



ACME TOWNSHIP PLANNING COMMISSION MEETING
ACME TOWNSHIP HALL
6042 Acme Road, Williamsburg MI 49690
April 13, 2015, 7:00 p.m.

CALL TO ORDER WITH PLEDGE OF ALLEGIANCE : 7:00PM

ROLL CALL:

Members Present: D. White, B. Balentine, M. Timmins, S. Feringa, K. Wentzloff, T. Forgette

Members Excused: J. DeMarsh, D. Rosa, M. Binkley (resigned)

Staff Present: N. Lennox, Zoning Administrator; J. Jocks, Township Counsel; J. Iacoangeli, Township Planner

A. LIMITED PUBLIC COMMENT: Opened at 7:03pm

- J. Hefner, 4050 Bayberry Lane. Discouraged by the resignation of Chris Grobel but not surprised. A wonderful consultant and was impressed when he hired by township for this project. Feels the current condition of the VGT storm water retention system/ponds as designed by Grobel is not being implemented and an alternative proposed by developer is being used. Incidents of runoff reaching the creek and bay last fall as reported by the Record Eagle show poorly for the township and concerned that system is inadequate to protect these resources.
- K. Wentzloff . Noted the difference between current condition and completed build-out with respect to above incidents and the present condition is not the final design.
- J. Iacoangeli - C. Grobel did not design the ponds but recommended that the developer use a created engineered wetland and is part of the MDEQ best management practices for stormwater runoff. The developers, in their conceptual plan submitted to the planning commission as part of the SUO, showed that system. After that system was approved as part of the conceptual plan. The final engineering was then started. The two stormwater basins currently present are the first of many ponds. The east and west basins are designed to capture the runoff from the site, and additional ponds are to be built this spring/summer that will be part of the engineered wetland. The drawings seen to date have one of the basins with three ponds and one basin will have four ponds. They will all have the treatment train system and they will all be vegetated and planted according to the best management practices. When the final plans are issued (probably in a couple weeks), the pond system will be even more advanced than what it was conceptually thought of three years ago. What we are seeing now is partial construction of the stormwater treatment system.
- J. Hefner – If I were the DEQ, I would be more concerned about the construction phase since the build out would have a completed stormwater system.
- J. Iacoangeli- DEQ is concerned about it which is why violations have been issued for stormwater discharge into the creek. The developers put enhanced stormwater controls (basin pumping, extra fencing and straw, installed a filtering system last fall) during the construction phase. After approval of the final engineering phase, they will start the final construction of the treatment train system per the SUP that was approved by the planning commission.
- J. Hefner – Will this system be similar in design to what Grobel recommended?
- J. Iacoangeli - Grobel recommended what is referred to as an engineered wetland system which has a retention basin and then has a series of pools that the water will infiltrate as it moves through the system.
- J. Hefner – Why are they not doing that?
- J. Iacoangeli- They are going to do that and the last part of it will be done this year.
- J. Hefner – I bring this up because some of the planning commission were here during the process and none of us wanted to see our township on the front page of the Record Eagle and clay runoff showing up in the bay. And now we have another project coming up tonight with another creek (Yuba). Want to make sure the same thing does not happen again and we learn from past experience not sure I really heard that.
- J. Iacoangeli- A project of this size, considering it really did not get construction started to the end of June/July, and the entire region was hit by significant rainfall in September/October which then further diminished the amount of construction they could get done and typically would take two construction seasons. Additionally, in the coming months, work on M-72 and roundabouts will commence and is also part of

- the infrastructure roadwork for this project. The project is large in scope, it is more than just building a Goodwill or Advanced Auto. This is a 120 acre development along with Meijer, along with major improvements to the regional and county roadway system that are going to take two full construction seasons to actually build out. There are going to be some issues that come up periodically that will need to be monitored and that is why the state and county agencies are there, Gosling Czubak is out there periodically during rain events and have an inspector on site. There are a lot of eyes on these projects.
- J. Hefner – But Grobel’s eyes were not on the project from the time it got improved until after we had an event.
- J. Iacoangeli- Grobel was on site 2-3 weeks after they started construction and my first report from him was the weekend of July 4th. It was then dry, and then we had the significant rains in September and he was back out again. During that time period, there were other inspectors out there in the field.
- J. Hefner – Grobel stated the system as designed would handle two 100 year storms back to back and that was impressive. Obviously that was not the case.
- K. Wentzloff – The system that was out there at that particular time is not the final system. This is the construction phase and still needs to be stabilized.
- J. Iacoangeli – The key point here which people tend to forget that the system, when finally built to completion, is built in design for part of the site to be impervious and a part to be vegetated. In the condition it is now there is very little but some vegetation growing but the site has not been stabilized. Once the site is stabilized, then based on all of the calculations, the system will work as designed. But, when you have a wide open system like it was in September where they had taken all of the topsoil off, that entire 120 acre site was subject to runoff. The engineering that goes into design of the basins for the completed development is based on the part that is going to be developed and the part that is going to be vegetative and then the coefficients and calculations are run.
- J. Hefner - I still have a hard time believing that MDEQ and GT County Soil and Erosion would allow the 120 acres to be exposed without strict, temporary measures to keep the runoff from going into the creek and bay.
- J. Iacoangeli – The soil erosion and sedimentation plans were approved by the County and a permit was issued by the County. The developers submitted soil and erosion plans following best management practices to the County, they were approved and had a permit before they came before the planning commission and did everything they were supposed to do but it just wasn’t enough based on the amount of rainfall.
- K. Wentzloff – Some of the issues that come up, we, as a planning commission and township, have to rely on those who issue the permits. As far as what is to come, the system will be different from what you see now.
- J. Hefner – I just hope that we as a township and planning commission learn from this past experience with respect to future projects. Personally I would like to commend those of you on the planning commission for you dedication and service to making Acme a better township.
- B. Kelley, Ridgecrest Drive. Read written statement regarding VGT storm water and that we still don’t have creek monitoring at this time. There was an agreement in November that said monitoring would be done on a weekly basis. It is not occurring.
- J. Iacoangeli – Monitoring starts June 1st for parameters based on the plan that was approved by the township and developer. Plan is online with weekly and monthly testing. It starts in June as it is one year. Today, a report was posted online from the last rain event.
- S. Feringa- There was report done prior.
- J. Iacoangeli – There was a full baseline report done prior to construction.

Public comment closed at 7:21pm

B. APPROVAL OF AGENDA: Motion by Timmins to approve agenda; seconded by White. Motion passed unanimously.

C. INQUIRY AS TO CONFLICTS OF INTEREST: None

D. CONSENT CALENDAR: The purpose is to expedite business by grouping non-controversial items together for one Board motion without discussion. A request to remove any item for discussion later in the agenda from any member of the Board, staff or public shall be granted.

a) RECEIVE AND FILE:

If you are planning to attend and are physically challenged, requiring any special assistance, please notify Cathy Dye, Clerk, within 24 hours of the meeting at 938-1350.

1. Draft Unapproved Minutes of:

1. Township Board minutes 03/03/15
2. Parks & Rec minutes 1/22/15

b) ACTION:

1. Draft Unapproved Minutes of:

1. Planning Commission minutes: 03/09/15

E. ITEMS REMOVED FROM THE CONSENT CALENDAR:

1. None

Motion by Timmins to approve consent calendar; supported by Balentine. Motion passed unanimously

F. CORRESPONDENCE:

Letter dated 4/13/15 from C. Abernathy regarding Traverse Bay RV Resort Expansion SUP read into meeting. Copy attached to minutes.

Letter dated 4/10/15 from Tim Norman, Grand Traverse Resort & Spa, regarding Traverse Bay RV Resort Expansion SUP read into meeting. Copy attached to minutes.

Letter dated 3/31/15 from Haggards Plumbing and Heating regarding Traverse Bay RV Resort Expansion SUP read into meeting. Copy attached to minutes.

Voice mail, 4/13/15 from Lot 4 supporting RV Park expansions.

G. PUBLIC HEARINGS:

- a) Traverse Bay RV Resort Expansion SUP – Opened hearing at 7:29pm.

B. Kelley- Provided drawing for planning commission members and read a prepared statement that is attached to the minutes.

Public hearing closed at 7:33pm.

H. NEW BUSINESS: Traverse Bay RV Park Site Plan Review

J. Iacoangeli – Discussed in detail the Beckett & Raeder site plan review that was in the planning commission packet and part of the agenda. The packet and review included a storm water calculation review from Gosling Czubak, an Impact Assessment Statement prepared by JML Design Group for the applicant, letters of proposed modifications to existing plan, reviews and comments from Grand Traverse Metro Fire, MDEQ Environmental Quality, MDEQ campground construction permit, Grand Traverse County Soil and Erosion, Grand Traverse County DPW, and Grand Traverse County Health Department. David Graves of MDEQ states that the application is presently for connection of 12 sites to the existing septic system. Grand Traverse County Health Department will do joint inspections with the MDEQ for a new system and also does “flow monitoring”. Beckett & Raeder also requested and receive a Storm Water Control Plan Review and recommendations from a 3rd party firm called Cardno, Inc.

Emphasized in the review in several instances is the need for enhanced storm water control measures on this project due to the proximity to the wetlands. They are in compliance with local ordinance, however, there are some steep slopes that need to be addressed and added protection adhered to. The Cardno report points that out. Other key items with respect to the review include how they plan to remove household waste (central facility or otherwise), landscaping, and how they plan to address some of the items in the Cardno review such as the use of enhanced storm water measures and verification from the Health Department that the current septic system capacity is able to handle the 12 additional lots.

B. Balentine – How can we approve if MDEQ and Health Department have not approved the additional 80 units.

N. Lennox- The Health Department does not have to approve; they are under the jurisdiction of the of the MDEQ and work in conjunction with the DEQ and may do joint inspections but the MDEQ is the responsible agency for

the permitting. They have all of the plans.

J. Iacoangeli – The memo states that the County has spoken with Dave Graves of MDEQ who states the approval is for the connection of the 12 additional sites to the existing system; not the 80.

M. Timmins – So are we only looking at approving the 12 sites tonight and not the 80?

K. Wentzloff- The sheets that I would need to sign off on include all 80 sites or full build-out which is where I am confused.

S. Feringa – The agencies only review what you are going to do right now. Catch-22 situation since they look at the entire build out but only review the current portion which in this case is the 12 sites.

M. Timmins – Section 1.1. of the Cardno report states “the site complies with the mandated 25 foot setback of any structure from a wetland habitat except for the proposed culver location under the proposed road that connects the east and west overlooks drives. This culvert will be set within the wetland habitat and the surrounding road fill will partially fill as well as encroach upon the existing wetland.” This concerns me.

K. Wentzloff – Asked if applicant would like to address.

Fred Campbell on behalf of owner addressed concerns.

- Currently stuck in loop as Phases III and IV were previously approved.
- Culvert location is not a defined creek or stream as indicated on GIS maps.
- The GIS map makes it appear as if this location is a creek the size of Yuba
- If you continue with this same “creek”, it “crosses” four different holes of the golf course; from personal experience this is not the case. The “creek” does not exist on any of those holes.
- We have approval from DEQ for a 36” corrugated culvert; the Cardno review recommends in the report a box culvert which is to allow for aquatic or semi-aquatic organisms to transfer from one side of the area to the other. This is not a stream or defined body of water it is basically a wetted vegetative area like a detention pond that retains water.
- Toe of slope in the 12 unit addition (area 3A) is greater than 312 feet from Yuba Creek. Averages out to 400 ft.

J. Iacoangeli – Having worked with communities in the past with respect to watersheds in relation to the Cardno review is that over time, the culverts will begin to clog which then changes the ecological conditions and habitat. The box culvert provides a greater area to allow free transfer from one side to the other. If, you look around the state road projects, they are removing the round culvert type and replacing with the box culvert in order to reduce the flow resistance. I think it is a reasonable recommendation. Additionally, though the area may be 312 feet from the creek, our township landscape maps have this entire area as an existing sensitive area. You have the creek and all of the riparian areas next to it that needs to be addressed. The site is a micro version of VGT and the Cardno report is basically laying out the same technologies to be used here. You have to use enhanced measures for stormwater management and control due to the types of soils, proximity to the creek and in some instances the steep slopes; not just the basic best management practices.

F. Campbell – The area of the culvert is the only area where we would be encroaching on the wetland setbacks and this would occur only during construction. We are asking for approval of Phase 3A. In Gosling Czubak review, they were interested in the stormwater flow from retention basins into the wetlands. If we were to have a significant rain event, the detention basins would allow a slow release of storm water. When the entire project was submitted 5 years ago, plans were approved by the township, the County Soil and Erosion, and MDEQ. When we re-applied in January, one of the things that changed was the County ordinance. If you compare the plans from five years ago to today, you will notice that there is a change of 33,000 more gallons held today.

M. Timmins- Additional question on septic fields

F. Campbell - An additional 49 units/lots can be added to existing septic field. MDEQ (D. Graves) inspects the site every year to re-license and is very familiar with the site. The septic fields are designed for each lot to handle 40 gallons per day for four months. Quantity is monitored on a daily, weekly, and monthly basis. The proposed

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12 lots of Phase 3A would go to existing system. As a reminder, five years ago DEQ issued a permit for the additional 81 units, the County approved the approved the 81 units and the township issued a land use permit for the additional 81 units. The only thing that has changed was the economics. To respond to townships concerns with previous stormwater issues, in addition to the Cardno Report, and the Gosling Czubak Report, the developer on his own hired on his own Jozwiak Consulting. The Jozwiak Report adds additional measures to protect the wetlands and specifies a specific construction sequence to be able to minimize impact, build the road and a cul-de-sac as required by GT Metro Fire.

Balentine - How long will this take?

D. Scheppe (developer) - Immediately. Minimal disturbance and seeding as fast as possible. As owner I am there 180 days and do not want anything to happen. This project, it is a slower way, I don't want to do 81 at one time, but this 12.

Balentine – Who is to insure this occurs in writing.

J. Iacoangeli- The methodology outlined by Jozwiak is not provided on any drawings at this time

F. Campbell – Tried to include with packet but was too late.

S. Feringa – Show us limits of construction

Balentine – Who is really knowledgeable about managing construction in/and around Yuba Creek to insure protections

J. Iacoangeli – That would be Cardno by reviewing revised drawings. That is all that can be done.

Balentine – Environmental impact study needed?

J. Iacoangeli – We already know what the impact. What we are looking at right now is Phase 3A.

F. Campbell – We already had approval for the 81 units. If we had erased all other phases and showed only 3A would that have made it easier? Unfortunately, if we were to do that, the MDEQ, knowing they had already approved the 81 units, it would be confusing to them. GT Soil and Erosion is a similar issue. Same issue with the land use permit as it expires before

J. Iacoangeli – We are looking at the 12 units only tonight; the developer just showed the entire build out. Developer has to make a decision if they are looking for site plan approval for Phase 3A only, or the entire build out to include Phase 3 and Phase 4. If the applicant is looking for approval on the additional 81 lots, then we would be looking for the need to come back next month due to a number of issues raised in public comment, agency reviews and the site plan review that need to be addressed and resolved. The additional 12 sites is lot more manageable than the 80.

F. Campbell – We asked for approval of the 12 additional units. The planning commission asked to see the overall buildout of the 80 units.

J. Iacoangeli - Recommend to planning commission to approve Phase 3A for the 12 units with stipulations.

K. Wentzloff – The application just doesn't seem to match what we would be approving.

F. Campbell – We ask for site plan approval of the 12 units only.

Motion by Feringa to recommend for approval to the Acme Township Board the major amendment to 99-03SUP Phase 3A and the site plan submitted for the construction of 12 additional RV sites with the following stipulations:

- 1) The Park Model buildings will not have permanent foundations and must have wheels;

- 2) All agency reviews and approvals received;
- 3) The Coach Houses can be permanently affixed to the RV unit site;
- 4) Incorporate recommendations from the Cardno review;
- 5) Submit drawing that shows limits of construction along with enlarged site plan of the 12 additional RV site area and work;
- 6) Conform to the Acme Township ordinance for native landscape plantings;
- 7) The approved site plan package be signed by the Chairperson of the Planning Commission and the Applicant, or their representative;
- 8) Prior to issuance of Land Use Permit, final plans to be reviewed by Beckett & Raeder, Cardno, and any other consultants of Beckett & Raeder to insure recommendations have been followed.

Timmins support the motion. Motion carried unanimously.

I. OLD BUSINESS:

a) US 31/M72 Business District: Architectural Standards revision – J. Iacoangeli presented revisions of Architectural Standards. Concerns of Acme Business Association were taken into consideration. T. Forgette identified a mistake with the document regarding the storm water component. J Jocks suggest we create a formal document with adds/removes for a recommended approval document for next month.

J. PUBLIC COMMENT & OTHER PC BUSINESS

J. Hefner – Thank you to PC for working hard.

Closed at 8:57pm

1. Zoning Administrator update on projects: Getting inquires but nothing concrete. K. Wentzloff commented on trailer at Tractor Supply that appears to be used for signage. T. Forgette commented on unclear entrance for Tractor Supply. D. White commented that site appears to mimic site plan we approved.
2. Planning Consultant: Form based code work; final engineering plans for storm water at VGT. Construction starting on M-72 next week.
3. P C Education etc.: None

ADJOURN: Motion to adjourn by M. Timmins. Support by B. Balentine. Motion passed unanimously. 9:03pm

To: Acme Township Planning Commission
From: Brian Kelley, Acme Township
Date: April 13, 2015

Good Evening,

The RV park looks like a well run business. I am not opposed to the expansion, but I have very serious concerns about the proximity to the creek.

In reviewing the packet materials for this project, I could not find a plan or document that depicted the location of the development in relation to Yuba Creek. That critical view is conspicuously missing.

Using a plan document, google satellite images, and google map data, a friend assembled a scale composite image that shows the proximity of the creek on the east side of the project expansion, and also running through the middle of the project. I am including that with my comment and have provided you a copy. The project is obviously trying to get as close as absolutely possible to the creek and wetlands. This raises the question of what we consider the actual border - where do the wetlands begin? We need an impartial determination of that.

As we have learned from other projects, clay cannot be filtered or stopped by silt fences and straw bales. This project features clay soils, and extremely steep slopes. It is also located essentially on top of a branch of Yuba creek.

That is a trifeca of challenges - clay, steep slopes and proximity to one of our cold water trout streams.

I spoke with Dan Thorell of the Grand Traverse Health Department regarding this project. He also noted the lack of documents depicting the creek. I asked him to pull up the google imagery of the site. He was very surprised and said he unaware of the proximity of the creek to the development. He was very concerned about it and said he would

be contacting David Graves of the DEQ. He confirmed that the DEQ review only looked at the 12 units and not the rest of the expansion project. The email from the DEQ reflects that. They are only looking at the 12 units, not the entire proposed expansion. The GT health department has also ONLY looked at the 12 units of the expansion, not the entire proposed 80.

This project must be fully and knowingly reviewed by the DEQ and county health before it is approved by the township.

The scheduling of this project is described in plan documents as "market driven". That, and the schedule, raise concerns about earth and soil change scheduling. The plan calls for planting exposed soils only after project completion. The project schedule indicates construction from Fall 2015 through December 2016. That could be a very long period of exposed soils on the site, washing into the creek and bay. Acme has left this to chance before with very poor results.

Based on the large number of issues found in the stormwater review, I am not convinced they have all been found. Especially given the potential for the DEQ to require revisions.

Our Acme Master Plan requires that our Creeks and wetlands are protected. The complexity of this project, and attempt to get as close as possible to wetlands demands great scrutiny. The township should require the developer to hire an expert to review the potential impact of this project before moving forward.

Thank you,

Brian Kelley



ACME TOWNSHIP PLANNING COMMISSION MEETING
ACME TOWNSHIP HALL
6042 Acme Road, Williamsburg MI 49690
April 13, 2015, 7:00 p.m.

6:30 p.m. PLANNING COMMISSION EDUCATION: Northwest Michigan Prosperity Initiative

CALL TO ORDER WITH PLEDGE OF ALLEGIANCE

ROLL CALL:

A. LIMITED PUBLIC COMMENT:

Public Comment periods are provided at the beginning and end of each meeting agenda. Members of the public may address the Board regarding any subject of community interest during these periods. Comment during other portions of the agenda may or may not be entertained at the moderator's discretion.

B. APPROVAL OF AGENDA:

C. INQUIRY AS TO CONFLICTS OF INTEREST:

D. CONSENT CALENDAR: The purpose is to expedite business by grouping non-controversial items together for one Board motion without discussion. A request to remove any item for discussion later in the agenda from any member of the Board, staff or public shall be granted.

a) RECEIVE AND FILE:

1. Draft Unapproved Minutes of:

- 1.** Township Board minutes 03/03/15
- 2.** Parks & Rec minutes 1/22/15

b) ACTION:

1. Draft Unapproved Minutes of:

- 1.** Planning Commission minutes: 03/09/15

E. ITEMS REMOVED FROM THE CONSENT CALENDAR:

- 1.** _____

F. CORRESPONDENCE:

G. PUBLIC HEARINGS:

- a)** Traverse Bay RV Resort Expansion SUP

H. NEW BUSINESS: Traverse Bay RV Park Site Plan Review

I. OLD BUSINESS:

- a)** US 31/M72 Business District: Architectural Standards revision

J. PUBLIC COMMENT & OTHER PC BUSINESS

- 1.** Zoning Administrator update on projects:
- 2.** Planning Consultant:
- 3.** P C Education etc.:

ADJOURN:



**ACME TOWNSHIP BOARD MEETING
ACME TOWNSHIP HALL
6042 Acme Road, Williamsburg MI 49690
Tuesday, March 3, 2015, 7:00 p.m.**

CALL TO ORDER WITH PLEDGE OF ALLEGIANCE AT 7:00 p.m.

Members present: J. Aukerman, C. Dye, A. Jenema (Arrived at 7:50 p.m.), G. LaPointe, P. Scott, D. White, J. Zollinger

Members excused: None

Staff present: J. Jocks, Legal Counsel
N. Edwardson, Recording Secretary

A. LIMITED PUBLIC COMMENT: None

B. APPROVAL OF AGENDA:

LaPointe requested item #5 to be added to New Business, Salary Review committee

Motion by White, seconded by LaPointe to approve the agenda with the additional item #5 Salary Review under New Business. Motion carried by unanimous vote.

C. INQUIRY AS TO CONFLICTS OF INTEREST: None

D. CONSENT CALENDAR: The purpose is to expedite business by grouping non-controversial items together for one Board motion (roll call vote) without discussion. A request to remove any item for discussion later in the agenda from any member of the Board, staff or public shall be granted.

