project up to 1-foot beyond the face of the wall. The applicant should verify the signs will comply with this standard.

Should you have any questions concerning this matter, please do not hesitate to call me at (810) 227-5225.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kelly VanMarter', with a long horizontal flourish extending to the right.

Kelly VanMarter
Planning Director

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
JANUARY 14, 2013
6:30 P.M.**

MINUTES

CALL TO ORDER : The meeting of the Genoa Charter Township Planning Commission was called to order at 6:31 p.m. Present constituting a quorum were Dean Tenge, Lauren Brookins, Chairman Doug Brown, Diana Lowe, James Mortensen and Barbara Figurski. Also present were Assistant Manager, Kelly VanMarter and Sherrin Hood of LSL Planning.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

ELECTION OF OFFICERS: Kelly VanMarter calls for a motion to elect officers. **Motion** by James Mortensen that the current slate be re-elected: Doug Brown as Chairman; Dean Tenge as Vice Chairman; and Barbara Figurski as Secretary. Support by Lauren Brookins. **Motion carried unanimously.**

APPROVAL OF AGENDA: Upon motion by Barbara Figurski and support by Diana Lowe, the agenda was approved as submitted. **Motion carried unanimously.**

CALL TO THE PUBLIC: (*Note: The Board reserves the right to not begin new business after 10:00 p.m.*) A call to the public was made at 6:34pm with no response.

OPEN PUBLIC HEARING#1...Request for approval of sketch plan for a proposed 440 sq.ft. addition to the existing Champion Buick GMC building located at 7885 W. Grand River Brighton. Sec. 13, petitioned by Brighton Land LLC.

Kathy Kominski is present on behalf of the petitioner. It is a small addition to update the façade of the facility. They are going to square off the front corner and change colors to white and black. There are no other changes to the site. No changes to exterior display. They understand the Zoning Board of Appeals would have to approve any additional signs.

Sherrin Hood presents the LSL Planning review letter. Sketch plan is all that is necessary for this request and a variance has been requested for the front yard setback. Building materials and colors shall be discussed. Add some additional information to the plan including where the vehicle display areas are on the site plan. You may also ask for additional details on landscaping and lighting.

Kathy Kominski presents pictures of sample building materials. The metal panels are less than 25% of the façade facing a public street.

Landscaping is sufficient. Chairman Brown would like the lighting to meet the ordinance standards. Chairman Brown stated there is a vast number of banner signs on the site. Jim Mortensen asks if the dealership would be willing to remove the pole signs on the site. Barbara Figurski has an issue with the large red and white pole sign. Chairman Brown would also like to see the pole sign replaced with a monument sign.

Chairman Brown states that he has no problem with the submittal however the signage has gotten out of hand on the site. Kathy Kominski states that she will look into reducing the amount of signage on the site.

Chairman Brown states that the Engineers have no concerns. He reviews the Fire Department letter with the petitioner. The applicant needs to provide the access around the building.

A call to the public was made at 7:09pm with no response.

Planning Commission disposition of petition

A. Disposition of sketch plan.

Motion by James Mortensen to approve the sketch plan with the following conditions:

1. Sketch plan should be dated and signed by a professional engineer.
2. The ZBA approves the setback variance to expand a non-conforming building.
3. The site shall conform with the Township lighting ordinance.
4. Materials reviewed this evening as shown in the rendering are acceptable and will become part of the permanent record of this approval.
5. The signage displayed on the building is excluded from the approval this evening and will be handled administratively with possible ZBA approval required.
6. The applicant will comply with the requirements of the Brighton Area Fire Department as spelled out in their letter dated 1-10-13.

Support by Dean Tenge. **Motion carried unanimously.**

OPEN PUBLIC HEARING #2...Review of request for an extension of a site plan and environmental impact assessment for a proposed 96-unit condominium development located at the northeast intersection of Chilson Road and the Chesapeake & Ohio Railroad line. Sec. 6, petitioned by Bayfield Homes of Howell, Inc. (Aspen Glen).

The Planning Commission discussed the length of time it has been since this site plan was reviewed. Some of the Planning Commission members are new to this Board since the project was originally approved. The Planning Commission would like to see a re-presentation of this project prior to granting another site plan extension.

Planning Commission disposition of petition

A. Disposition of site plan extension

Motion by James Mortensen to table the request for approval of the extension of the site plan for Aspen Glen pending a re-orientation of the site plan by the applicant with this Commission at a future meeting.

Support by Diana Lowe. **Motion carried unanimously.**

Administrative Business:

- *Staff report.* Kelly VanMarter gives a staff report to the Planning Commission. The Master Plan open house is scheduled for Wednesday, February 6th, 2013 from 5:00 to 7:00pm. All Commissioners are urged to attend and participate in the meeting. No applications have been received for the February meeting.
- *Approval of December 10, 2013 Planning Commission meeting minutes.* **Motion** by Barbara Figurski and support by Diana Lowe to approve the minutes of the December 10, 2012 meeting minutes. **Motion carried unanimously.**
- *Member Discussion*

Adjournment

Motion by Dean Tenge to adjourn the meeting at 7:28 p.m. Support by Diana Lowe. **Motion carried unanimously.**