1. RECEIVE AND FILE:

- a. **Treasurer's Report**
- b. **Clerk's Revenue/Expenditure Report and Balance Sheet**
- c. **Draft Unapproved Meeting Minutes:**
 - 1. **Planning Commission 02/09/2015**
- d. **North Flight January 2015**
- e. **Metro Newsletter January/February 2015**
- f. **Parks and Maintenance Report – Tom Henkel**
- g. **Zoning report - Lennox**

2. APPROVAL:

- 1. **2015 Summer Tax Collection for Elk Rapids Schools, TBAISD, TCAPS**
- 2. **Township Board meeting minutes of 02/03/2015**
- 3. **Accounts Payable Prepaid of \$314,588.76 and Current to be approved of \$117,949.43 (Recommend approval: Cathy Dye, Clerk)**

E. ITEMS REMOVED FROM THE CONSENT CALENDAR:

LaPointe requested the Treasurer's and Clerk's Revenue/Expenditure report be removed from the Consent Calendar.

Motion by LaPointe, seconded by Scott to approve the Consent Calendar with the removal of the Treasurer's and Clerk's Expenditure Reports. Motion carried by a roll call vote of 6 in favor (Aukerman, Dye, LaPointe, Scott, White, Zollinger) Jenema arrived at 7:50 p.m.

LaPointe commented on the balance in General Fund of \$381,923. He stated that this was a significant amount in unrestricted funds as we enter a new budget season.

Motion by LaPointe, seconded by White to approve the Treasurer's report as presented. Motion carried unanimously.

Motion by LaPointe, seconded by White to approve the Clerk's report as presented. Motion carried unanimously.

F. SPECIAL PRESENTATIONS/DISCUSSIONS: None

G. REPORTS: Received and filed

- 1. Sheriff's Report – Deputy: Ken Chubb**
- 2. County Commissioner's Report - Crawford**
- 3. Road commission report – McKellar**
- 4. GTC Resource recovery – Kim Elliott**

H. CORRESPONDENCE: Reviewed and Filed

- 1. Email dated 2/18/15 regarding snow removal on the Tart Trails**
- 2. Letter dated 2/19/15 to Clerk, Dye, awarding her a scholarship for the Basic Institute for Municipal Clerks**

I. PUBLIC HEARING: None

J. NEW BUSINESS:

- 1. SAD Two resolutions bonding for work – LaPointe**

Motion by LaPointe, seconded by Aukerman to approve Resolution R-2015-8 requesting the County of Grand Traverse to issue bonds for the Township of Acme Holiday Hills Road Project. Motion carried by a roll call vote of 6 in favor (Aukerman,Dye, LaPointe, Scott, White, Zollinger) Jenema arrived at 7:50 p.m.

Motion by Dye, seconded by LaPointe to approve Resolution R-2015-9 approving the undertaking to provide continuing disclosure by the Township of Acme for the County of Grand Traverse Michigan Transporation fund bonds, series 2015. Motion carried by a roll call vote of 6 in favor (Aukerman,Dye, LaPointe, Scott, White, Zollinger) Jenema arrived at 7:50 p.m.

- 2. CPO Officer new contract with county/annual pricing - Zollinger**

Motion by Scott, seconded by Aukerman, to grant authority to the Township Supervisor to proceed with negotiations with the County on the model contract for law enforcement services. Motion carried unanimously.

- 3. Appointment to Board of Review alternate - Zollinger**

Motion by Scott, seconded by Dye to approve the recommended appointment of Sarah Lawrence, to the Acme Township Board of Review as the alternate. Motion carried unanimously.

- 4. Resolution Budget amendment Metro driver cost/North Flight support**

Motion by LaPointe, seconded by White to approve Resolution R-2015-10 on Budget amendment for Metro Fire EMS Driver. Motion carried by unanimous roll call vote.

- 5. Salary Review Committee**

LaPointe stated in previous budget cycles the Board talked about reviewing salaries. And each year we are unable to do the task. LaPointe would like to form a ad-hoc committee with two Trustees and two Township residents. Aukerman volunteered to work with LaPointe. Township residents, Larry Lasusa and

Ken Crawford will complete the committee.

K. OLD BUSINESS:

1. Resolution to change date of the May Board meeting

Motion by Dye, seconded by Scott to approve Resolution R-2015-11 changing the May Board Meeting from May 5th to May 12th because of an election. Motion carried unanimously.

2. Acme Township water testing tools up date possible 2015-16 budget item

Henkel has been doing the water testing for several years. Some of the equipment is breaking down and we also do not have a way to do turbidity testing. Henkel prepared a proposal summary for \$7,721.90. Zollinger is requesting the Board's input on making this a 2015-2016 Budget item or taking action now. Discussion followed. Board requested Zollinger to obtain more details and present as a budget item.

3. Metro Fire station 8 status, cost, and funding means - Parker

A memo from Chief, Parker, was reviewed giving an update on what is happening with the new Acme fire Station. Topics covered were Need for a new station, Land Purchase, Architectural and Finance.

4. Acme Sewer plans/DEQ response to violation - Zollinger/Jocks

Zollinger stated that the letter in the packet from Jocks to DEQ is a partial response and extension request to the January 27, 2015, Notice of Violation. Items 4,5,6, and 7 require additional study and engineer work to complete and an additional 60 days to complete has been requested.

5. GTTC – Acme Creek water testing interim/Final water testing plan – Zollinger

Zollinger stated we are still doing work on this. We do have a final water testing plan and once the site is at a certain point then the testing plan will go into place.

6. Sayler Park boat launch status/Grant status/Bay side south MDNR grant/Recommendation for 2015 grant cycle – Zollinger/Aukerman

Discussion followed.

Motion by Jenema, seconded by Scott to approve Trustee, Aukerman, to proceed with the Oleson Foundation grant application. Motion carried unanimously.

7. Review update of Board procedures – Dye

PUBLIC COMMENT & OTHER BUSINESS THAT MAY COME BEFORE THE BOARD:

B. Kelley, Ridgecrest, read a prepared statement into the record and are attached to the minutes.

Clerk, Dye, stated that her Deputy Treasurer, Sharma Zollinger, retired as of 2/27/15. She appointed Angela Fernow.

Adjourned at 9:50 pm

To: Acme Township Board of Trustees

From: Brian Kelley

Date: March 3, 2015

Our community is known for big melts in the month of March. That should not be a surprise to anyone who lives here. The weather forecast says we're going to get a big warm up starting on Saturday. Temps will climb above freezing by the weekend, rising to the mid 40's and 50's next weekend.

But what we haven't had is an update from our township expert, Dr. Grobbel. The DEQ and Dr. Grobbel have both stated in public meetings that they are extremely concerned about what will occur during the Spring melt. It is well past time for an update from Dr. Grobbel.

On February 6th I sent an email asking for a study session so Dr. Grobbel could give us an update. Our township supervisor denied the request, saying "I don't believe we have a need to do this at this time" and "I believe at a later time this might be needed but not on the current horizon."

"Not on the current horizon." If not now, before the melt, then when?

96% of respondents in the community survey indicated that protecting the water quality of streams, watersheds and East Bay is a priority. Our master plan requires Trustees to protect our water resources. And yet we have not had an update from our expert. He does not come here on his own, he needs to be invited by the township.

Acme needs to stop reacting to things after the fact, especially in cases where there is advance warning. We have a chance to be pro-active and get Dr. Grobbel's opinion before the melt, but the days are rapidly slipping away. We all knew the melt was coming, and yet here we are, with the request for a study session denied. That sounds less like Citizen Driven and more like Citizens' Overridden.

I encourage the Trustees to put this item on the agenda for tonight. We should try and hold a study session next week. It should be at least two hours, to allow for ample public questions, and coverage of both soil erosion and stormwater issues. We ran out of time at the December session, and that was primarily a Horizon study session.

Thank you,
Brian Kelley

Parks and Recreation Advisory Committee Meeting
Thursday, January 22, 2015 6:00 p.m.
Acme Township Hall

Meeting called to order at 6:02 p.m. with the Pledge of Allegiance.

Members present: Timmins (Chairperson), Challenger, Guy, Feringa, Goss

Members absent: Yamaguchi, Kerns, Kaetchen

Staff present: Henkel (Parks Supervisor)

The Minutes from the 11/5/14 meeting were approved with several changes.

OLD BUSINESS:

Aukerman gave a **boat launch update**.

- 1) Funding from 2% grant should get a yes/no in February. She requested that everyone contact people who have had "East Bay boating" experiences to show/write personal letters of support and interest for the launch.
- 2) Klaus Heinert, landscape architect/engineer from Gosling Czubak, gave an overview on the engineering and construction plans for the boat launch. We are processing a Bottom Lands Conveyance permit from the DEQ and Army Corps of Engineers which will give us the OK from the State of Michigan. Topographic studies, soil samples, designing dredge areas, discussions with the county road commission about the road rights and launch traffic patterns, ADA compliance issues, changes in launch design, skid pier, tie up site for waiting boats, and parking were all points of discussion. An early autumn start date and spring 2016 finish was tentatively proposed.

Feringa offered his resignation as Vice-Chair of Parks & Recreation Committee temporarily, but may return in the spring if his work load doesn't get too heavy.

Timmins has been talking with McDonough and Clark from Grand Traverse Conservancy regarding what is permitted by the original grant for the **Yuba Creek Natural Area**. They may explore snowshoe/bike trails for that area. Also, because we did not get the grant for South Park development, they're discussing what is needed to protect the beaches and waters along that stretch of US 31 (nonpoint source water pollution) and possible sand filtration systems to purify runoff returning to the Bay. After considerable discussion, the question was raised about whether water quality was under the Parks & Rec Committee's domain.

Extended Park Hours were revisited. The parks (Yuba, Saylor, and Bayside) are open May to October, when the snow flies. No snow removal limits their use. Henkel will be checking with insurance to explore liability issues for the township and ask Deputy Chub if there have been any problems related to extended park usage so far.

Acme Ace Hardware Shopping Nights in Nov/Dec raised \$435 for the boat launch fund (Men's Night \$200 and Ladies Night \$235). Thank you Acme and Ace Hardware! There is still plenty more to raise... Feringa encouraged contacting Lakes Fisheries Trust regarding the June 30th 2% tribal grant, as well.

Henkel announced he was looking for someone to help write a trust fund grant; Timmins offered support.

Meeting was adjourned.

Submitted by Margy Goss, Recording Secretary for Parks and Recreation Committee



ACME TOWNSHIP PLANNING COMMISSION MEETING
ACME TOWNSHIP HALL
6042 Acme Road, Williamsburg MI 49690
March 9, 2015, 7:00 p.m.

CALL TO ORDER WITH PLEDGE OF ALLEGIANCE AT 7:00pm

Present: D. Rosa, J. DeMarsh, M. Timmins, B. Ballentine (Finch), D. White, S. Feringa, K. Wentzloff, T. Forgette
Excused: M. Binkley
Staff Present: N. Lennox, Zoning Administrator, J. Iacoangeli, Planner, J. Jocks, Legal Counsel
Recorder: T. Forgette

A. LIMITED PUBLIC COMMENT: None

B. APPROVAL OF AGENDA:

Motion by Timmins to approve agenda as presented; support by Balentine. Motion carried.

C. INQUIRY AS TO CONFLICTS OF INTEREST:

Feringa brought up for review and discussion the proposed GT Resort & Spa parking lot expansion that is on agenda. He was not planning to state a conflict of interest but would defer to legal counsel and the Planning Commission. The GT Resort is a separate business entity owned and operated by the Grand Traverse Band of Ottawa and Chippewa Indians. Though he is a tribal member, tribal members do not receive direct or indirect financial contributions from the GT Resort. He does work on projects at the GT Resort as part of normal duties as a corporate architect but has not worked on this particular project. J. Jocks reviewed policy and does not see an issue with bias. S. Feringa stated he would not recuse himself.

D. CONSENT CALENDAR: The purpose is to expedite business by grouping non-controversial items together for one Board motion without discussion. A request to remove any item for discussion later in the agenda from any member of the Board, staff or public shall be granted.

a) RECEIVE AND FILE:

1. Draft Unapproved Minutes of:

1. Township Board minutes 02/03/15
2. Zoning Admin. monthly report: Jan-Feb 2015
3. Bayshore Corridor Strategy meeting 2/24/15 Notes

b) ACTION:

1. Draft Unapproved Minutes of:

1. Planning Commission minutes: 02/09/2015

E. ITEMS REMOVED FROM THE CONSENT CALENDAR:

Motion by White to to approve the consent calendar as presented; support by Timmins. Motion carried.

F. CORRESPONDENCE: K. Wentzloff introduced into record a letter from Robert Garvey of Deepwater Point dated February 13, 2015 regarding the proposed plans for the Traverse Bay RV Park expansion and the potential impacts on Yuba Creek. Copy is available with the minutes.

G. PUBLIC HEARINGS: None

H. NEW BUSINESS:

a) Grand Traverse Resort & Spa employee parking lot improvement site plan review

Ken Ockert of RCA, a representative of Grand Traverse Resort & Spa, presented the project. The proposed project involves the expansion of the current gravel 138 car employee parking lot to a paved parking lot. If you are planning to attend and are physically challenged, requiring any special assistance, please notify Cathy Dye, Clerk, within 24 hours of the meeting at 938-1350.

lot that will accommodate 254 cars and up to 6 buses.

J. Iacoangeli provided a summary of the staff site plan review. Agency reviews were submitted and reviewed (GT Metro review was emailed today). We asked them to reduce the height of the lighting poles to be consistent with the form-based code standard of 27'. The applicant reduced them to 25'. Initial stormwater review has been completed however we have not received the finalized document. The plan meets or exceeds the standards and recommending the Planning Commission approval.

D. Rosa asked about the lighting and a provision for maintaining within the parking lot area.

J. Iacoangeli indicated that the lights are contained within the box so light directs downward and the lighting is evenly distributed. The photometrics are not that intense.

S. Feringa asked if more screening trees could be added along cart path. Understands this is not a requirement but a suggestion to block potential stray golf balls.

Motion by M. Timmins, second by T. Forgette to approve the site plan submitted by Grand Traverse Resort & Spa for the construction of a 260 vehicle parking lot located on a 3.00 acre parcel on the northwest corner of Grand Traverse Resort Village Drive and North Village Drive with the following stipulations:

- 1) The approved site plan package be signed by the Chairperson of the Planning Commission and the Applicant, or their representative.
- 2) Signage, if any, shall meet the Acme Township Zoning Ordinance.
- 3) Stormwater revisions must be completed prior and approved by Kris Enlow, P.E. (Beckett & Raeder) prior to issuance of land use permit.
- 4) Incorporation of additional trees along the south boundary of the project area.

Motion unanimously carried.

I. OLD BUSINESS:

- a) US-31/M-72 Business District Architectural Standards

J. Iacoangeli suggests postpone pending legal review of language and present at a later time. Discretionary areas were discussed and will be addressed after additional review by planner and legal counsel.

J. PUBLIC COMMENT & OTHER PC BUSINESS

1. Zoning Administrator update on projects: None
2. Planning Consultant: J. Iacoangeli provided updates. Developers of VGT getting very close to presenting to the township a final draft of the stormwater and system that is attached to the stormwater (wetlands and basins) per the SUP. PC will receive copy of the development vegetation augmentation plan being submitted to DEQ. Should have this information by the April meeting, no later than May. Additionally, Dr. Grobel, consultant for the township on this project has resigned. He feels to some degree that he is hearing too often that he is the one to ensure the stormwater system will work. Professionally he doesn't want to be put in this position because no one can tell on any of these stormwater systems if they are going to work the way they were intended. He also felt that on some issues that his recommendations were not taken seriously by the developer. Township is going to bring in a 3rd party stormwater review consultant who was not at all part of the project to provide a legitimate peer-review. A contract has been signed with Cardno JF New, out of Grand Haven, MI. They specialize in ecological assessment and wetland restoration projects. They will do the peer review on the designs that will be submitted.
3. P C Education etc.: Wentzloff- Report on T.A.R.T trails.

Currently looking at the possibility of taking T.A.R.T Trail down Bunker Hill. Looked at four routes and weigh them according to criteria. Routes considered were 1) taking it through the VGT property, 2) up Bunker Hill to Bates 3), take down the shore and Mount Hope to pedestrian tunnel and then to Bates, and 4) proposed taking it through Bayside parks and then looking at taking it through VGT. Julie Clark of T.A.R.T met K. Wentzloff and M. Timmins (Parks and Recreation) to look at possibility of bringing trail from Bayside Park, through Deepwater Point or to trails behind Christ the King up to get to Lochenheath or some other easement. Looking at crossing points, curb cuts, elevations, etc. taking it all the way to Elk

DRAFT UNAPPROVED

Rapids. Some like a crossing at Twisted Fish or water tower. Have to consult with MDOT. Cross at Bunker Hill possible to get to Acme parks along the shoreline. VGT and GT Resort would be spurs of the trail.

Forgette – Report on Bayshore Corridor/MDOT meeting.

Submitted a highlight summary provided by John Syche on the Bayshore Corridor/MDOT meeting with Grand Traverse County, area Townships, and MDOT personnel. Access management seems to be a big concern of all. Monies are available from MDOT to conduct an access management plan that all seem to be interested in. Acme relevance was provided and document attached to the meeting minutes. It may not be too late for township to look at some areas along US31 with respect to access management. Road construction on US 31 and M72 to begin in April. No detours.

Timmins/Ballentine- Report on Community Engagement Class. Rosa and Wentzloff also attended. Learned how to identify stake-holders in a project and how to work with the public. Instructor did a great job and it was very informative.

Lennox – Update on Traverse RV Park. Soil and Erosion unable to conduct site visit yet due to snow. Several outstanding issues with the site plan.

PUBLIC COMMENT: None

ADJOURN: Motion to adjourn by Timmins, seconded by Ballentine. Motion carried. Meeting adjourn at 8:16pm

Nikki Lennox

From: Karly Wentzloff <karly.wentzloff@gmail.com>
Sent: Friday, February 13, 2015 12:02 PM
To: Nikki Lennox
Subject: Fwd: Yuba Creek

Could you please forward this to the PC and include it as correspondence in our next packet.



----- Forwarded message -----

From: Robert Garvey <bobgarvey@me.com>
Date: Thu, Feb 12, 2015 at 4:57 PM
Subject: Yuba Creek
To: karly.wentzloff@gmail.com

Hello Karly ;

Hope all is well with you in the new year.

I am writing to you as Chair of the Planning Commission.

I wanted to express my concerns relating to mobile home development on M 72 adjacent to the Yuba Creek. I have no negative comments relating to the expansion itself . My concerns relate primarily to the close proximity of impervious surfaces and septic fields to the Creek. As you know, two branches wind their way through this property.

I appreciated your comments at the last Planning Commission meeting expressing concern with this issue after our experience with the VGT development as it relates to the Acme Creek. We are so fortunate to have two designated cold water trout streams self contained within our township.

As you may know , our family owns a 40 acre farm just north of this project . The Yuba Creek runs across our entire East property line. What goes into the Creek at this proposed site reaches our property a few minutes later. Our stretch of the Creek is still viable as a brook trout stream, meaning the water is cold enough and oxygenated enough to maintain a healthy trout habitat. We maintain a sand trap [permitted by the DEQ] in an effort to reestablish a natural gravel bottom . Development and roads adjacent to the creeks cause sand to wash into the streams ruining the natural gravel spawning habitat that you see further up stream in both the Yuba and Acme Creeks . The sand trap slowly accumulates sand which we remove when it fills up.

My concern and my request with regard to this project is straight forward. Would the Planning Commission PLEASE consider, as a prerequisite to allowing the project to move forward, an impact study ? I would suggest that the Planning Commission select the best qualified person to do the study and ask the proponent of the development pay for it . This seems a reasonable request .

We are a relatively small community . We simply don't have the expertise to make informed decisions relative to the impact of significant cumulative development adjacent to our Creeks . That's what experts are for. If mistakes are made at this stage the effects will live on long after we are gone . So , our decisions have consequences. Again, I have no problem with the concept of expanding the business, I just want reassurance that it is going to be done right with the least amount of harm to this important resource .

I remember my neighbor [now deceased] , Bill Hicks , standing up at a Board meeting when the "Town Center" was first being discussed . He introduced himself as someone who knew Fred Meijer personally . Actually , Mr Hicks was instrumental in locating the existing Meijer store in Town. His statement was to the effect that he had no problem with a "town center" in Acme but " I'll be damned if I will go along with a project that threatens the Acme Creek " . He was reassured that the project would not have a deleterious effect on the Acme Creek. Bill's home is located 5 or 6 houses North of the mouth of the Acme Creek where it enters the Bay . He was also an avid fisherman.

I feel the same way about this project. I have no problem with the expansion but there is no reason not to get it right as far as impact to the creek is concerned. Having a meaningful impact study before approval will give all of us the comfort of an informed decision as it relates to the Yuba Creek.

Please give me, as a downstream resident and taxpayer, assurances that before this plan is approved that someone with expertise , someone who is not beholdng to the business owner, will look at the plans and give the community assurances that there are no unreasonable threats in the design .

If there is a higher responsibility for our Township officials than protecting the watersheds I don't know what it would be .

Hopefully what I am asking for has already been made a condition of the project , if so can you let me know that ?

Thank you for taking the time to read this and please share my concerns with the other members of the Commission.

Sincerely, Bob Garvey

Highlights from Bayshore Corridor Strategy Meeting

February 24, 2015

Governmental Center

Grand Traverse County: John Sych, County Planning and Development
Townships Represented: Acme, East Bay, Garfield, Elmwood
MDOT Personnel: Rick Liptak Jr. – Manager, Transportation Service Center, TC
Patty O'Donnel – Transportation Planning Specialist, North Region

- MDOT is supportive of developing an access management plan for the corridor and may be able to provide some funding for development of a plan. Local communities will need to consider interest in a plan and providing funding for the plan.
- An access management plan would map out locations for driveway closures and cross-access locations. Implementation of the plan would be primarily in the form of site plan review actions, based on zoning ordinance provisions and cross-access agreements.
- MDOT may plan for central control of signals along the corridor. This may alleviate congestion problems. However, it could also limit gaps in the traffic to allow for pedestrians crossing the road and vehicles turning onto the road.
- Speed limit changes require a traffic study that may or may not warrant a speed limit change. In some instances, speed limits have gone up following a study. Elmwood Township will be conducting its own traffic study. MDOT has concerns about buildings being built at the right-of-way (ROW) line. They may be impacted by snow plows and some of the building features (signs, outdoor cafes) would require permits if they project into the ROW. The recommendation is to site buildings at distance to accommodate such features.
- Stormwater management improvements are being made during the reconstruction of US-31 in East Bay in 2015, but not to the extent to reduce water quality concerns of stormwater emptying into the bay. The cost of stormwater mitigation facilities can be high. Costs include finding property, construction, and maintenance.
- MDOT is accepting of building refuge islands/medians to accommodate pedestrian crossings where there are no intersections or driveways.

- US-31 project in 2015 will start in April and go through June. There will be a break for July and then the project will pick up again in August. Two lanes of traffic (one lane each way) will be provided throughout the project. No detour is planned.

Acme Relevance

- Need access management plan; look for crossovers for future parks area in Bayshore district
- MDOT has funded access mgmt. plans for communities; GT County has \$100k for corridor access mgmt.
- Look at vegetation as natural “tightening” of roadway to slow traffic down between 5 Mile and Holiday Road
- Review build out line and road right of way for Bayshore FBC district with respect to US31; MDOT has seen issues related to plow damage



Application Number: 2015-01

Parcel Number: 28-01-236-012-00

ACME TOWNSHIP
Grand Traverse County, Michigan
Application for Special Use Permit/Site Plan Approval

Owner/Applicant Information: (please type or print clearly)

Name: JML Design Group, Ltd. Phone: (231) 947-9019
Mailing Address: 225 E. 16th Street, Suite B
City: Traverse City State: Michigan Zip: 49684
E-Mail Address: jmlgdg@att.net

A. Property Information:

1. **Address:** 5555 M-72
2. **Property Description/Parcel Number:** 28-01-236-012-01
3. **Current Zoning of Property:** A-1 Agricultural
4. If this project is one phase of a larger development and/or property subject to an existing/previous Site Plan Review, Special Use Permit, or Variance, what is/are the applicable permit number(s)? SUP 99-3P
5. **Provide proof of current property ownership.** If applicant is not the current property owner, also provide written permission to act as agent of, and complete contact information for the current property owner.
6. **Proposed Use/Change to Property:**
7. **Estimated Start and Completion Dates:**
Phase IIIA: Spring 2015 - July 2015
Phase IIIB and Phase IV: Fall 2015 - December 2016

B. Application Packet Requirements: REFER TO ACME TOWNSHIP ZONING ORDINANCE AND COMPLETE ATTACHED CHECKLIST

C. Fees: Include initial fee as required by the Acme Township Ordinance #2004-01, Schedule of Fees.

D. Fee Escrow Policy Acknowledgement: provide completed and signed form with initial escrow fee deposit.

**PROPOSED EXPANSION OF
TRAVERSE BAY RV PARK
IMPACT ASSESSMENT STATEMENT**

OWNER:

Scheppe Investments Inc.
7915 Cairn Highway
Elk Rapids, Michigan 49629

PREPARED BY:

JML Design Group, Ltd.
1874 Cass Hartman Court, Suite B
Traverse City, Michigan 49684
(231) 947-9019

October 23, 2008
February 25, 2009 (Revised)
April 11, 2011 (Revised)
November 6, 2014 (Revised)
January 12, 2015 (Revised)

Proposed Project

This report contains the anticipated physical impacts of the proposed recreational vehicle (RV) development on the immediate project area.

The proposed project includes the construction of (81) additional RV sites on an acquired piece of property adjacent to the existing park. The typical site for the new development is approximately 50' x 100'. The typical site will include an optional 12' x 16' storage building, 1552 s.f. of concrete driveway, and 448 s.f. of brick pavers, for use by a typical RV.

The 12' x 16' storage building will be set on a concrete slab. The building will be an option to each RV site. The building will contain several options to upgrade to a coach house, including a toilet, shower, and washer/dryer. The infrastructure is designed to accommodate the utilities for the coach house upgrades. The building has been approved by the MDEQ licensing for conformance with the Michigan Campground Rules. The coach house will be a limited common element of the condominium.

A new concept has been introduced to the RV parks, in the form of a Park Model. The Park Model is a pre-manufactured mobile unit that is licensed by the RV Industry. The unit is portable and contains 399 s.f. Park Models are mobile but are generally parked in one location for extended periods of time. The intention is to have the option of an RV or a Park Model at any given site.

The project is owned by Scheppe Investments LLC. A copy of the warranty deed for the property is attached.

The property is currently zoned A-1 Agricultural. The RV park is permitted with a Special Use Permit.

The development is 26.65 acres. The site has some gently rolling hills with a drainage swale separating the parcel into (2) areas. The area to the east of the swale will be considered Phase III (The current park was constructed under (2) phases - Phase I and II). The first (5) units (lots 218-222) will be considered Phase IIIA, the remaining (50) units will be Phase IIIB. The west side of the drainage swale will contain (26) units and be referred to as Phase IV.

Phase IIIA is intended to create the first (5) sites to display the Park Model.

The property abuts the Grand Traverse Band of Chippewa and Ottawa Indians Grand Traverse Resort "The Bear" golf course to the west, and a vacant property to the east. An additional lot to the east is owned by Walter and Hazel Wistrand. The property to the north is owned by Janet Marnett. A legal description of the parcel is attached.

The project is anticipated to be built over a two year period. Phase IIIA of the project will commence in spring of 2015 and completed by July of 2015. Phase IIIB and IV will commence in fall of 2015 and completed by December 2016. The timing of the project is market driven.

Silt fencing will be provided as required during the construction process. The requirements of the Grand Traverse Soil Erosion Department will be strictly adhered to.

The RV park will not create any nuisances such as dust, fumes, vibration, or smoke. There will be no street lighting.

The property has (1) significant oak tree. The tree will remain.

The property has no existing structures developed on it.

Soils

The soils of the site are clay and sandy loam. Soil data is attached. The driveways and parking areas for the RV park will not have heavy traffic. Normal asphalt paving thickness and design will be provided.

Drainage

The storm water drainage system is designed to meet the storage requirements of the Grand Traverse County Drain Commission. Storm drainage will be accumulated in retention ponds and in the freeboard area of the proposed water features. Each individual site will be restricted to 2200 s.f. of impervious surface.

The overall site has the ability to be developed in phases and balance with on-site materials.

Sanitary Sewer

The proposed (81) sites will connect to a new septic field. The septic field and reserve field will be sized and designed to meet the requirements of the Grand Traverse County Health Department.

Phase IIIA will be implemented prior to the new septic field being installed. The existing septic field is large enough to accommodate the first (12) sites of Phase III. Therefore, Phase IIIA will include the permanent sewer piping for the (12) units, pipes to a lift station that will pump up and tie into the existing sanitary system.

The sewage flows for the RV park are not unusual in terms of quantity or quality.

Water Supply

Domestic water will be delivered to each site to a standard RV coach pedestal. A new well is anticipated to be drilled for the new sites. A new water system will be installed and tied onto the existing system to provide more reliability.

Phase IIIA will include a portion of the water main work. The main will be installed and looped back to the existing system, as the new well will not be installed at that time.

No fire suppression will occur on the site.

Traffic Access

The proposed site plan anticipates (2) access points to the existing street system. The new roads are designed in a loop fashion for continuous access. The internal roads will be privately maintained. 35' radii will be provided to allow for fire department access.

A temporary cul-de-sac will be provided for Phase IIIA.

Landscaping

The areas disturbed by construction will be seeded with grass. Each individual site is responsible for their own lawn irrigation and landscaping. Areas have been designated for landscaping.

A 4'0" landscape berm is to be provided along the north property with plantings along the top of the berm. The plantings will consist of (16) spruce trees and (16) river birch. The trees will be randomly spaced to meet the ordinance.

Miscellaneous

Internal directional and traffic signage will be provided throughout the site.

Parking is provided at a rate of (2) cars per lot, in addition to the motorcoach. Additional guest parking is provided in (2) separate areas.

The ordinance required setbacks are maintained. 25' wetland setbacks are also being maintained.

A series of ponds with aeration fountains are provided throughout the sites.

The RV Park opens in the spring and is shut down in October. The site is not utilized during the winter months.

SOIL EROSION & SEDIMENTATION CONTROL (Part 91, 1994 PA 451, as amended)
GTC SOIL EROSION & STORMWATER RUNOFF CONTROL ORDINANCE OF 2003

GRAND TRAVERSE COUNTY
DRAIN COMMISSIONER'S OFFICE
2650 LAFRANIER RD
TRAVERSE CITY MI 49686
Phone # (231) 995-6042

COPY

Permit #: 21449
Issued: 11/24/2010
Expires: 10/22/2011
Fee: 1,715
Receipt #: 33737

Owner:
SCHEPPE INVESTMENTS LLC
7915 CAIRN HWY
ELK RAPIDS MI 49629

Applied: 10/22/2010

10/24/11 Close Permit
No work Done
GZ

Contractor/On-Site responsible person:
MOLON EXCAVATING
P O BOX 1860 125 BUCKSHOT DR
TRAVERSE CITY MI 49685

DEQ Permit #: 08-28-0080-P

Issue Date:

4/06/2009

Under the provisions of Part 91 of Act 451 of 1994 and/or the GTC Stormwater Ordinance of 1992, authority is hereby granted to make the following earth changes:

GRADING & DRAINAGE/NEW RV PARK
APPROX 25 ACRES / ALSO SEE PERMIT # 20656

Located at: 5555 E M 72
In ACME Township, Section 36 Town 28N Range 10W Lot #
Sub:
Property Tax #: 28 - 01 - 236 - 012 - 05

Work to be done under authority of this permit is subject to the following special instructions and requirements:

This permit does not obviate the need for any other local or state permits or authority to conduct these activities.

This permit is approved according to the site plan received on November 23, 2010 with the following conditions:

1. Install silt fence as planned to protect wetlands and stream. Allow no sediment to enter stream or wetlands.
 2. All basin slopes shall be 3:1. Stabilize with vegetation. Use erosion control mats where necessary.
 3. Stabilize all outlets as planned with riprap and fabric.
 4. Within 5 days of finishing construction, place 4 inches of topsoil, seed and mulch over all disturbed soils. No exposed soils may remain.
 5. All culverts/standpipes must be corrugated metal pipe or concrete, no plastic pipes are permitted.
 6. Follow all requirements of the MI DNRE.
 7. A licensed professional must certify that all storm water facilities are built to specifications.
- inspection. The landowner/applicant is responsible for contacting our All Earth Change permits require an initial, periodic and final site inspection. The landowner/applicant is responsible for contacting our office to request a final inspection when all permit requirements are


Signature

THIS PERMIT ALONG WITH THE SITE PLAN MUST BE POSTED AT THE PROJECT SITE

SOIL EROSION & SEDIMENTATION CONTROL (Part 91, 1994 PA 451, as amended)
GTC SOIL EROSION & STORMWATER RUNOFF CONTROL ORDINANCE OF 2003

GRAND TRAVERSE COUNTY
DRAIN COMMISSIONER'S OFFICE
2650 LAFRANIER RD
TRAVERSE CITY MI 49686
Phone # (231) 995-6042

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Applied: 10/22/2010

Contractor/On-Site responsible person:

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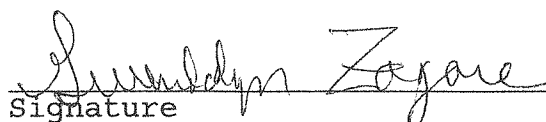
Located at: 5555 E M 72

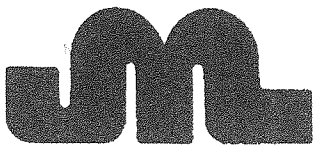
In ACME Township, Section 36 Town 28N Range 10W Lot #
Sub:

Property Tax #: 28 - 01 - 236 - 012 - 05

Work to be done under authority of this permit is subject to the following special instructions and requirements:

met and the site is stabilized for the permit to be closed.


Signature



Design Group, Ltd.

"Excellence is our Hallmark"

225 E. 16th Street, Suite B • Traverse City, MI 49684 • Phone: (231) 947-9019 • Fax: (231) 947-8738

January 12, 2015

Mr. David Graves
Department of Environmental Quality
Resource Management Division
Campgrounds & Pools Program
525 West Allegan Street
2nd Floor North
Lansing, Michigan 48933

Re: Traverse Bay RV Park

Dear Mr. Graves:

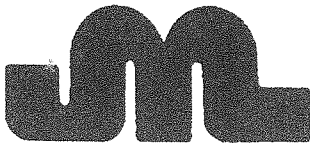
Attached is a proposed modification to the Traverse Bay RV Park located at 5555 M-72. The project is a scaled down version of a priorly approved, but never built expansion. Please provide comments to allow us to present to the Acme Township Planning Commission on February 9, 2015.

If there should be any questions, please contact me.

Sincerely,

C.F. Campbell

CFC/nr
Attachments



Design Group, Ltd.

"Excellence is our Hallmark"

225 E. 16th Street, Suite B • Traverse City, MI 49684 • Phone: (231) 947-9019 • Fax: (231) 947-8738

January 12, 2015

Grand Traverse Metro Fire Authority
Grand Traverse Metro Fire Department
Fire Prevention Bureau
897 Parsons Road
Traverse City, Michigan 49686

Re: Traverse Bay RV Park

To Whom it May Concern:

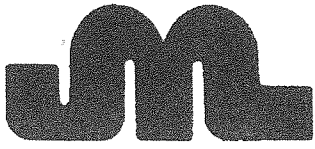
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225 E. 16th Street, Suite B • Traverse City, MI 49684 • Phone: (231) 947-9019 • Fax: (231) 947-8738

January 12, 2015

Grand Traverse County Soil Erosion
2650 LaFranier Road
Traverse City, MI 49686

Re: Traverse Bay RV Park

To Whom it May Concern:

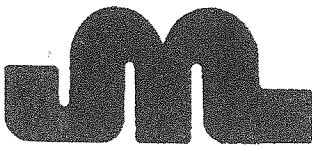
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Attachments



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225 E. 16th Street, Suite B • Traverse City, MI 49684 • Phone: (231) 947-9019 • Fax: (231) 947-8738

January 12, 2015

Grand Traverse County DPW
2650 LaFranier Road
Traverse City, MI 49686

Re: Traverse Bay RV Park

To Whom it May Concern:

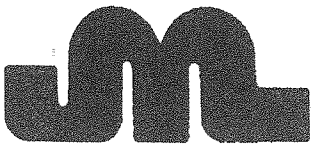
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C.F. Campbell

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Attachments



Design Group, Ltd.

— "Excellence is our Hallmark" —

225 E. 16th Street, Suite B • Traverse City, MI 49684 • Phone: (231) 947-9019 • Fax: (231) 947-8738

January 12, 2015

Grand Traverse County Environmental Health Department
2650 LaFranier Road
Traverse City, MI 49686

Re: Traverse Bay RV Park

To Whom it May Concern:

Attached is a proposed modification to the Traverse Bay RV Park located at 5555 M-72. The project is a scaled down version of a priorly approved, but never built expansion. Please provide comments to allow us to present to the Acme Township Planning Commission on February 9, 2015.

If there should be any questions, please contact me.

Sincerely,

C.F. Campbell

CFC/nr
Attachments

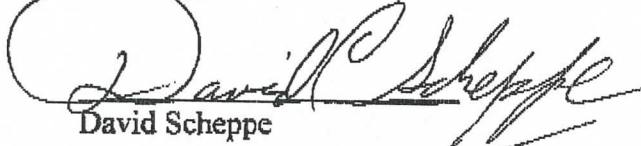
DESIGNATED AGENT AUTHORIZATION

Date January 27, 2015

To Whom it May Concern:

I David Scheppe of Scheppe Investments LLC authorize C.F. Campbell of JML Design Group, Ltd. to serve as my agent in overseeing all improvements relating to my property at 5555 M-72.

Sincerely,


David Scheppe

T. C. RECORD-EAGLE, INC.
120 WEST FRONT STREET
TRAVERSE CITY MI 49684
(231) 946-2000

ORDER CONFIRMATION (CONTINUED)

Salesperson: DENISE LINGERFELT

Printed at 03/27/15 11:42 by dling

Acct #: 6

Ad #: 397003

Status: N

**LEGAL NOTICE
NOTICE OF HEARING**

PLEASE TAKE NOTICE that the ACME TOWNSHIP PLANNING COMMISSION will hold a public hearing at a regular meeting on Monday, April 13, 2015 at 7:00 p.m. in the Acme Township Hall, Acme, Michigan to consider the following: An application by JML Design Group, 225 E. 16th St. Traverse City, MI 49684, for a Special Use Permit to allow an addition of 81 sites in 2 phases at the Traverse Bay RV Resort, 6500 M-72 East. More fully described as follows: Parcel Number: 28-01-236-012-06

PART E 1/2 SEC 36 T28N R10W BEG AT S 1/4 CNR SEC 36 TH N 00 DEG 39'44" W 2654.72' TH N 00 DEG 01'40" W 1808.84' TH S 89 DEG 56'47" E 341.30' TH S 83 DEG 03'24" E 145.88' TH S 89 DEG 56'47" E 469.29' TH S 48 DEG 14'31" E 495.99' TH S 00 DEG 05'50" E 161.07' TH S 89 DEG 56'33" E 398.26' TH S 00 DEG 10'10" E 1312.32' TH N 89 DEG 32'28" W 399.93' TH S 00 DEG 24'15" E 2424.75' TH N 89 DEG 50'41" W 99' TH S 00 DEG 24'15" E 222.75' TH N 89 DEG 50'41" W 1216.07' TO POB. EXCEPT TRAVERSE BAY RV PARK SPLIT ON 05/18/1999 FROM 01-236-002-00; SPLIT ON 09/05/2001 FROM 01-236-012-01; SPLIT ON 10/13/2004 FROM 01-236-012-02, 01-236-002-01.

All interested persons are invited to attend and be heard at the public hearings before the Planning Commission. After the public hearings the Planning Commission may or may not deliberate and make its recommendation based on the Acme Township Zoning Ordinance to the Township Board, which will subsequently take appropriate action on the application.

Applications may be inspected at the Acme Township Hall between 8:00 a.m. and 5:00 p.m. Monday through Friday. The application materials will also be available on the Acme Township website www.acmetownship.org as an attachment to the agenda and minutes of the meeting(s) at which they are discussed. Written comments may be directed to:

Nikki Lennox
Zoning Administrator
Acme Township
6042 Acme Rd.
Williamsburg, MI 49690
231-938-1350
nlennox@acmetownship.org

March 29, 2015-1T

397003

WISTRAND WALTER H TRUST
P 0 BOX 631
NEW SMYRNA BEACH FL 32170
MARNETT JANICE
5560 BRACKETT RD
WILLIAMSBURG MI 49690
2801-235-020-03
GRAND TRAVERSE RESORT AND SPA LLC P 0 BOX 404
ACME MI 49610
2801-101-001-00
SIEVERS ALFRED A TRUSTEE SIEVERS ALFRED A TRUST 7207 28 MILE RD
WASHINGTON MI 48094
2801-236-011-00
GTB OF OTTAWA & CHIPPEWA INDIANS 2605 N BAYSHORE DR
SUTTONS BAY MI 49682
2801-101-006-10
PELLERITO SAM JR & SUSAN M 8772 HORIZON DR
TRAVERSE CITY MI 49686
2801-101-009-00
STOPPEL CHRISTOPHER & LOIS 7238 DEEPWATER PT RD
WILLIAMSBURG MI 49690
2801-101-008-00
GREMEL THOMAS A & THERESA A P 0 BOX 246
ACME MI 49610
2801-101-003-00
WEATHERHOLT JEAN 1516 ANDREWS PLACE
TRAVERSE CITY MI 49684
2801-236-014-00
WAY BONNIE L 5683 E M 72
WILLIAMSBURG MI 49690
2801-236-019-00
STELZER JOHN & TACK TERRENCE 4136 N BROOMHEAD RD
WILLIAMSBURG MI 49690
2801-236-012-06
SCHEPPE INVESTMENTS INC 7915 CAIRN HWY
ELK RAPIDS MI 49629
2801-722-131-00
SCHEPPE DAVID C & KATHLEEN A 7915 CAIRN HWY
ELK RAPIDS MI 49629
2801-722-132-00
WERNER JEFFREY 5506 IDEAL PL
ORCHARD LAKE MI 48324
2801-722-133-00
KLAUSE THOMAS L
10872 SW BLUE MESA WAY PORT SAINT LUCIE FL 34987
2801-722-134-00
WALESKY RANDALL D & JULIE A 13075 N ELMS RD
CLIO MI 48420
2801-722-136-00

2801-722-187-00
CACCAVO FRANK SR & MARIE 3951 ST ARMENS CIRCLE
MELBOURNE FL 32934
2801-722-019-00
BUTLER PHILLIP & PLANK LINDA 9860 BIRDIE DR
CANADIAN LAKES MI 49346
OIAL MAXEY LIVING TRUST
60 S CARDINAL HEIGHTS DADEVILLE AL 36853
BROKER LES J TRUST
701 CAPRI CT
EDMOND OK 73034
2801-722-193-00
EDMONDSON LOUIS E 10416 SPOONBILL RD W
BRADENTON FL 34209
2801-722-195-00
PURE MICHIGAN LLC 973 GRANDE HAVEN DR
TITUSVILLE FL 32780
2801-722-199-00
WAEBER JAMES & ELAINE 2010 NW ESTUARY CT
STUART FL 34994
2801-722-002-00
LOVE FAMILY LIVING TRUST LOVE HOWARD W & PAMELA L 4138 PEPPER TR
HOWELL MI 48843
2801-722-020-00
MIKOLAICZIK MARK A & SUSAN A 9455 BROOKVILLE RD
PLYMOUTH MI 48170
2801-722-200-00
DAVIDSON ROBERT C 8561 EASTBEACH TRL
TRAVERSE CITY MI 49686
2801-722-203-00
ELLIOTT DAVID C 759 GEORGE ST
TRAVERSE CITY MI 49686
2801-722-204-00
WATERS WILLIAM J & WATERS DANIEL K 2840 PINE BRANCH DR
MELBOURNE FL 32940
2801-722-205-00
WATERS WILLIAM J 2840 PINE BRANCH DR
MELBOURNE FL 32940
2801-722-206-00
STONEBRUNNER DAVID L & SUZANNE A 6841 LAKEWOOD ISLE DR
FORT MYERS FL 33908-4761
2801-722-207-00
MICHELSON JACK A & BEVERLY A TRUST 2541 NUTTALL CT
HOLLAND MI 49424
2801-722-209-00
CROVISIER RICHARD C & PATRICIA S 11005 RENE ST
LENEXA KS 66215
2801-722-021-00
KOURIS HEIKA DANA C & POBUR KELLY M 2790 PINE BLUFF

WITTWER DAVID S & BETTY A PMB 13072

HIGHLAND MI 48377

230 RAINBOW DR
LIVINGSTON TX 77399
2801-722-137-00
LE-AN PROPERTIES LLC
141 MEMORIAL S COMMONS TRAVERSE CITY MI 49685
2801-722-152-00
BENNETT JOHN & SHEILA
157 MARTESIA WAY SATELLITE BEACH FL 32937
2801-722-153-00
CARTLIDGE JAMES P 1511 OLD TRENTON RD
PRINCETON JUNCTION NJ 08550
MCKENZIE DURRELL L TRUST
2544 WESTPORT DR
KALAMAZOO MI 49009
B & K RESORT PROPERTIES INC
P 0 BOX 277
ACME MI 49610
2801-722-156-00
TUSHMAN J LAWRENCE TRUST
358 LAKEWOOD
BLOOMFIELD HILLS MI 48304
2801-722-157-00
HENRY RONALD D & ROSALIE D 1576 BELLA CRUZ DR #140
LADY LAKE FL 32159
2801-722-159-00
HISCOCK JAMES R & NANCY K TRUSTEES 689 KENASTON DR
COLDWATER MI 49036
2801-722-160-00
THOMPSON GEORGE M & GLADYS M TRUST
254 E GARFIELD RD COLDWATER MI 49036
2801-722-166-00
FOGLE MARVIN R & MA ALICIA
177 LINCOLN CIR
SALINE MI 48176-9142
2801-722-173-00
KNOTT EDGAR E TRUST 7757 THOMAS RD
MIDDLETOWN OH 45042
2801-722-174-00
TBA CREDIT UNION
537 BAY ST
TRAVERSE CITY MI 49684
2801-722-178-00
THOMPSON GEORGE M & GLADYS
254 E GARFIELD RD COLDWATER MI 49036
2801-722-179-00
MCF ASSOCIATES INC C/O JENNIFER MCFALL P 0 BOX 2523

2801-722-211-00
KISIEL BRENDA S ESTATE 5710 BAUER RD
BRIGHTON MI 48116
2801-722-216-00
SUTTON THOMAS & DORENE
281 SUTTON WAY
WARDENSVILLE WV 26851
2801-722-022-00
KOWATCH GARY J 4875 WILCOX RD
HOLT MI 48842
2801-722-023-00
SPADER CARL & JUDITH 7613 TANIA LN
FT MYERS FL 33917
2801-722-024-00
SHANGLE KIRK & JULIE L 2718 HOLLYBERRY DR
MIDLAND MI 48642
CANAN PHILLIP C
259 BRENTWOOD DR
BATTLE CREEK MI 49015-4513
TUSHMAN CAROL TRUST
358 LAKEWOOD DR
BLOOMFIELD HILLS MI 48304
2801-722-027-00
BATESON FREDERICK R & DEANNA L PMB 5814
P 0 BOX 2428
PENSACOLA FL 32513
2801-722-028-00
MILLER ALAN & CATHY
459 E ALMS RD FLUSHING MI 48433
2801-722-029-00
CANTRELL JAMES A & CHERYL D 12527 GREEN DARNER
SAN ANTONIO TX 78253
2801-722-031-00
STENZEL LEONARD & JO ANNA
494 RIVERWALK DR
MASON MI 48854
2801-722-033-00
HAGER WOLFGANG L & INGE A 6900-29 DANIELS PKWY
FORT MYERS FL 33912
2801-722-034-00
CORRADI THOMAS & CAREN 10919 SEAVITT DR
ALLEN PARK MI 48101
2801-722-035-00
BROUWER MARTIN A & ELEANOR
527 PINEHURST LN
SCHERERVILLE IN 46375

HUNTSVILLE AL 35804
2801-722-180-00
TERREBONNE TERRY J & LINDA C 1905 RIVERSIDE DR
LAKE CHARLES LA 70601
2801-722-181-00
FLEMING GERALD B & HELEN M
255 RIVER KNOLL WAY DAHLONEGA GA 30533
2801-722-182-00
WILTON WILLIAM L & CHERYL A 2929 COOLIDGE ST
CONKLIN MI 49403
2801-722-183-00
CHAMBERLIN GEORGE R & KENDRA L
105 KETTLE OAKWAY
SIMPSONVILLE SC 29680
2801-722-184-00
VANHORN GARY R & MARIANNE TRUSTEES VANHORN GARY & MARIANNE TRUST
6336 ELSEY DR
TROY MI 48098
2801-722-185-00
CATALYST COMMERCIAL REALTY LLC 3659 GREEN RD STE 214
BEACHWOOD OH 44122
2801-722-188-00
GRAHN W KENNETH
1261 W SKYVIEW CROSSING HERNANDO FL 34442-6195
2801-722-191-00
MILLER PETER D & HALL DENISE T
426 W HAMPTON RD ESSEXVILLE MI 48732
2801-722-196-00
CRANNELL DAVID J TRUSTEE CRANNELL DAVID J TRUST 5800 SR 80 WEST LOT 82
LABELLE FL 33935
RWT STRATEGIES LLC
110 E CENTER ST #1194
MADISON SD 57042
FOXGATE REALTY AND LEASING LLC
8799 KENDALL RD
COLUMBUS MI 48063
2801-722-201-00
RUSSO SALVATORE J & MELISSA L 4277 BYRON RD
HUDSONVILLE MI 49426
2801-722-202-00
CROALL DAWN M TRUST 8607 MAUMEE WESTERN RD
MONCLOVA OH 43542
2801-722-217-00
SUTTON THOMAS L & DORENE L
281 SUTTON WAY
WARDENSVILLE WV 26851
2801-722-001-00
VANWERT LARRY E & JAMIE L 4418 S 9 MILE RD
AUBURN MI 48611
2801-722-010-00
GRABSKI DALE & MARGARET 8678 SOUTH FERNWOOD CT
WASHINGTON MI 48094
2801-722-100-00

2801-722-036-00
SLEEP ALAN W & CAROL G 22286 CAMILLE
WOODHAVEN MI 48183
2801-722-037-00
BROUWER MARTIN A TRUST
527 PINEHURST LN
SCHERERVILLE IN 46375
2801-722-038-00
LOUBE PAULA
204 DUNDAS ST W PARIS ON N3L 4H3
2801-722-039-00
RYLANDER DONALD W & JANE E 13245 MAPLE WAY
CHARLEVOIX MI 49720
2801-722-004-00
RUSSELL HERBERT J& LEEANN TRUSTEES RUSSELL LIV REV T 7525 OLD 27
GAYLORD MI 49735
2801-722-040-00
KULIN KENNETH J & CHERYL A 7455 SMILEY
SHELBY TWP MI 48316
2801-722-041-00
SPADER CARL W & JUDY L 7613 TANIA LN
NORTH FORT MYERS FL 33917
2801-722-042-00
M AND S PROEPRTY INC P 0 BOX 316
ACME MI 49610
2801-722-043-00
KLINE KATHLEEN A 42769 REDFERN ST
CANTON MI 48187
2801-722-044-00
SHEMON MICHAEL E & JACQUELINE F 12360 KELLY SANDS WAY
FORT MYERS FL 33908
2801-722-045-00
KLINE RICHARD C & KATHLEEN A 42769 REDFERN
CANTON MI 48187
ZIMMERMAN DAVID J SR & MARILYN J TR
SUMMER
5555 M 72 E
WILLIAMSBURG MI 49690
BLANCHARD KENNETH & ANNETTE
450 CUMBERLAND SE
LOWELL MI 49331
2801-722-068-00
GUILARTE WALTER D & THERESA TRUSTEE GUILARTE REV LIVING TRUST
1024 NORFOLK ISLAND DR #21
SUN CITY CENTER FL 33573
2801-722-069-00
ALEXANDER MICHAEL I & PAMELA K 11091 HEGEL RD
GOODRICH MI 48438
2801-722-007-00
KUZNICKI DAVID M & JILL D 46780 GREENRIDGE CT
NORTHVILLE MI 48167
2801-722-070-00
HURSON CURTIS & SUZANNE P 0 BOX 434

RUDLAFF JANIS S TRUST
12701 MASTIQUE BEACH BLVD #1904 FORT MYERS FL 33908
2801-722-101-00
RUDLAFF JANIS S TRUSTEE
12701 MASTIQUE .BEACH BLVD #1904 FORT MYERS FL 33908
2801-722-102-00
LAWRENCE DARYL & CHERYL
113 RAINBOW DR #1345
LIVINGSTON TX 77399
2801-722-103-00
SMITH PHILIP M & KENDA 6312 N SEYMOUR RD
FLUSHING MI 48433
2801-722-104-00
2551 THEODORE LLC
15130 JUGHANDLE RD
MINOOKA IL 60447
2801-722-105-00
GAFNER THOMAS C TRUST 5312 BEACON RD
PALMETTO FL 34221-9750
2801-722-106-00
RIDLEY BRUCE J & DOROTHEE P 0 BX 470
BRIGHTON MI 48116
2801-722-107-00
SULLIVAN MARILYN D TRUSTEE SULLIVAN MARILYN D TRUST 6500 TRAVERSE BAY DR 107
WILLIAMSBURG MI 49690
2801-722-108-00
CHALK ROBERT A & BARBARA 3824 BURNS LN
NORMANGEE TX 77871
2801-722-109-00
RADTKE FREDERICK A TRUST 2177 AUSTIN DR
SHELBY TWP MI 48316
2801-722-011-00
BEADNER HOWARD A & MARY S 2124 WOODCLIFF AVE SE
GRAND RAPIDS MI 49546
2801-722-110-00
ROSS ROBERT H & JEANNE K 1631 PALOMINIO DR
SAGINAW MI 48609
2801-722-111-00
JFD LLC
P 0 BOX 130
CLARKSVILLE AR 72830
UNDERWOOD RONALD L & ANITA M
843 DRACKA RD
TRAVERSE CITY MI 49684-8813
GOEPFRICH LEO R & ANITA L
141 MEMORIAL SOUTH COMMONS TRAVERSE CITY MI 49684
2801-722-114-00
HARTMAN DOUGLAS L & LINDA E 2258 WILLOW TREE DR
BRIGHTON MI 48116
2801-722-115-00
MENOSSI RYAN & MISTY 4825 HAZEL RD
EDWARDSVILLE IL 62025
2801-722-117-00
RIFE DANIEL F TRUST 5232 RIVERLAKE DR

ACME MI 49610
2801-722--072-00
KURTH JACOB & NANCY P 0 BOX 4090
GAYLORD MI 49734
2801-722-073-00
RUSSELL MARGARET P TRUST 3312 KINGSWAY DR
HIGHLAND MI 48356
2801-722-074-00
KIRTS DIANE K 21123 SR 120
ELKHART IN 46516
2801-722-075-00
MCCORMICK DENNIS & JOYCE
510 CREST LN
JONESVILLE MI 49250
2801-722-076-00
HENRY ROSALIE D 1576 BELLA CRUZ DR
LADY LAKE FL 32159
2801-722-077-00
MONTGOMERY JAY H P 0 BOX 522
ACME MI 49610
2801-722-078-00
WILLIAMSON PAUL D & JANE O 14435 CRESCENT COVE DR
LOUISVILLE KY 40299
2801-722-079-00
SPENCER BILLY E & LEOLA P 0 BOX 785
KALKASKA MI 49646
2801-722-008-00
KALETA KENNETH 5460 MOHAWK TRL
WASHINGTON MI 48094
2801-722-080-00
HIRT ALLAN TRUST
HIRT ALLAN A & SHIRLEY M TRTEE 1325 BATTLE CREEK HWY
CHARLOTTE MI 48813
2801-722-082-00
PALMER ALBION W & CAROL J 55535 WOODY LN
SOUTH LYON MI 48178
2801-722-083-00
GOTTLOB DONALD W JR & STACEY O 7522 PIGEON DR
HITCHCOCK TX 77563
2801-722-084-00
PHYLE CHARLES E TRUST 4150 GRANGE HALL RD
HOLLY MI 48442
2801-722-085-00
RANEY JOHN J
9 N BLACKWATER LN
KEY LARGO FL 33037-2973
OBRYAN FAMILY TRUST
4776 LIPPINCOTT RD
LAPEER MI 48446
BARLOW CHARLES W & CONNIE E
22875 EAST AVE N BATTLE CREEK MI 49017
2801-722-048-00
PEREZ MARY & EMILIO
161 N FAIRWAY LOOP COLDSRING TX 77331

BARTOW FL 33830
2801-722-118-00
BARRON JAMES R & RUTH F PMB 241269
3916 N POTSDAM AVE
SIOUX FALLS SD 57104-7048
2801-722-119-00
AVERY GEORGE & E LOUISE
28 SOUTH DR
KEY LARGO FL 33037
2801-722-012-00
PAYNE CHRIS TRUST 18347 N FRUITPORT RD
SPRING LAKE MI 49456
2801-722-099-00
PARIS RICHARD A & NANCY E TRUST
500 DOUGLAS DR
COLGATE WI 53017
2801-722-121-00
AINSWORTH KATHLEEN & LAMER FRANCES
100 HEATHLAND CIRCLE
HINCKLEY OH 44233
2801-722-123-00
LEPPINK BETSY TRUSTEE LEPPINK BETSY TRUST APT 2079 PARKSIDE
1551 FRANKLIN ST SE GRAND RAPIDS MI 49506 2801-722-125-00
THOM AILEEN T TRUSTEE THOM AILEEN T TRUST 757 SNYDER ST
OXFORD MI 48371
2801-722-120-00
SUMNER GEORGE E & SUSAN A 5700 JAMESTOWN CT SE
KENTWOOD MI 49508
2801-722-122-00
HENLINE LOWELL E TRUST 3640 BROKEN ARROW
SEBRING FL 33872
2801-722-124-00
RADTKE PAULA TRUSTEE 2177 AUSTIN DR SHELBY TWP MI 48316
2801-722-126-00
DILLON WILLIAM & SHARON 4533 GLENNVILLE DR
PLANO TX 75093
2801-722-127-00
COKER JOHN E & SHIRLEY J 39438 E ARCHER
HARRISON TOWNSHIP MI 48045
2801-722-128-00
WEEKS ROGER A & PEGGY L 9 NARROWS CT
SALEM SC 29676-4019
2801-722-129-00
LUBELL MARK & LINDA 5401 HOGAN LN
WINTER HAVEN FL 33884
2801-722-013-00
SURDENIK JOSEPH 1662 HOWELL RD
MASON MI 48854
MILLIRON KEITH A & MARILYN M
1620 SIVLERBELL RD
ROCHESTER MI 48306
MIDWAY MOTORHOMES INC
5590 S DIVISION AVE GRAND RAPIDS MI 49548

2801-722-005-00
VANCE GLADYS REVOC TRUST 4814 HALLBROOK DR
LAWRENCE KS 66047
2801-722-050-00
MURPHY RICHARD D & JULI A 16026 CANYON RUN
FORT WAYNE IN 46845
2801-722-051-00
HARDY DIANA W
820 CLUB HOUSE RD #1C NORTH LIBERTY IA 52317
2801-722-052-00
HAGAR WOLFGANG L & INGE A 6900-29 DANIELS PKWY PMB 259
FORT MYERS FL 33912
2801-722-053-00
PUURI HOWARD J
3563 E CLARKSTON RD OAKLAND MI 48363
2801-722-054-00
TABBI JACK & JUDY 53570 ROMEO PLANK RD
MACOMB MI 48042
2801-722-055-00
KROPF ROGER D & RITA M 5885 ENGLISH AVE NE
COMSTOCK PARK MI 49321
2801-722-056-00
WOODBURY BRIAN & MARALYN
206 E OAK ST
ST JOHNS MI 48879
2801-722-057-00
HARTLEY WILLIAM & DARLENE 2180 BELL MEADE DR
DAVISON MI 48423
2801-722-058-00
BAKER PATRICK & CAROL 4104 ANTHONY CT
DORR MI 49323
2801-722-059-00
GROBBEN DOANLD H & MARGARET E TRUST
#2384
3916 N POTSDAM
SIOUX FALLS SD 57104
2801-722-006-00
BOWEN RODERICK M & MARY JANE 4809 HALLBROOK DR
LAWRENCE KS 66047
2801-722-060-00
MINER TEARLE H & GAIL M 4918 BELMONT ST
MIDLAND MI 48640
2801-722-061-00
SCHUITEMA JAMES H JR & LINDA L TRUS
523 E 120TH ST GRANT MI 49327-9042
2801-722-062-00
BATTS DONALD H & MARY H 6510 LINDHURST
KALAMAZOO MI 49009
2801-722-064-00
RITCHEY DAVID L & ROBILYNNE K 3350 IRIS LN
PRESCOTT AZ 86305
2801-722-065-00
BIRTSAS WILLIAM N JR & FANNY N6099 MILAKOKIA LAKE RD #8

2801-722-138-00
LALONE CAROL A TRUST 22030 SUNRISE BLVD
NOVI MI 48375
2801-722-014-00
GREEN RANDALL W & RUTH A 7906 BLACK CHERRY WAY SE
CALEDONIA MI 49316
2801-722-145-00
RUDLAFF JANIS & SCHEPPE KATHLEEN 7915 CAIRN HWY
ELK RAPIDS MI 49629
2801-722-147-00
SMILEY DANNY L & NANCY J TRUST 6059 BLOSS CT
SWARTZ CREEK MI 48473
2801-722-015-00

WARK BRIAN & PAULA
12963 MICHAEL DR SHELBY TOWNSHIP MI 2801-722-151-00

2801-722-158-00
BLANCK JANICE I & HARVEY C 5007 E COOK RD
GRAND BLANC MI 48439
2801-722-161-00
RESSEGUE LOUISE E TRUST 2115 EVANS PRAIRIE TRL
THE VILLAGES FL 32163
2801-722-163-00
BEARDSLEE FAMILY REVOC TRUST
409 CAICOS DR
PUNTA GORDA FL 33950
2801-722-165-00
SCHEPPE INVESTMENT INC 7915 CAIRN HWY
ELK RAPIDS MI 49629
2801-722-167-00
MYERS JAMES L & SHELBY JEAN TRUST P O BOX 925
BAMBERG SC 29003
2801-722-017-00
SULLIVAN CHARLES E & BARBARA K 15401 SEYMOUR RD
GRASS LAKE MI 49240
2801-722-170-00
CHERRY JOHN A & DIANA P 9417 PAUL DR
CLINTON MD 20735
2801-722-171-00
ALLISON IVAN & BARBARA 3484 HONEYWOOD LN
DEWITT MI 48820
2801-722-018-00
HAGGERTY FRED L & SHERRAYN C TRUST 5235 OLDE SHAWBORO RD
GRAND BLANC MI 48439
2801-722-186-00
HERMANSEN MOGENS & KIRSTEN 1674 LOVEJOY LN
COLLIERVILLE TN 38017

GOULD CITY MI 49838
KRUEGER DIANE D TRUST
4113 FAIRFAX CT
EVANSVILLE IN 47710
COBAUGH TEDDY A & JANICE E
901 BROOKSWOOD DR
TRENTON OH 45067
2801-722-088-00
DJMCO LLC
7395 TEXTILE RD
YPSILANTI MI 48197-8930
2801-722-089-00
SVOBODA SHARON L TRUST

503 ARBOR LAKE DR NAPLES FL 34110-8694
2801-722-009-00

OBRZUT MARK & ANDREA E 5641 BARBER RD
METAMORA MI 48455
2801-722-090-00
MILLER NEIL L & JUDY L 7601 FRAMPTON
WASHINGTON MI 48095
2801-722-091-00
DIETLIN GERALD D & FLORENCE N 7773 FRAMPTON
WASHINGTON MI 48095
2801-722-092-00
RABER STANLEY F 3509 OAK PARK DR
SALINE MI 48176
2801-722-093-00
BETTINGER RONALD J & JOAN M 2633 NORTH RAAB RD
SWANTON OH 43558
2801-722-094-00
2251 THEODORE LLC
15130 JUGHANDLE RD
MINOOKA IL 60447
2801-722-096-00
BARKER LINDA E TRUSTEE BARKER LINDA E TRUST
109 KINGSBURY DR
BROOKLYN MI 49230
2801-722-097-00
KOVALCHIK LIVING TRUST P O BOX 643
HILLSDALE MI 49242-0643
2801-722-098-00
GILLEN CARL E TRUST
450 SCOTT CT
ELK RAPIDS MI 49629
FUERST ARLINGTON & SHARON
5784 SUTTON RD
DRYDEN MI 48428

UTILITIES

ACME TOWNSHIP
JOHN HULL, ZONING ADMINISTRATOR
6042 ACME ROAD, ACME
231-938-1350

GRAND TRAVERSE COUNTY ROAD COMMISSION
MS. MARY GILLIS - MANAGER
1881 LAFARNIER ROAD, TRAVERSE CITY, MICHIGAN
922-4848

GRAND TRAVERSE COUNTY DRAIN COMMISSIONER'S OFFICE
MR. KEVIN McELYEA, DRAIN COMMISSIONER
2650 LAFRANIER ROAD, TRAVERSE CITY MICHIGAN
995-6042

GRAND TRAVERSE COUNTY HEALTH DEPARTMENT
MR. RANDY EMEOTT, SANITARIAN
2650 LAFRANIER ROAD, TRAVERSE CITY, MICHIGAN
995-6022

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
MR. DAVID GRAVES
MANUFACTURED HOUSING & REC. RESOURCES UNIT
DRINKING WATER & ENVIRONMENTAL HEALTH SECTION CONSTITUTION HALL 2-NORTH
525 W. ALLEGAN LANSING, MI 48933
(517) 373-3258

CONSUMERS ENERGY
MR. JOHN RADLICKI - AREA REPRESENTATIVE
821 HASTINGS, TRAVERSE CITY, MICHIGAN
929-6243

CHERRYLAND ELECTRIC COOPERATIVE
MR. BOB SIEKAS - AREA ENGINEER
P.O. BOX 298, GRAWN, MICHIGAN
943-8377

AMERITECH
MR. KEITH NELSON - ENGINEER
142 EAST STATE STREET, FLOOR 2W, TRAVERSE CITY, MICHIGAN
941-2734

MICHIGAN CONSOLIDATED GAS CO. (M.C.G.)
MR. KEN LAKE - MANAGER
1011 HASTINGS ST., TRAVERSE CITY, MICHIGAN
946-5363

TRAVERSE CITY LIGHT & POWER
MR. BOB VANDYKE - SUPERINTENDENT
P.O. BOX 592, TRAVERSE CITY, MICHIGAN
922-4942

CHARTER COMMUNICATION CABLE SYSTEMS
MR. BOB NOWAK - CONST. MGR.
701 S. AIRPORT RD. WEST, TRAVERSE CITY, MICHIGAN
1-800-545-0994

POLICE AGENCIES
EMERGENCY CALLS - 911
CITY OF TRAVERSE CITY - 941-2300
MICHIGAN STATE POLICE - 946-4646
GRAND TRAVERSE CO. SHERIFF - 941-2225

FIRE DEPARTMENTS
EMERGENCY CALLS - 911
CITY OF TRAVERSE CITY - 941-2340
GRAND TRAVERSE CO. - 941-2238

AMBULANCE
EMERGENCY CALLS - 911

MISS DIG - 800-482-7171

GENERAL SITE NOTES

UPON INSTALLATION OF COMMUNITY SEPTIC FIELDS, GRAND TRAVERSE COUNTY HEALTH DEPARTMENT TO BE NOTIFIED FOR SITE INSPECTION PRIOR TO INSTALLATION OF SAND, TOPSOIL AND SEED.

ALL CONSTRUCTION MATERIALS SHALL CONFORM WITH GRAND TRAVERSE COUNTY FORCEMAIN SEWER STANDARDS, SPECIFICATIONS AND DETAILS.

ALL ELEVATIONS ARE BASED ON USGS SURVEY DATUM.

CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES FROM ACCELERATED EROSION AND SEDIMENTATION AT ALL TIMES DURING CONSTRUCTION.

ALL DISTURBED AREAS SHALL BE TOPSOILED, SEEDED, FERTILIZED AND MULCHED.

EXISTING UTILITIES CAUTIONS

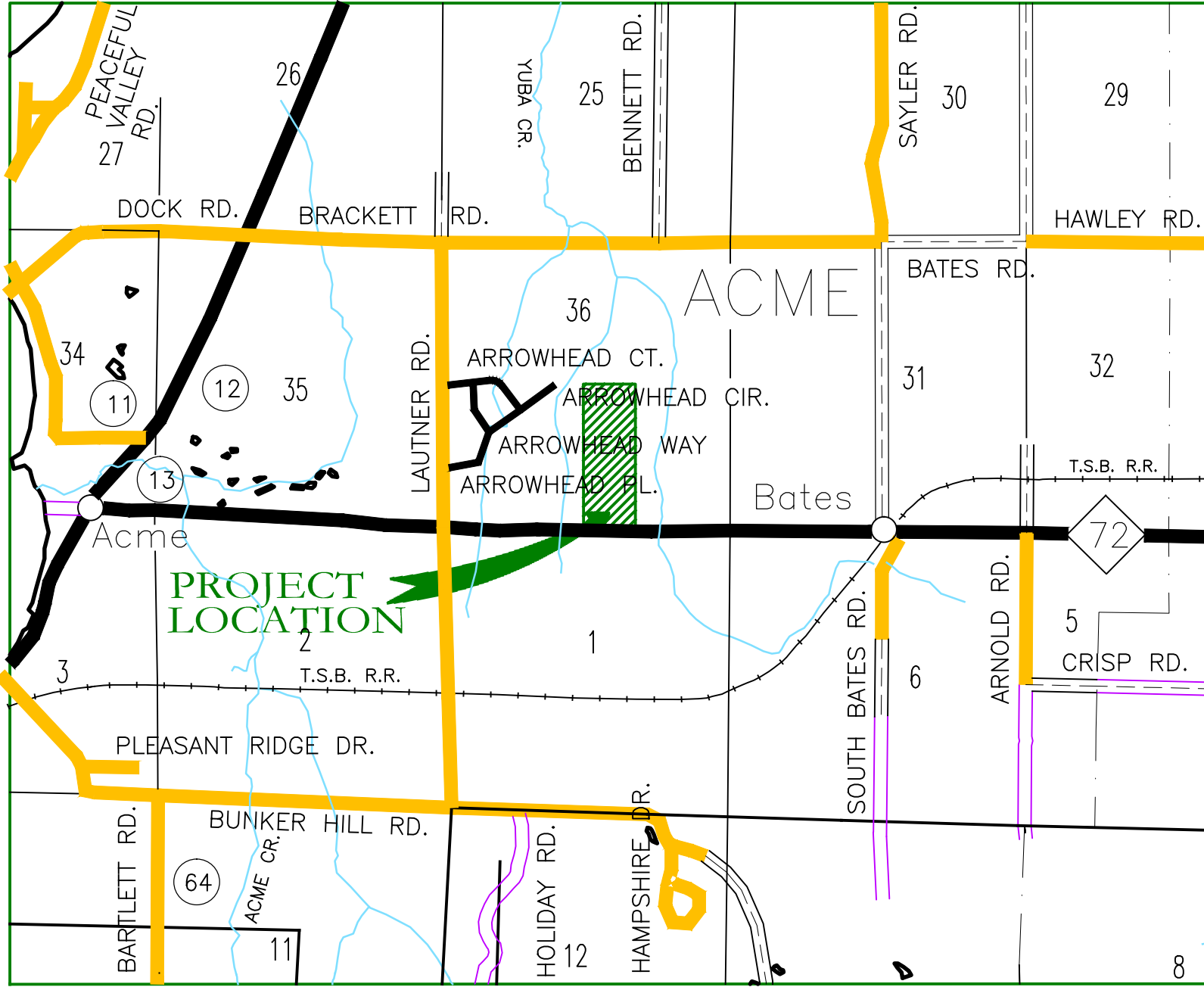
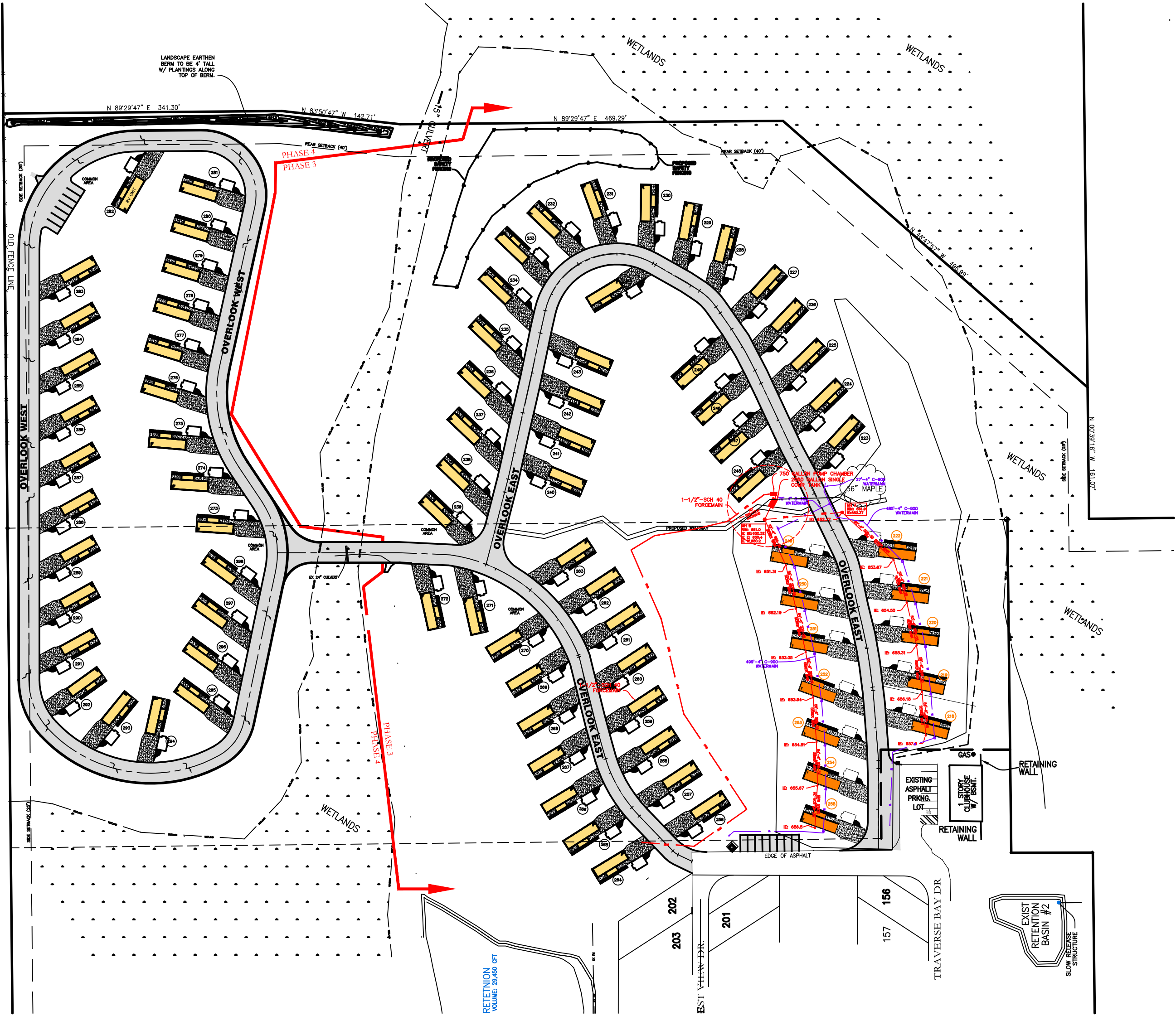
EXISTING PUBLIC UTILITIES AND KNOWN UNDERGROUND STRUCTURES ARE SHOWN ON THE PLANS. THE INFORMATION SHOWN IS BELIEVED TO BE REASONABLY CORRECT AND COMPLETE. HOWEVER, NEITHER THE CORRECTNESS OR THE COMPLETENESS OF SUCH INFORMATION IS GUARANTEED. PRIOR TO THE START OF ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY "MISSDIG" AND REQUEST THE UTILITY COMPANIES TO MARK THE UTILITIES IN QUESTION.

SPECIAL CARE SHALL BE TAKEN IN EXCAVATING IN THE PROXIMITY OF ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL PROVIDE SUPPORT FOR ANY UTILITIES WITHIN THE EXCAVATION, PROVIDE PROPER COMPACTION UNDER ANY UNDERMINED UTILITY STRUCTURE AND IF NECESSARY, INSTALL TEMPORARY SHEETING OR USE A TRENCH BOX TO MINIMIZE THE EXCAVATION. CONTRACTOR SHALL PROTECT AND SAVE HARMLESS FROM DAMAGE ALL UTILITIES, ABOVE OR BELOW THE GROUND SURFACE, WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION.



TRAVERSE BAY RV PARK
PHASE III & IV EXPANSION

SECTION 36, TOWN 28 NORTH, RANGE 10 WEST
ACME TOWNSHIP, GRAND TRAVERSE CO., MICHIGAN



LOCATION MAP
NO SCALE

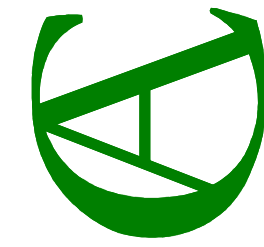
DEVELOPERS:

TRAVERSE BAY RV RESORT
5555 M-72 EAST
ACME, MI 49610
PH: 938-5800

SHEET INDEX

1. COVER SHEET
2. SITE PLAN
3. STORMWATER CONTROL PLAN
4. UTILITY PLAN
5. OVERLOOK WEST PLAN AND PROFILE 0+00 - 15+00
6. OVERLOOK WEST PLAN AND PROFILE 15+00 - 19+40
OVERLOOK EAST PLAN AND PROFILE 0+00 - 7+34
7. OVERLOOK EAST PLAN AND PROFILE 0+00 - 12+78
8. LOW PRESSURE SEPTIC FIELD DETAILS
9. SEWER DETAILS
10. SITE PEDISTALS AND CONSTRUCTION DETAILS

Andersen & Crain, Inc
Surveying, Engineering, Consulting, & Design
2636 Garfield Road N - Suite 30
Traverse City, MI 49686
Phone: (231) 947-7255 Fax: (231) 947-7275



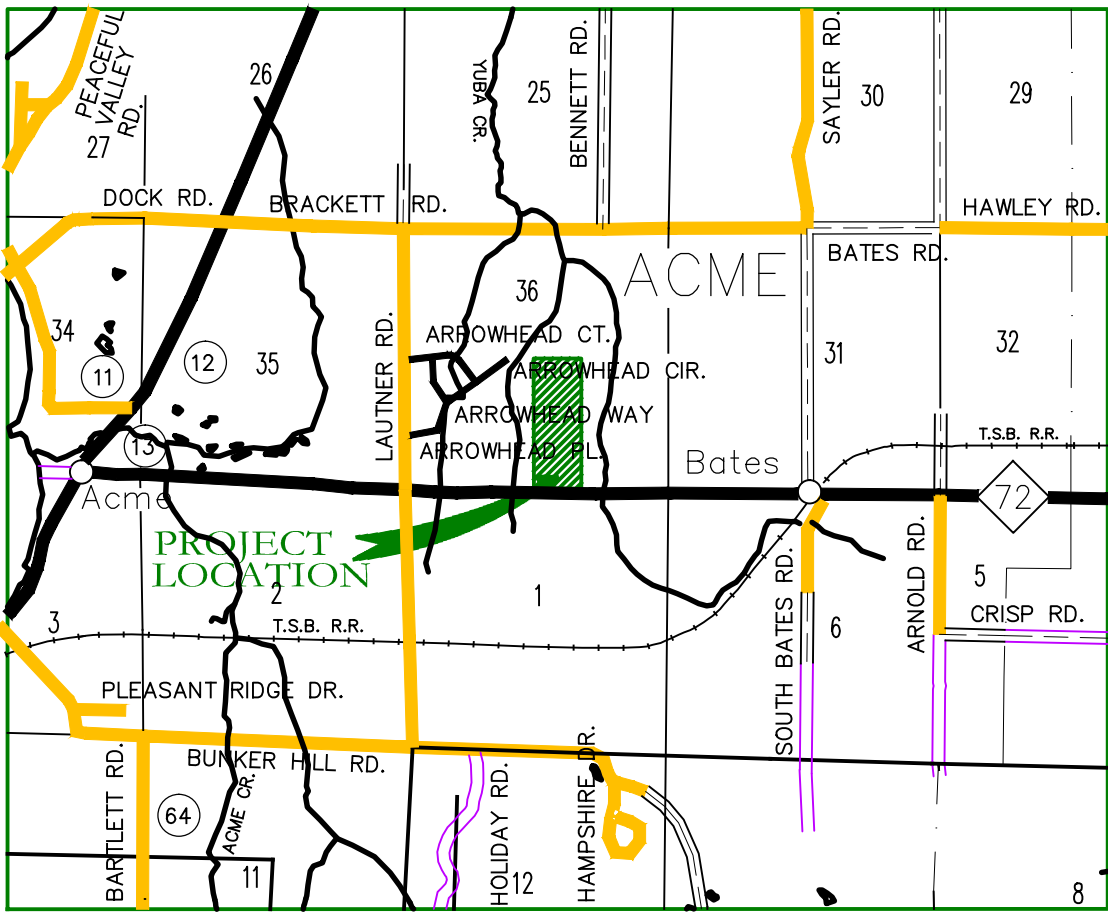
DRWN BY: CLA
DSGN BY: WLC
DATE: 12-16-08
REV DATE: 12-16-08
1-10-09 SITE REVIEW
1-10-09 SITE REVIEW
03-22-10 SITE REVIEW

COVER SHEET - PLAN SET:
TRAVERSE BAY RV PARK
SECTION 36 -TOWN 28 NORTH - RANGE 10 WEST
ACME TOWNSHIP, GRAND TRAVERSE CO., MICHIGAN

JOB NUMBER:
218808

"TRAVERSE BAY RV PARK"

SECTION 36, TOWN 28 NORTH, RANGE 10 WEST
ACME TOWNSHIP, GRAND TRAVERSE CO.
MICHIGAN



LOCATION MAP

LEGEND

- PROPERTY LINE
- PROPOSED UNIT LINE
- PROPOSED EASEMENT LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING CONTOURS
- PROPOSED WATER FEATURE
- PROPOSED RV UNIT

0' 100' 200' 300'
SCALE: 1" = 100'

SITE DATA

PROPERTY OWNER & APPLICANT:

TRAVERSE BAY RV RESORT
5555 M-72 EAST
ACME, MI 49610
PH: 938-5800

PARCEL ADDRESS - 5555 M-72 EAST, ACME, MI 49610
PARCEL ZONING - A-1 AGRICULTURAL
PARCEL NUMBER - 28-01-236-012-01

SETBACKS:

FRONT - 50'
SIDE - 25'
REAR - 40'

PROPOSED:

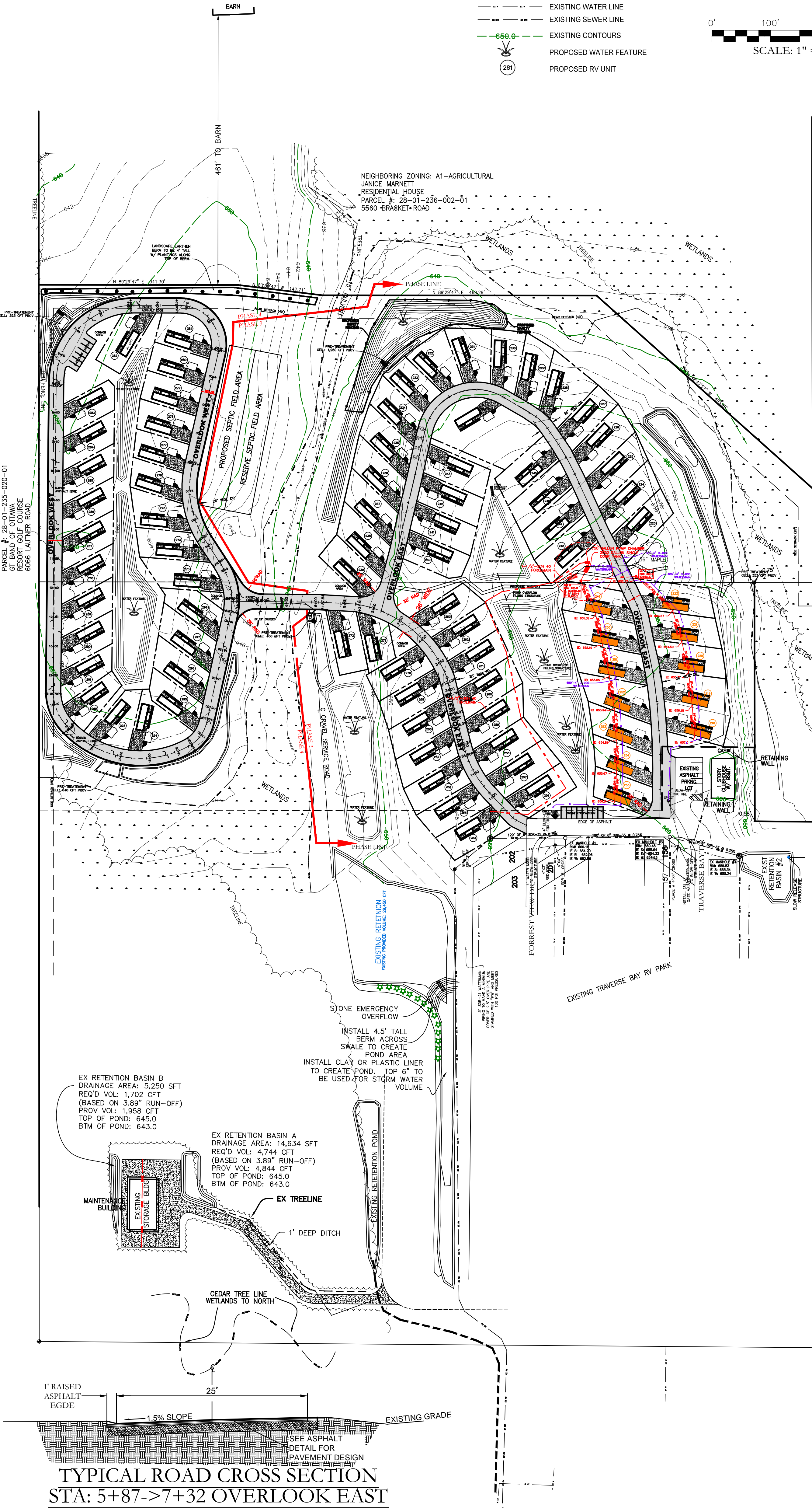
80 UNIT EXPANSION TO THE EXISTING TRAVERSE BAY RV RESORT

LANDSCAPING:

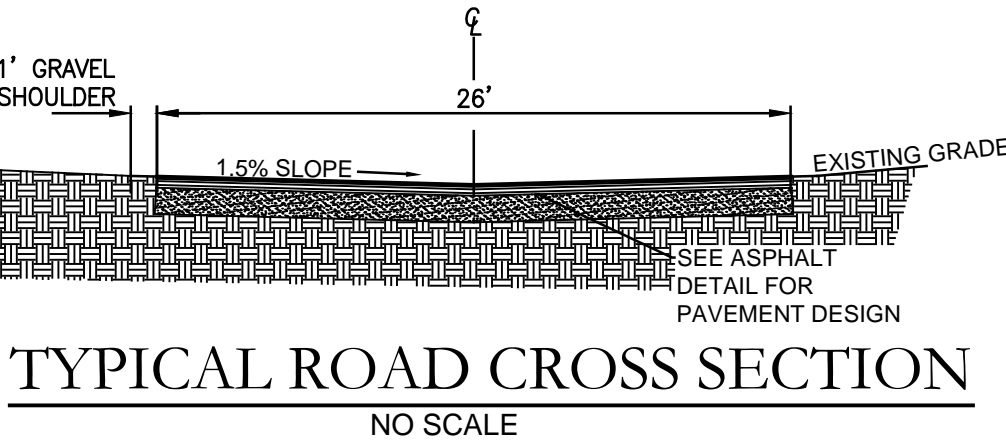
PROVIDED LANDSCAPING: LANDSCAPE BERM ALONG NORTH PROPERTY LINE
EACH UNIT TO BE LANDSCAPED BY OWNER

NEIGHBORING ZONING: A1-AGRICULTURAL
PARCEL #: 28-01-236-001-00
WALTER & HAZEL WISTRAND
BRACKETT ROAD

NEIGHBORING ZONING: A1-AGRICULTURAL
VACANT
GT BAND OF OTTAWA
PARCEL #: 28-01-236-011-00
E-W-72



TYPICAL ROAD CROSS SECTION
STA: 5+87->7+32 OVERLOOK EAST
NO SCALE

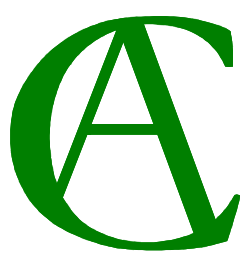


TYPICAL ROAD CROSS SECTION
NO SCALE

PROPOSED OVERALL SITE PLAN TRAVERSE BAY RV RESORT

SECTION 36-TOWN 28 NORTH-RANGE 10 WEST
ACME TWP, GRAND TRAVERSE COUNTY, MICHIGAN

DRWN BY: CLA
DSGN BY: WLC
DATE: 12-16-08
REV DATE:
03-10-09 SITE REVISIONS
08-18-09 HEALTH DEPT / MDEQ
03-17-2015 TWP REVIEW
03-24-2015 TWP REVIEW



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Surveying, Engineering, Consulting, & Design
2636 Garfield Road N - Suite 30
Traverse City, MI 49686
Phone: (231) 947-7255 Fax: (231) 947-7275

- LEGEND**
- PROPOSED LOT LINE
 - PROPOSED EASEMENT LINE
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - DRAINAGE DIRECTION ARROW
 - EXISTING TREE LINE
 - PROPOSED RETENTION BASIN
 - PROPOSED GRADES
 - EXISTING WETLAND LIMITS
 - SILT FENCE
 - PROPOSED UNIT NUMBER

0' 60' 120' 180'

SCALE: 1" = 60'

DRAINAGE AND GRADING NOTES

1. THE SOIL EROSION MEASURES SHOWN ARE THE MINIMUM CONTROLS TO BE USED ON THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES TO PROTECT THE DISTURBED AREAS AND ADJACENT PROPERTIES FROM ACCELERATED EROSION AND SEDIMENTATION RESULTING FROM PROJECT CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
2. ALL DISTURBED AREAS SHALL BE TOPSOILED, SEEDED, FERTILIZED AND MULCHED OR SODDED. MULCH BLANKET SHALL BE INSTALLED IN AREAS AS DESIGNATED AND SHALL BE INCIDENTAL TO OTHER ITEMS.
3. CONTRACTOR SHALL OBTAIN SOIL EROSION PERMIT PRIOR TO ANY CONSTRUCTION.
4. ALL RETENTION BASINS TO HAVE 3 ON 1 SIDE SLOPES.
5. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING GROUND COVER ON AREAS DISTURBED BY CONSTRUCTION AND SHALL REPAIR ALL WASHOUTS AND EROSION DURING THE GUARANTEE PERIOD OF ONE (1) YEAR UPON COMPLETION OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
6. THE PRESENCE OF OTHER THAN GRANULAR MATERIALS IN THE SUB-GRADE SOIL SHALL REQUIRE A FULL WIDTH, TWELVE INCH, GRANULAR SUB-BASE, MDOT CLASS 3 OR EQUIVALENT.
7. PREPARE SUB-GRADE WIDTH, DEPTH AND COMPACTION SHALL BE REVIEWED AND/OR TESTED BY THE FIELD ENGINEER PRIOR TO PLACEMENT OF GRAVEL.
8. ALL TREES, STUMPS, BRUSH AND ROOTS THEREOF SHALL BE ENTIRELY REMOVED FROM THE GRADING LIMITS OF ALL ROADS IN THE PROPOSED PROJECT AND DISPOSED OF AS DIRECTED BY THE OWNER.
9. THE LEVEL OF THE FINISHED SUB-GRADE SHALL BE AT LEAST TWO-AND-ONE-HALF FEET ABOVE THE HIGH WATER TABLE.
10. CMP CULVERTS SHALL HAVE A MINIMUM OF ONE-FOOT COVER FROM TOP OF PIPE UNLESS OTHERWISE SHOWN ON THE PLAN. THE COVER ABOVE THE PIPE SHALL BE CLEAN AND FREE OF ALL DEBRIS.

DETENTION BASIN TABLE

BASIN #	DRAINAGE AREA (SFT)	DESIGN RAINFALL (IN)	DESIGN VOL. REQUIRED (CFT)	CREST BASIN	TOP OF BASIN	BTM OF BASIN	DEPTH OF BASIN	DESIGN VOL. PROVIDED (CFT)
1	126,226 SFT	3.89 IN	40,908 CFT	844.0	844.5	841.0	3.0'	44,241 CFT
2	36,800 SFT	3.89 IN	11,930 CFT	658.0	658.5	656.5	1.5'	13,576 CFT
3	7,650 SFT	3.89 IN	2,480 CFT	643.5	644.0	642.5	1.0'	2,835 CFT
4	67,888 SFT	3.89 IN	22,008 CFT	645.0	645.5	642.0	3.0'	22,692 CFT
5	37,000 SFT	3.89 IN	11,995 CFT	647.5	648.0	645.0	2.5'	12,375 CFT

STORAGE VOLUME CALCULATED FROM ELEVATION BELOW THE EMERGENCY OVERFLOW ELEVATION

SAMPLE DRAINAGE CALCULATIONS:

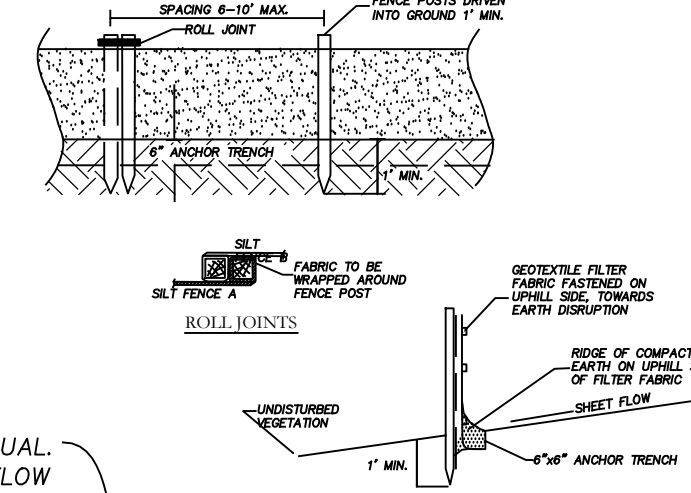
DISTRICT #1: (OVERLOOK EAST @ 41 RV SITES)
LENGTH OF ROAD: 1387 LIN FT
IMPERVIOUS AREA: 1,387 FT X 26' WIDE ROAD = 36,026 SFT
PROPOSED HOMES: 41 SITES X 2,200 SFT/SITE = 90,200 SFT
TOTAL IMPERVIOUS AREA: 219,974 SFT
25 YEAR STORM VOLUME: 126,226 SFT X 3.89 IN = 40,908 CFT REQ'D
BASIN #1: 44,241 CFT PROV
FLOOD CONTROL VOLUME: "C"=.81 =>8,220 CFT/AC = 23,820 CFT
PRE-TREATMENT FOREBAY VOLUME: =>5% OF FLOOD CONTROL
=>5% OF 23,820 CFT = 1,191 CFT REQ'D
=1,250 CFT PROV'D

DISTRICT #2: (OVERLOOK EAST @ 12 RV SITES)
LENGTH OF ROAD: 400 LIN FT
IMPERVIOUS AREA: 400 FT X 26' WIDE ROAD = 10,400 SFT
PROPOSED HOMES: 12 RV SITES X 2,200 SFT/SITE = 26,400 SFT
TOTAL IMPERVIOUS AREA: 36,800 SFT
25 YEAR STORM VOLUME: 36,800 SFT X 3.89 IN = 11,930 CFT REQ'D
BASIN #2: 13,576 CFT PROV
FLOOD CONTROL VOLUME: "C"=.81 =>8,220 CFT/AC = 6,945 CFT
PRE-TREATMENT FOREBAY VOLUME: =>5% OF FLOOD CONTROL
=>5% OF 6,945 CFT = 348 CFT REQ'D
=353 CFT PROV'D

DISTRICT #3: (OVERLOOK EAST & 2 RV SITES)
LENGTH OF ROAD: 125 LIN FT
IMPERVIOUS AREA: 125 FT X 26' WIDE ROAD = 3,250 SFT
PROPOSED HOMES: 2 SITES X 2,200 SFT/HOME = 4,400 SFT
TOTAL IMPERVIOUS AREA: 7,650 SFT
25 YEAR STORM VOLUME: 7,650 SFT X 3.89 IN = 2,480 CFT REQ'D
BASIN #3: 2,841 CFT PROV
FLOOD CONTROL VOLUME: "C"=.81 =>8,220 CFT/AC = 1,443 CFT
PRE-TREATMENT FOREBAY VOLUME: =>5% OF FLOOD CONTROL
=>5% OF 1,443 CFT = 73 CFT REQ'D
=1,06 CFT PROV'D

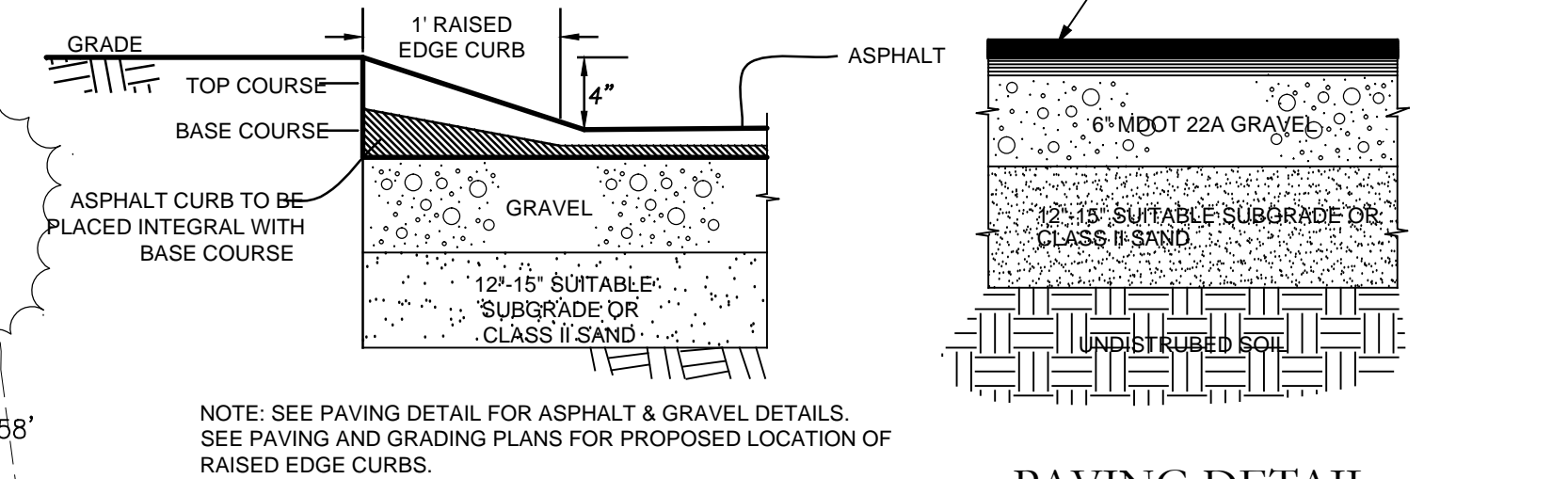
DISTRICT #4: (OVERLOOK WEST & 18 RV SITES)
LENGTH OF ROAD: 1,088 LIN FT
IMPERVIOUS AREA: 1,088 FT X 26' WIDE ROAD = 28,288 SFT
PROPOSED HOMES: 18 SITES X 2,200 SFT/SITE = 39,600 SFT
TOTAL IMPERVIOUS AREA: 67,888 SFT
25 YEAR STORM VOLUME: 67,888 SFT X 3.89 IN = 22,008 CFT REQ'D
BASIN #4: 22,125 CFT PROV
FLOOD CONTROL VOLUME: "C"=.81 =>8,220 CFT/AC = 12,811 CFT
PRE-TREATMENT FOREBAY VOLUME: =>5% OF FLOOD CONTROL
=>5% OF 12,811 CFT = 641 CFT REQ'D
=640 CFT PROV'D

DISTRICT #5: (OVERLOOK WEST @ 8 RV SITES)
LENGTH OF ROAD: 750 LIN FT
IMPERVIOUS AREA: 750 FT X 26' WIDE ROAD = 19,400 SFT
PROPOSED HOMES: 8 RV SITES X 2,200 SFT/SITE = 17,600 SFT
TOTAL IMPERVIOUS AREA: 37,000 SFT
25 YEAR STORM VOLUME: 37,000 SFT X 3.89 IN = 11,995 CFT REQ'D
BASIN #5: 12,375 CFT PROV
FLOOD CONTROL VOLUME: "C"=.81 =>8,220 CFT/AC = 6,983 CFT
PRE-TREATMENT FOREBAY VOLUME: =>5% OF FLOOD CONTROL
=>5% OF 6,983 CFT = 349 CFT REQ'D
=325 CFT PROV'D



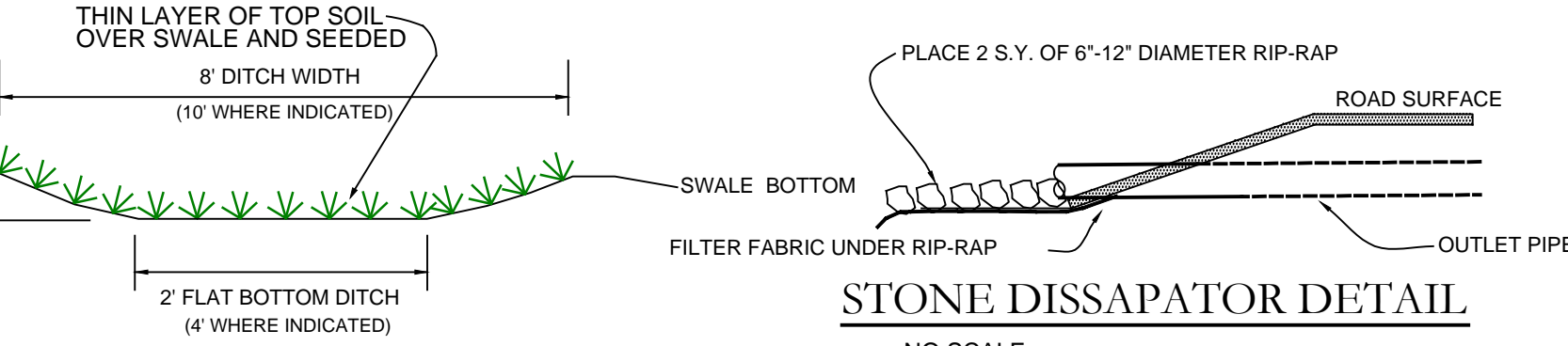
EMERGENCY OVERFLOW

NO SCALE



RAISED EDGE ASPHALT DETAIL

NO SCALE



GRASS DRAINAGE SWALE

NO SCALE

STONE DISSIPATOR DETAIL

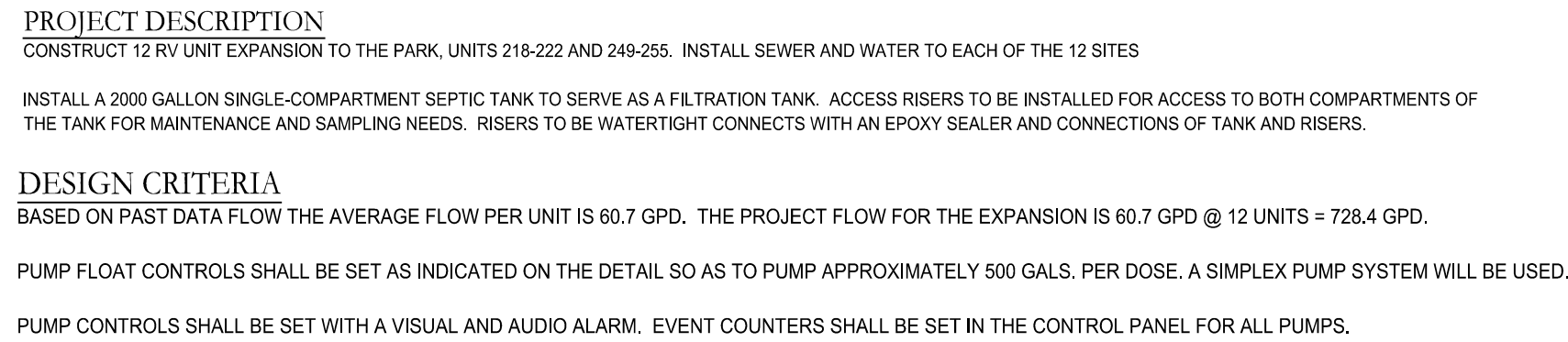
NO SCALE

Andersen & Crain, Inc.
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2636 Garfield Road N - Suite 30
Traverse City, MI 49686
Phone: (231) 947-7255 Fax: (231) 947-7275

DRWN BY: CLA
DSGN BY: WLC
DATE: 12-16-08
REV DATE: 1-26-09 SITE REVISIONS
03-10-09 SITE REVISIONS
03-17-2015 TWP REVIEW
03-24-2015 TWP REVIEW

PROPOSED STORMWATER CONTROL PLAN
TRAVERSE BAY RV RESORT
SECTION 36-TOWN 28 NORTH-RANGE 10 WEST
ACME TWP, GRAND TRAVERSE COUNTY, MICHIGAN

JOB NUMBER:
218808
SHEET **3** OF **10**



SYSTEM SHALL BE A SIMPLEX PUMP WITH A FORCE MAIN TO EXISTING SEWER MAINHOLE.

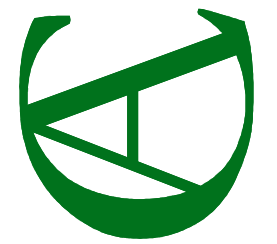
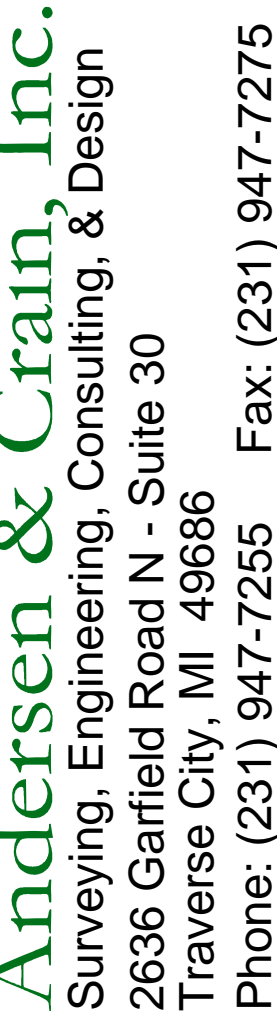
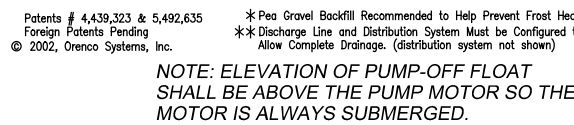
THE LIBERTY PUMP MODEL 251, $\frac{1}{3}$ HP SINGLE PHASE PUMP SHALL BE USED FOR THE DISPERSAL TO EXISTING SYSTEM FROM DOSING TANK SHALL MEET OR EXCEED

10.0 GPM @ 9.3 TDH, OR APPROVED EQUAL.

THE CONTROL PANELS SHALL BE SIMPLEX SYSTEM WITH AUDIO AND VISUAL ALARMS, HOUR METERS AND EVENT COUNTERS.

1. ALL UTILITIES SHALL BE COMPLETELY TESTED AND APPROVED PRIOR TO CONNECTION TO EXISTING MAINS

- ALL WATERMAIN AND SEWERMAIN SHALL HAVE A MINIMUM OF TWO (2) FEET OF COVER BELOW FINISHED GRADE. TEN (10) FEET OF HORIZONTAL SEPARATION BETWEEN SEWERMAIN AND WATERMAIN AND WATER SERVICE SERVICES.
3. WATERMAIN, SEWERMAIN AND FORCEMAIN SHALL BE TESTED PER GRAND TRAVERSE COUNTY' D.P.W. REQUIREMENTS.
4. CONTRACTOR SHALL SUBMIT CERTIFICATION OF ALL CONSTRUCTION MATERIALS TO THE DESIGN ENGINEER PRIOR TO ACCEPTANCE BY THE MDCO.
5. THE CONTRACTOR SHALL SUBMIT NAMES AND PHONE NUMBERS OF THEIR 24 HOUR EMERGENCY PERSONNEL PRIOR TO CONSTRUCTION.
6. A CAMPGROUND OWNER SHALL ENSURE THAT ANY PLASTIC WATERLINE THAT IS USED IN A CAMPGROUND IS MADE OF A MATERIAL APPROVED BY THE DEPARTMENT AND HAS A MINIMUM PRESSURE RATING OF 160 POUNDS PER SQUARE INCH (SDR-21). A CAMPGROUND OWNER SHALL ENSURE THAT THE PIPE, PLASTIC FITTINGS, AND SOLVENT CEMENTS ARE APPROVED BY NSF (NATIONAL SANITATION FOUNDATION) INTERNATIONAL FOR POTABLE WATER SUPPLY AND BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL.
7. A CAMPGROUND OWNER SHALL ENSURE THAT ALL SANITARY SEWERS (SDR-35) WHICH ARE LESS THAN 10 INCHES IN DIAMETER HAVE CLEANOUTS LOCATED AT THE END OF EACH SEWER LINE; AT ALL CHANGES IN GRADE, SIZE, AND DIRECTION OF MORE THAN 45 DEGREES; AND AT DISTANCES OF NOT MORE THAN 100 FEET LONG SEWERS
8. IF A SANITARY SEWER LINE CROSSES A WATERLINE, THEN A CAMPGROUND OWNER SHALL ENSURE THAT THERE IS A MINIMUM OF 12 INCHES OF CLEAR VERTICAL ISOLATION BETWEEN THE SEWER LINE AND THE WATERLINE. IF IT IS NOT FEASIBLE TO HAVE A MINIMUM OF 12 INCHES OF VERTICAL ISOLATION, THEN A CAMPGROUND OWNER SHALL ENSURE THAT THE SANITARY SEWER LINE IS ENCASED IN CONCRETE FOR 5 FEET ON EACH SIDE OF THE CROSSING. A CAMPGROUND OWNER SHALL ENSURE THAT 1 FULL LENGTH OF WATERLINE IS CENTERED OVER THE SEWER CROSSING.
9. INSTALL INTERMITTENT DRAINS FROM SEWER AND WATER TRENCHES TO ALLOW FOR WATER BEING TRAPPED IN AND AROUND MAINS.
10. A 12 GAUGE SOLID TRACER WIRE SHALL BE RUN WITH THE PIPE AND A DETECTABLE TRACER TAPE MIN 2" WIDTH SHALL BE BURIED 1'-2' BELOW GRADE ABOVE PIPE.
11. CONTROLS AND PUMPS TO BE PLACED ON SEPARATE CIRCUIT BREAKERS

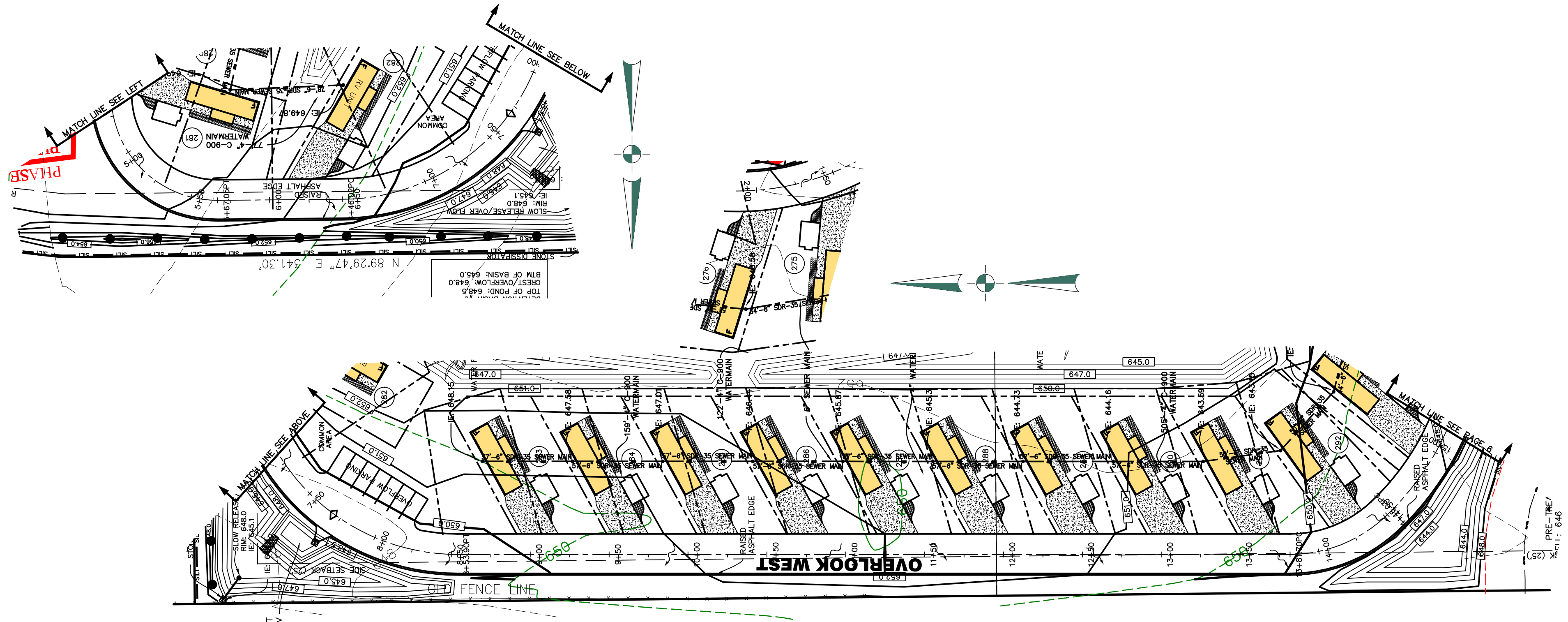
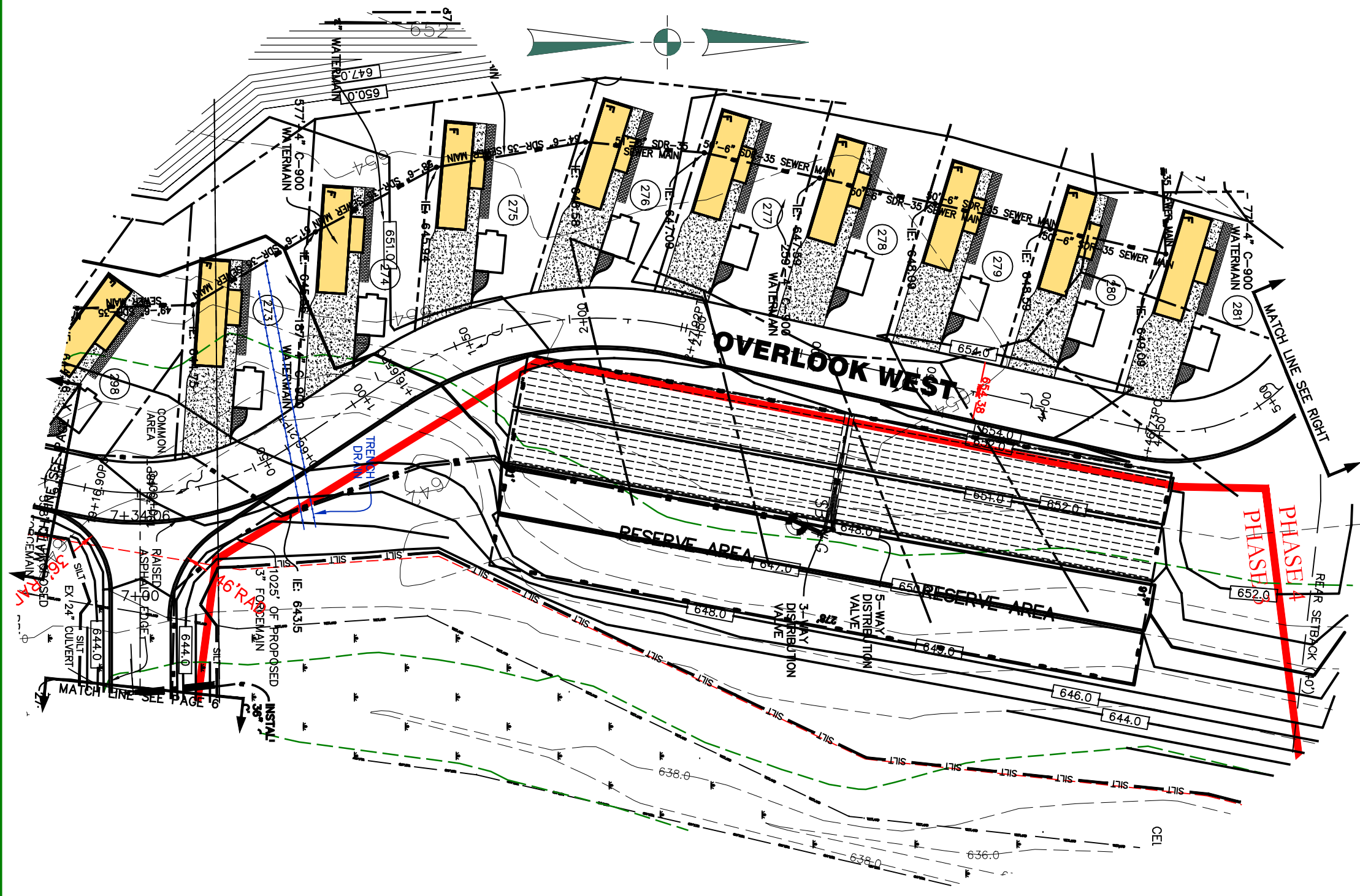


DRWN BY: WLC
 DSGN BY: WLC
 DATE: 02-11-2015
 REV DATE:
 03-24-2015 TWP F

SITE UTILITY PLAN TRAVERSE BAT RV PARK

SECTION 36-TOWN 28 NORTH-RANGE 10 WEST
ACME TWP, GRAND TRAVERSE COUNTY, MICHIGAN

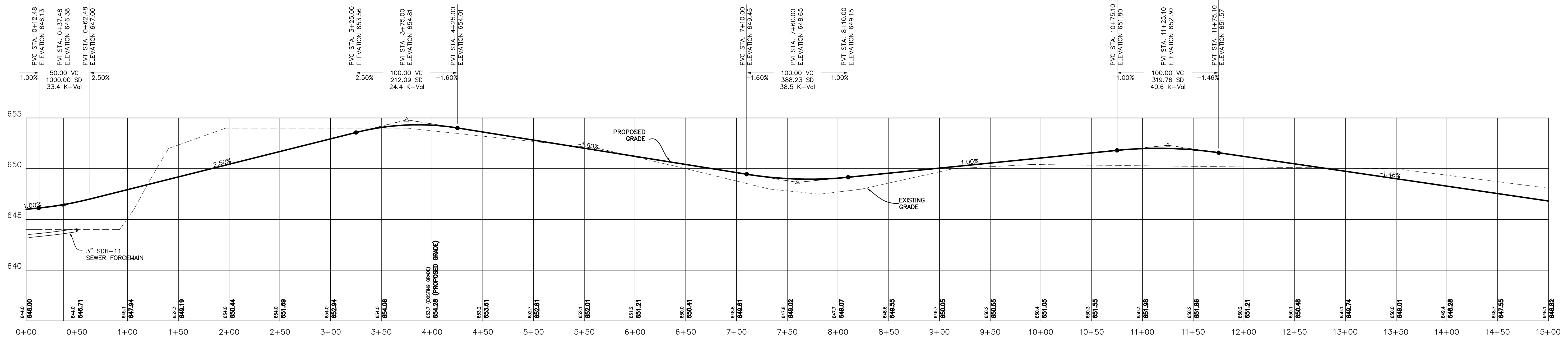
OB NUMBER:
218808



OVERLOOK WEST - PLAN VIEW STATION 0+00 => 15+00

SCALE: 1" = 50 FEET

- LEGEND**
- PROPOSED LOT LINE
 - PROPOSED EASEMENT LINE
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - DRAINAGE DIRECTION ARROW
 - EXISTING TREE LINE
 - PROPOSED RETENTION BASIN
 - PROPOSED SEWER FORCEMAIN
 - PROPOSED WATERMAIN
 - PROPOSED SEPTIC FIELD
 - PROPOSED SILT FENCING
 - EXISTING SOIL BORING LOCATION
 - WETLAND LIMITS

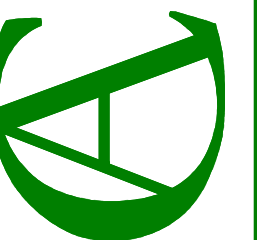


OVERLOOK WEST - PROFILE VIEW STA 0+00->15+00

VERTICAL SCALE: 1" = 5 FEET
HORIZONTAL SCALE: 1" = 50 FEET



Andersen & Crain, Inc
Surveying, Engineering, Consulting, & Design
2636 Garfield Road N - suite 30
Traverse City, MI 49686
Phone: (231) 947-7255 Fax: (231) 947-7275



DRWN BY: CLA
DSGN BY: WLC
DATE: 12-16-08
REV DATE: 08-18-09
REV DATE: 03-24-2015
REVISIONS
HEALTH DEPARTMENT/IDEQ

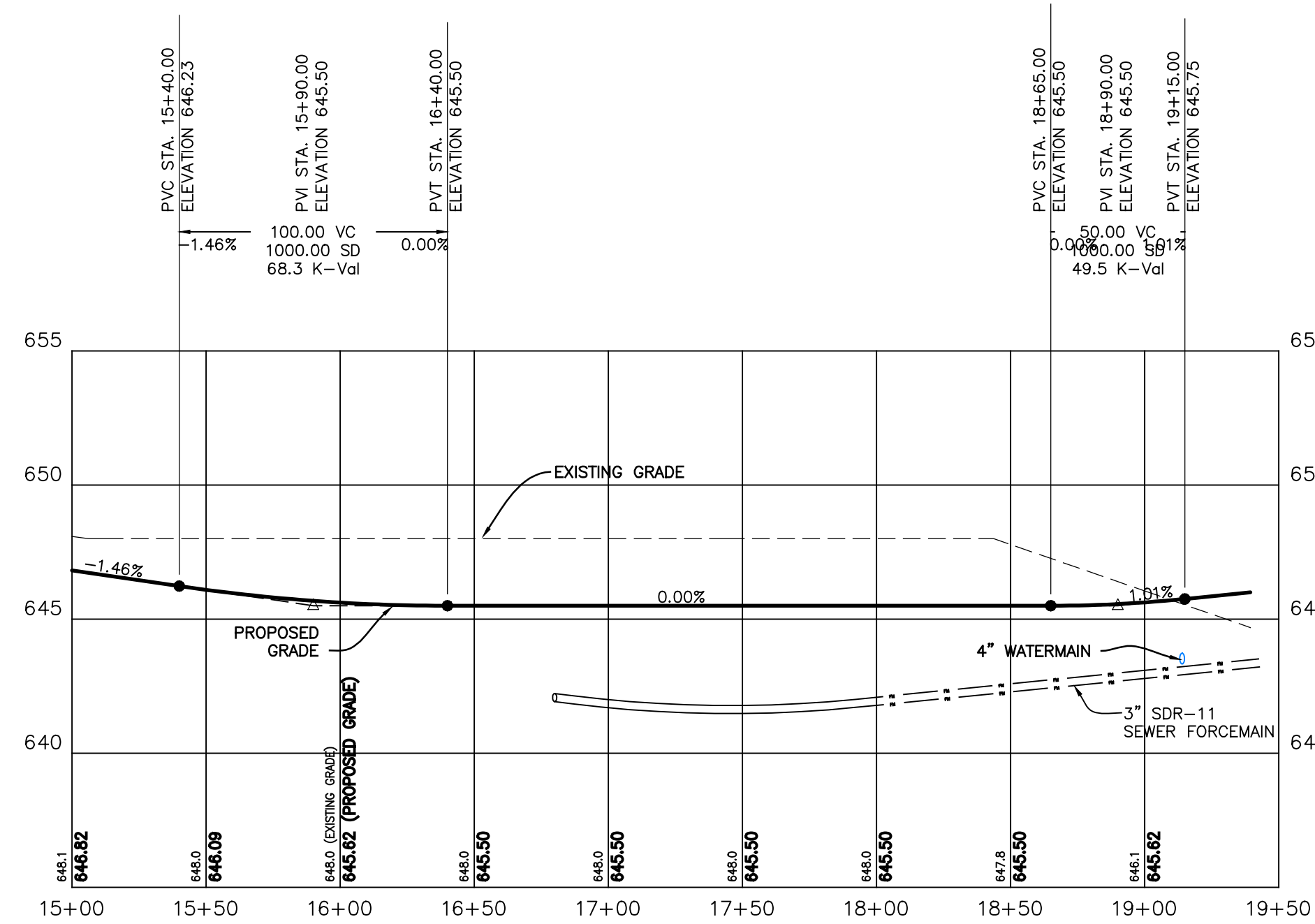
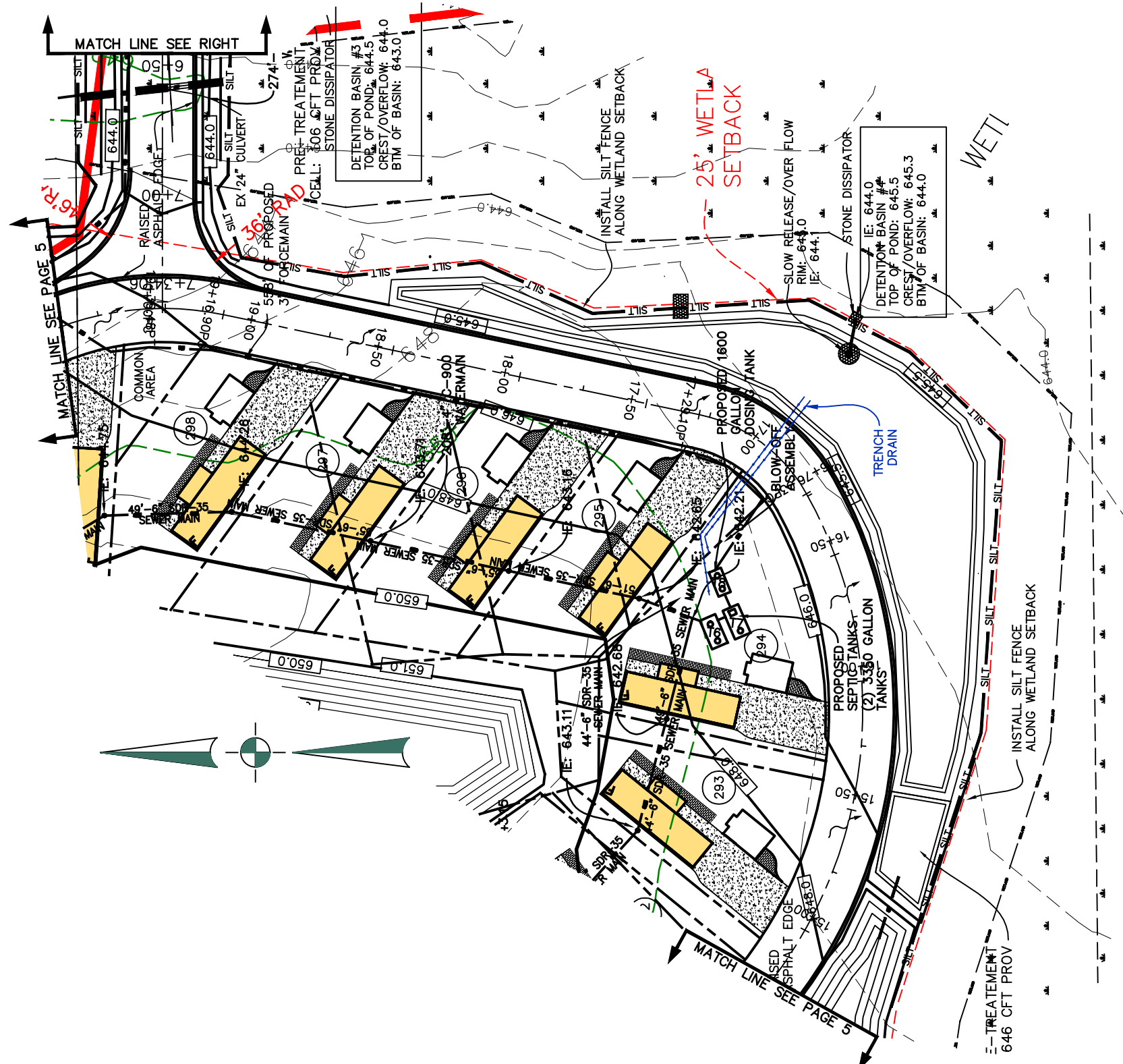
TRAVERSE BAY RV PARK
OVERLOOK WEST STA: 0+00=>15+00
SECTION 36 - TOWN 28 NORTH - RANGE 10 WEST
ACME TWP, GRANDTRAVERSE COUNTY, MICHIGAN

JOB NUMBER:
218808

SHEET **5** OF **10**

OVERLOOK WEST - PLAN VIEW STA 15+00 => 19+40

SCALE: 1" = 50 FEET

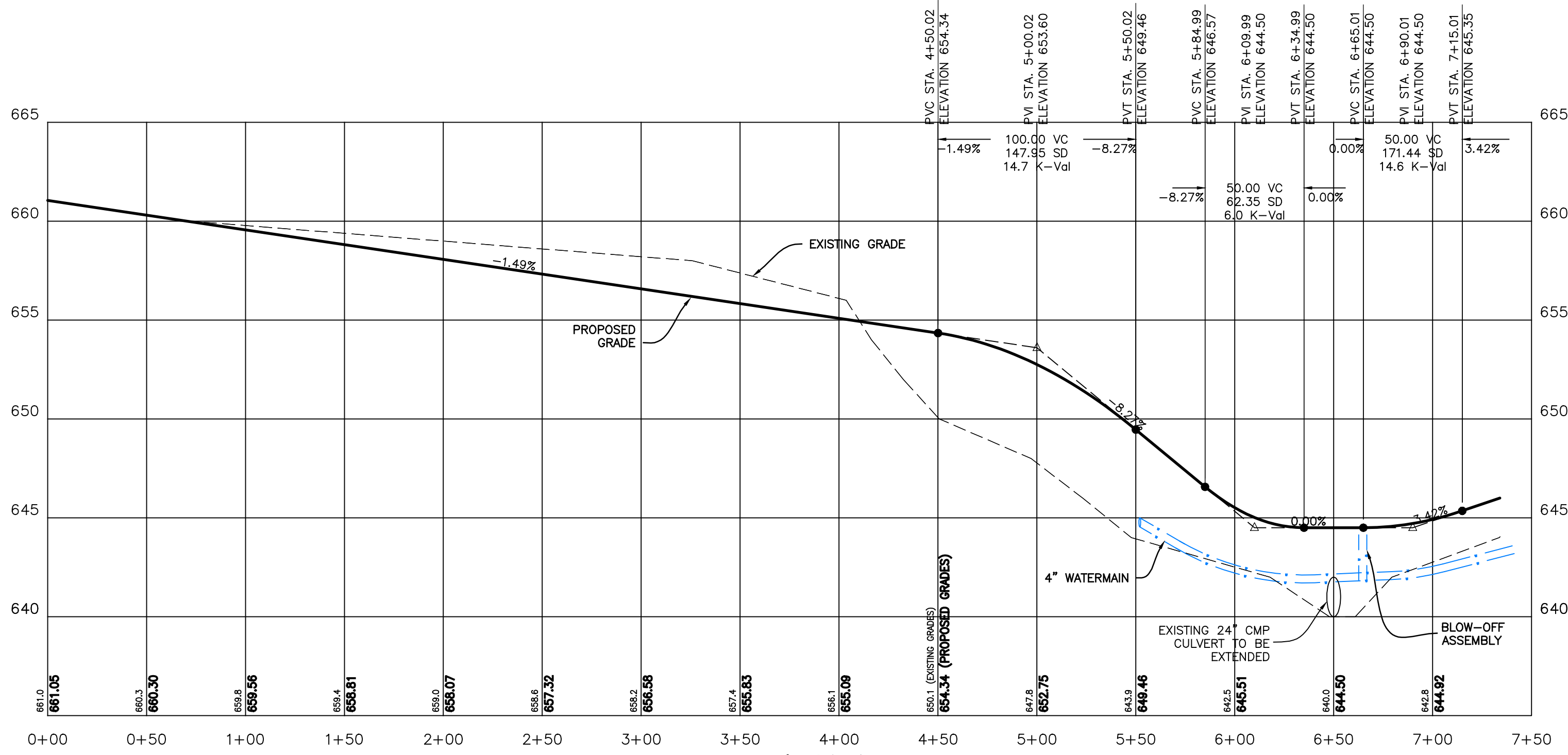
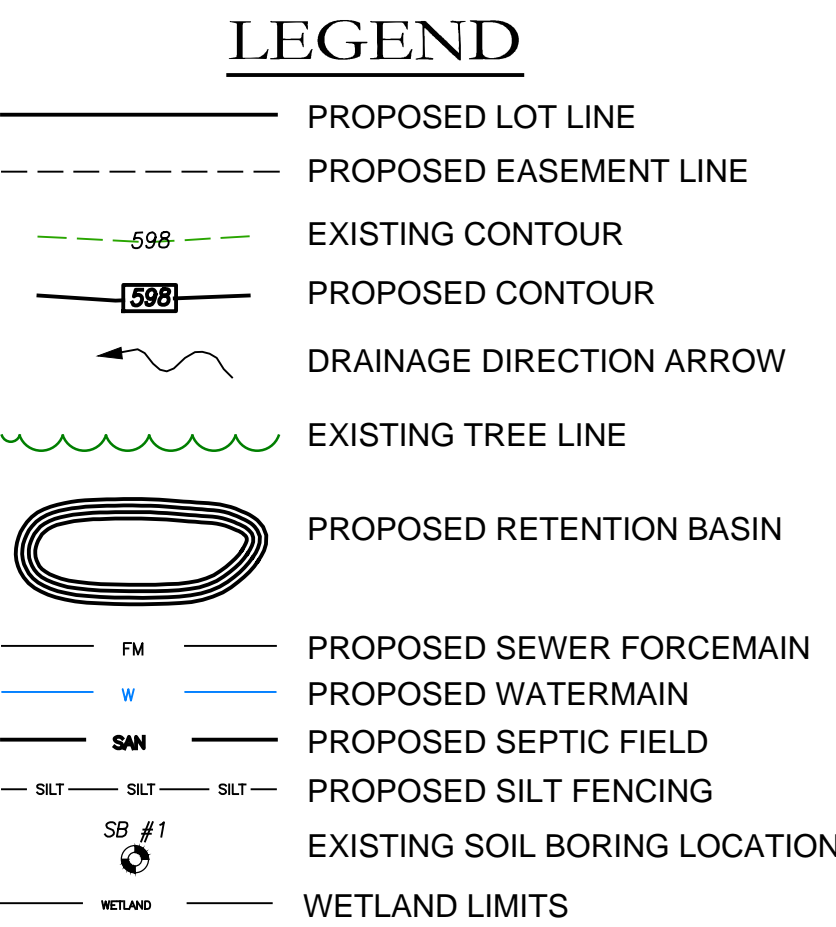


OVERLOOK WEST - PROFILE VIEW

VERTICAL SCALE: 1" = 5 FEET
HORIZONTAL SCALE: 1" = 50 FEET

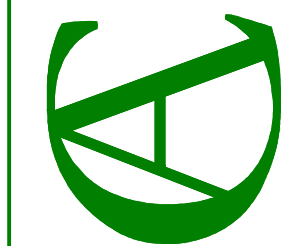
OVERLOOK EAST - PLAN VIEW STA 0+00 => 7+34

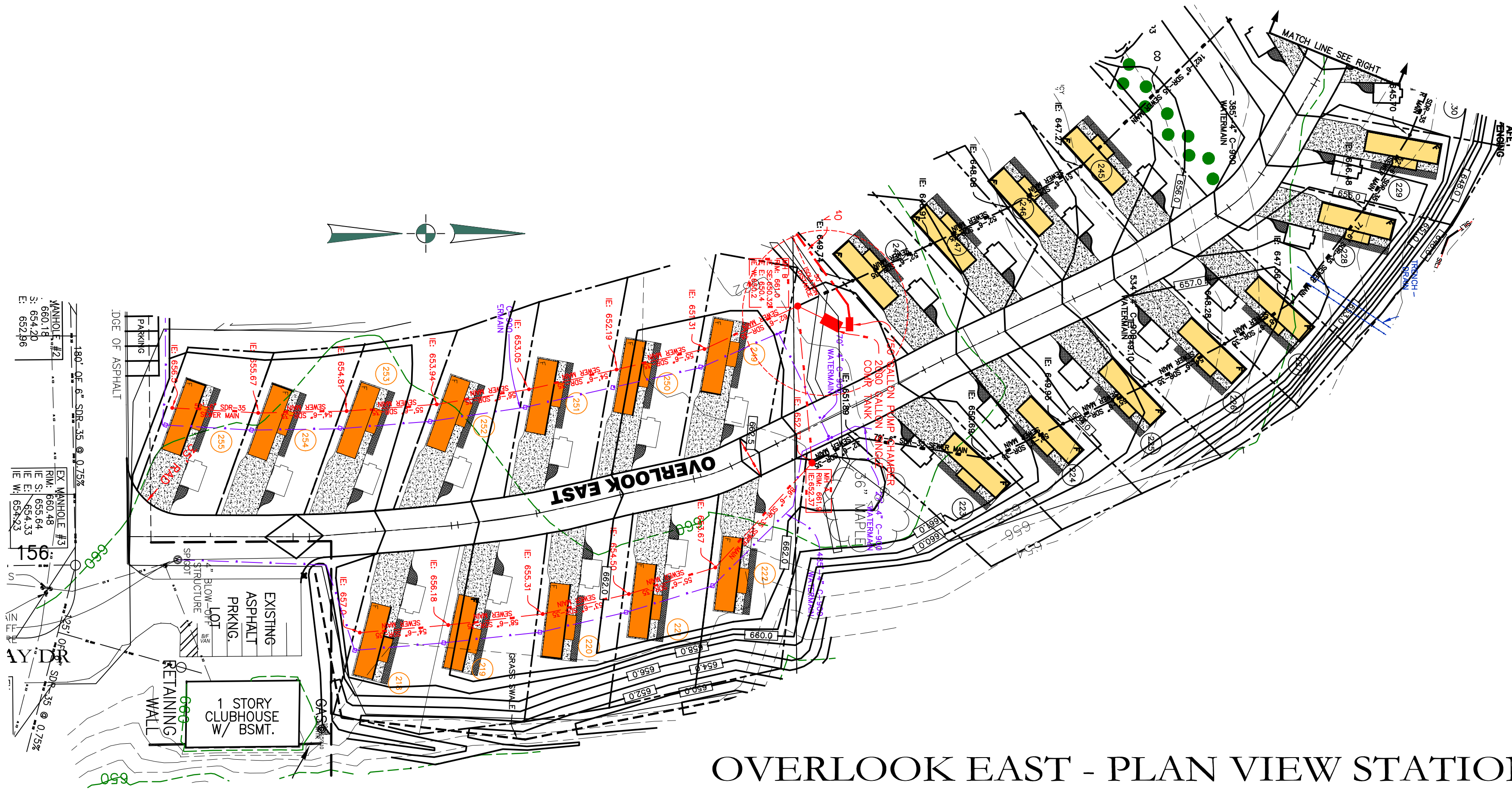
SCALE: 1" = 50 FEET



OVERLOOK EAST - PROFILE VIEW

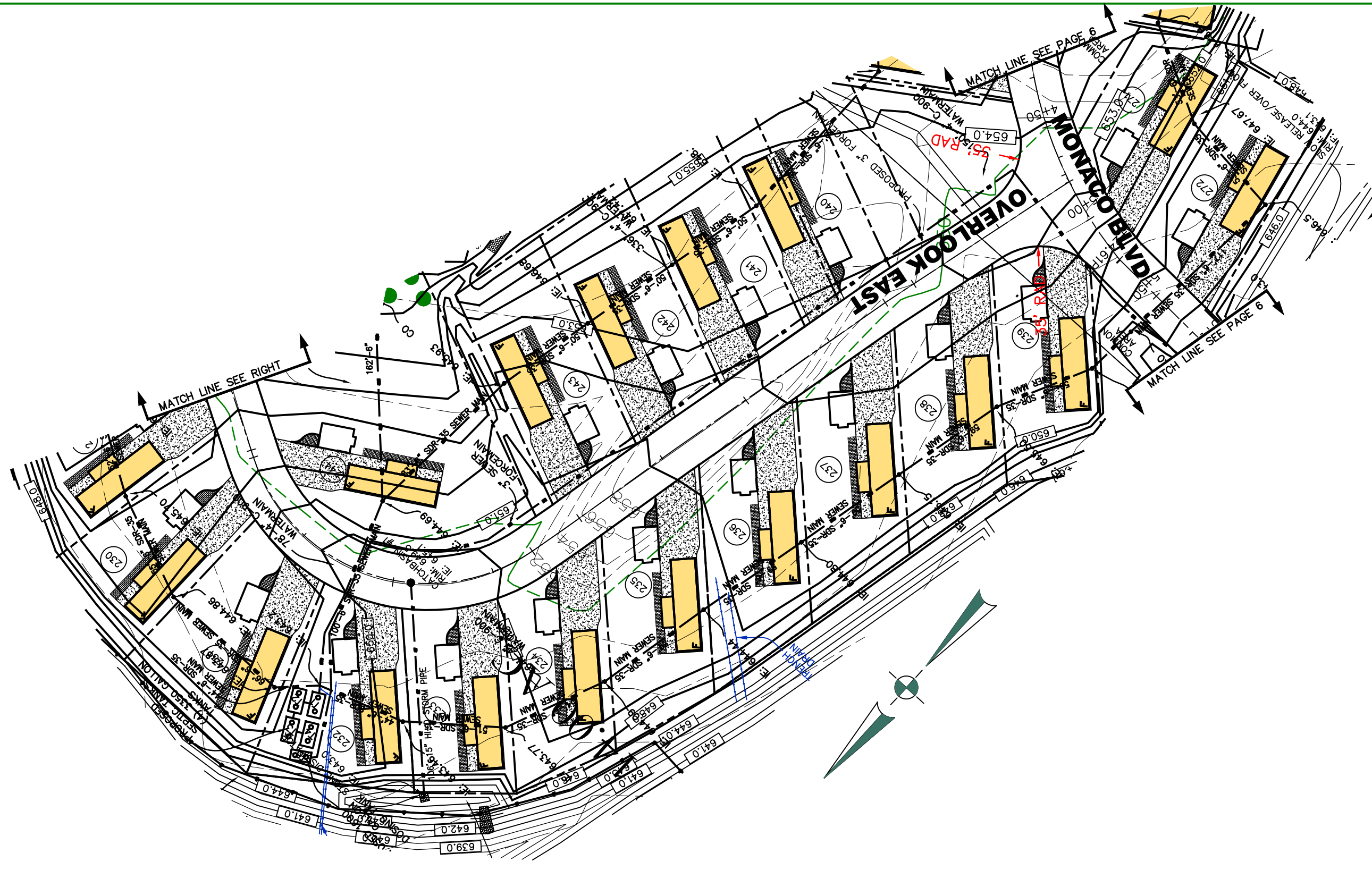
VERTICAL SCALE: 1" = 5 FEET
HORIZONTAL SCALE: 1" = 50 FEET





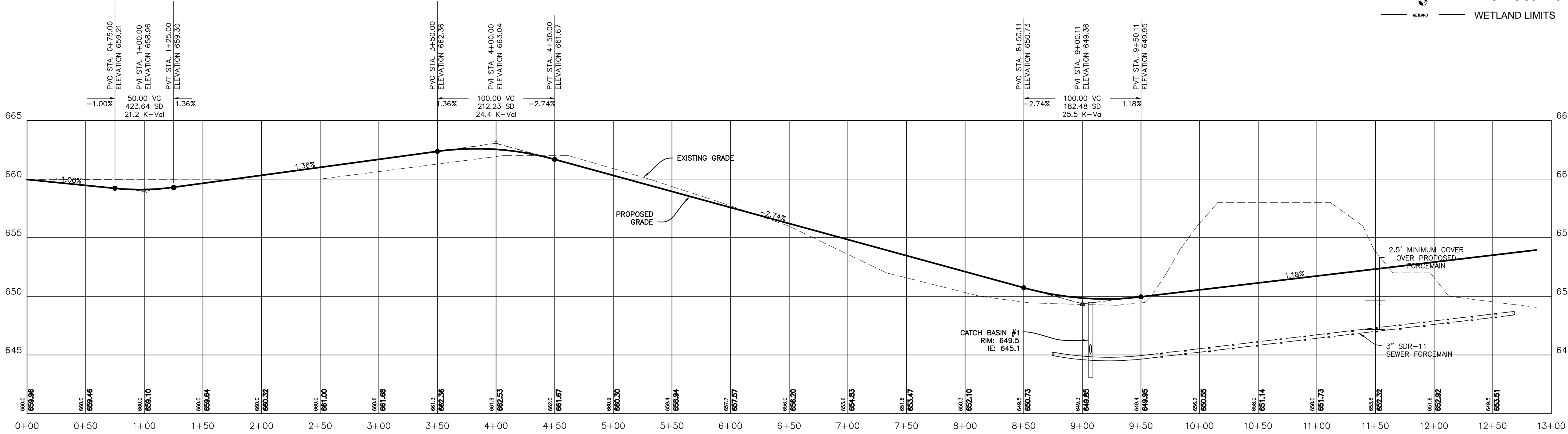
OVERLOOK EAST - PLAN VIEW STATION 0+00 => 12+87

SCALE: 1" = 50 FEET



LEGEND

- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DRAINAGE DIRECTION ARROW
- EXISTING TREE LINE
- PROPOSED RETENTION BASIN
- FM
- W
- SM
- SILT
- SB #1
- WETLAND
- PROPOSED SEWER FORCEMAIN
- PROPOSED WATERMAIN
- PROPOSED SEPTIC FIELD
- PROPOSED SILT FENCING
- EXISTING SOIL BORING LOCATION
- WETLAND LIMITS



OVERLOOK EAST - PROFILE VIEW

VERTICAL SCALE: 1" = 5 FEET
HORIZONTAL SCALE: 1" = 50 FEET



TRAVERSE BAY RV PARK
OVERLOOK EAST STA: 0+00=>12+87

SECTION 36 - TOWN 28 NORTH - RANGE 10 WEST
ACME TWP, GRAND TRAVERSE COUNTY, MICHIGAN

JOB NUMBER:
218808

SHEET **7** OF **10**

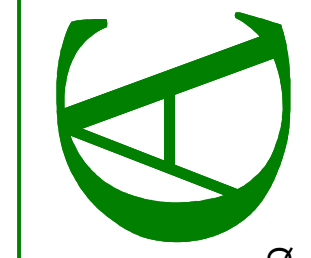
DRWN BY: CLA

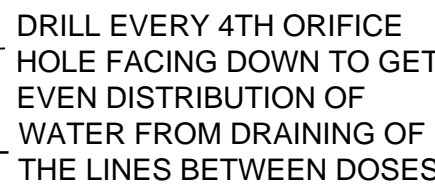
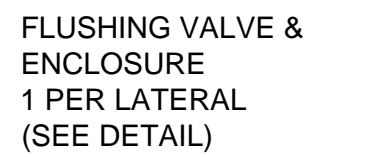
DSGN BY: WLC

DATE: 12-16-08

REV DATE: 08-18-2015
BY: J. SHEPHERD
REASON: SEPARATEMENT/INDEX

Andersen & Crain, Inc
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1-Application

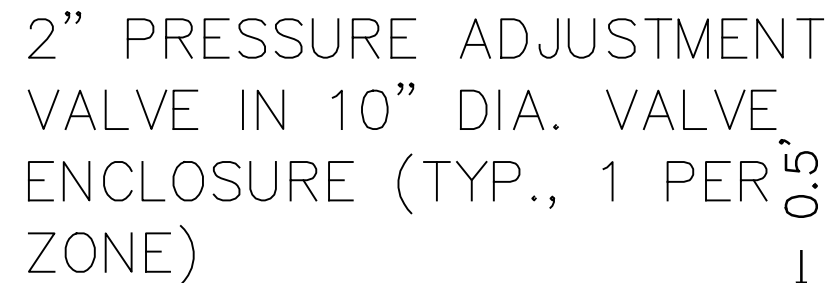
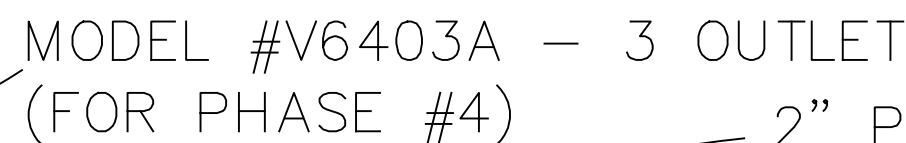
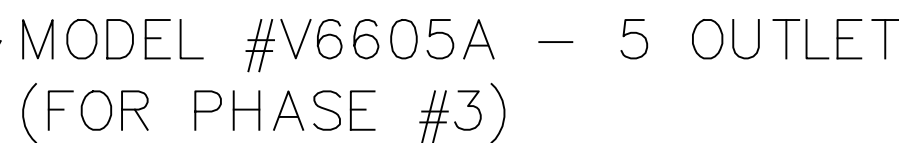
The Hydrotac 4000 and 6000 series valves are conducive to your efficient application. The construction materials used in their manufacture are compatible with most liquids and slurries. Particles that can cause the valve to not seal and operate properly will pass through the valve without causing any harm. A turbine submersible effluent pump, the screen and float assembly, and the discharge pipe must be installed from being passed into the pump and along the valve; the use of a float valve is recommended. The pressure available at the valve must be adequate pressure available at the valve to index.

2-Installation Location

The valve location in a waste water system is very important to its performance. It should be located as close relative to the drain fields and the valve will never drain the tank completely. The valve should be located so that it must drain to allow the stem and disc to spring up and cycle.

3-System Start-up

The transport line should always be flushed with clean water before starting. With the pump running, the float assembly close and open the ball upon this distributing flow.



SCALE: 1" = 15 FEET

CONSTRUCT NEW LOW PRESSURE COMMUNITY TREATMENT COLLECTION SYSTEM SUB-SURFACE DISPOSAL FIELD TO SERVE 81 RV UNIT SITES

THE PROPOSED FIELDS HAVE AN AREA OF 12,788 SFT STONE BED AREA PER FIELD AND A 12,788 SFT STONE BED AREA RESERVE SEPTIC AREA. A TYPICAL LAYOUT IS SHOWN BELOW WITH THE PIPING AND SIZING SHOWN IN THIS PLAN SET.

INSTALL FOUR (4) 3350 GALLON SINGLE-COMPARTMENT SEPTIC TANKS TO SERVE AS FILTRATION TANKS AND A 1600 GALLON DOSING CHAMBER FOR PHASE #3 AND TWO (2) 3350 GALLON SINGLE-COMPARTMENT SEPTIC TANKS TO SERVE AS FILTRATION TANKS AND A 1600 GALLON DOSING CHAMBER FOR PHASE #4. ACCESS RISERS TO BE INSTALLED FOR ACCESS TO BOTH COMPARTMENTS OF THE TANK FOR MAINTENANCE AND SAMPLING NEEDS. RISERS TO BE WATERTIGHT CONNECTS WITH AN EPOXY SEALER AND CONNECTIONS OF TANK AND RISERS.

ESTIMATED SANITARY SEWER AND DRIAN FIELD CALCULATIONS

SIZING OF THE DRAINFIELD IS BASED ON USING 6,300 GAL/DAY, ASSUMING RV SITES AT 75 GPD. USING 75 GPD WITH 81 POSSIBLE CONNECTIONS EQUATE TO 6,075 GPD FLOWS. 6,075 GPD WITH AN ABSORPTION RATE = 0.5 GAL/S.F./DAY, THEREFORE 6,075AL/DAY / 0.5 GAL/SF/DAY = 12,150 SFT TOTAL DRAINFIELD REQUIRED - TOTAL FIELD AREA PROVIDED IS 12,788 SFT.

PHASE #3 HAS 55 SITES @ 75 GPD/SITE = 4,125 GPD @ 0.5 GAL/S.F./DAY => 8,250 SFT FIELD AREA REQ'D -> USING A 5-WAY DISTRIBUTION VALVE AND 5 CELLS = 8,270 SFT FIELD AREA PROVIDED.

PHASE #4 HAS 26 SITES @ 75 GPD/SITE = 1,950 GPD @ 0.5 GAL/S.F./DAY => 3,900 SFT FIELD AREA REQ'D -> USING A 3-WAY DISTRIBUTION VALVE AND 3 CELLS = 4,518 SFT FIELD AREA PROVIDED

THE SOILS AT THE PROPOSED LOCATION ARE MEDIUM LOAMY SANDS. AN ACCEPTABLE DESIGN LOADING RATE IS 0.5 GALLONS PER SQUARE FOOT PER DAY FOR THESE SOIL TYPES.

TO OBTAIN THE NECESSARY DISTRIBUTION TO THE PROPOSED FIELD LOCATION A 1600 GALLON DOSING CHAMBER IS PROPOSED IN EACH PHASE. THE PUMPS WILL BE REQUIRED TO OBTAIN 61.7 GPM @ 60.6' TDH TO FILL ALL THE LATERALS AND MANIFOLD PIPING FOR PHASE #3 AND 61.7 GPM @ 52.9 TDH FOR PHASE #4. A DETAILED LAYOUT IS SHOWN IN THIS SET OF PLANS.

TITLE FIELD SHALL CONSIST OF A DRAINFIELD CONSTRUCTED OF 1.5" DRAINFIELD PIPING LATERALS, SPACED AS SHOWN, A 2" SCH 40 MANIFOLD, A 3" FORCEMAIN AND A 5-WAY DISTRIBUTION VALVE FOR PHASE #3 AND A 3-WAY DISTRIBUTION VALVE FOR PHASE #4 WITH A 12" THICK LAYER OF 10-A STONE AS DIRECTED BY THE LOCAL HEALTH DEPARTMENT.

PUMP FLOAT CONTROLS SHALL BE SET AS INDICATED ON THE DETAIL SO AS TO PUMP APPROXIMATELY 520 GALS. PER DOSE. A DUPLEX ALTERNATING PUMP SYSTEM WILL BE USED.

PUMP CONTROLS SHALL BE SET WITH A VISUAL AND AUDIO ALARM. EVENT COUNTERS SHALL BE SET IN THE CONTROL PANEL FOR ALL PUMPS

ALL SANITARY SEWER SHALL BE BURIED WITH A MINIMUM OF 2' OF COVER

ALL FORCEMAIN SEWERS SHALL BE BURIED WITH A MINIMUM OF 2' OF COVER.

FIELD LAYOUT AND VERIFICATION SHALL BE MADE PRIOR TO COMMENCING CONSTRUCTION. ANY DISCREPANCIES OR MODIFICATIONS SHALL BE IDENTIFIED AND THE ENGINEER SHALL BE CONSULTED.

A FLUSHING VALVE SHALL BE INSTALLED AT THE END OF EACH LATERAL.

A 12 GAUGE SOLID TRACER WIRE SHALL BE RUN WITH THE PIPE AND A DETECTABLE TRACER TAPE MIN 2" WIDTH SHALL BE BURIED 1'-2' BELOW GRADE ABOVE PIPE.

CONSTRUCTION ACCEPTANCE TESTING TO FOLLOW THE GRAND TRAVERSE COUNTY SEWER FORCEMAIN TESTING PROCEDURES

HEALTH DEPARTMENT PERMIT REQUIRED FOR OVERALL PROJECT PRIOR TO CONSTRUCTION. ELECTRICAL AND PLUMBING PERMITS MAY BE REQUIRED FOR THE INSTALLATION OF THE FORCEMAIN, SERVICE LINES AND GRINDER PUMP UNITS. CONTRACTOR TO CONTACT PLUMBING AND ELECTRICAL DEPARTMENT ON PLACEMENT OF SEVICES, FORCEMAIN AND GRINDER PUMPS FOR INSPECTION REQUIREMENTS.

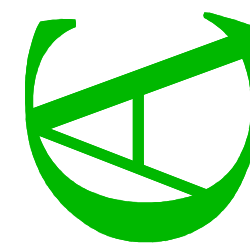
ALL SERVICE LEADS TO UNITS WILL BE SCHEDULE 40 OR SDR-21 PIPING.

CONTROLS AND PUMPS TO BE PLACED ON SEPERATE CIRCUIT BREAKERS

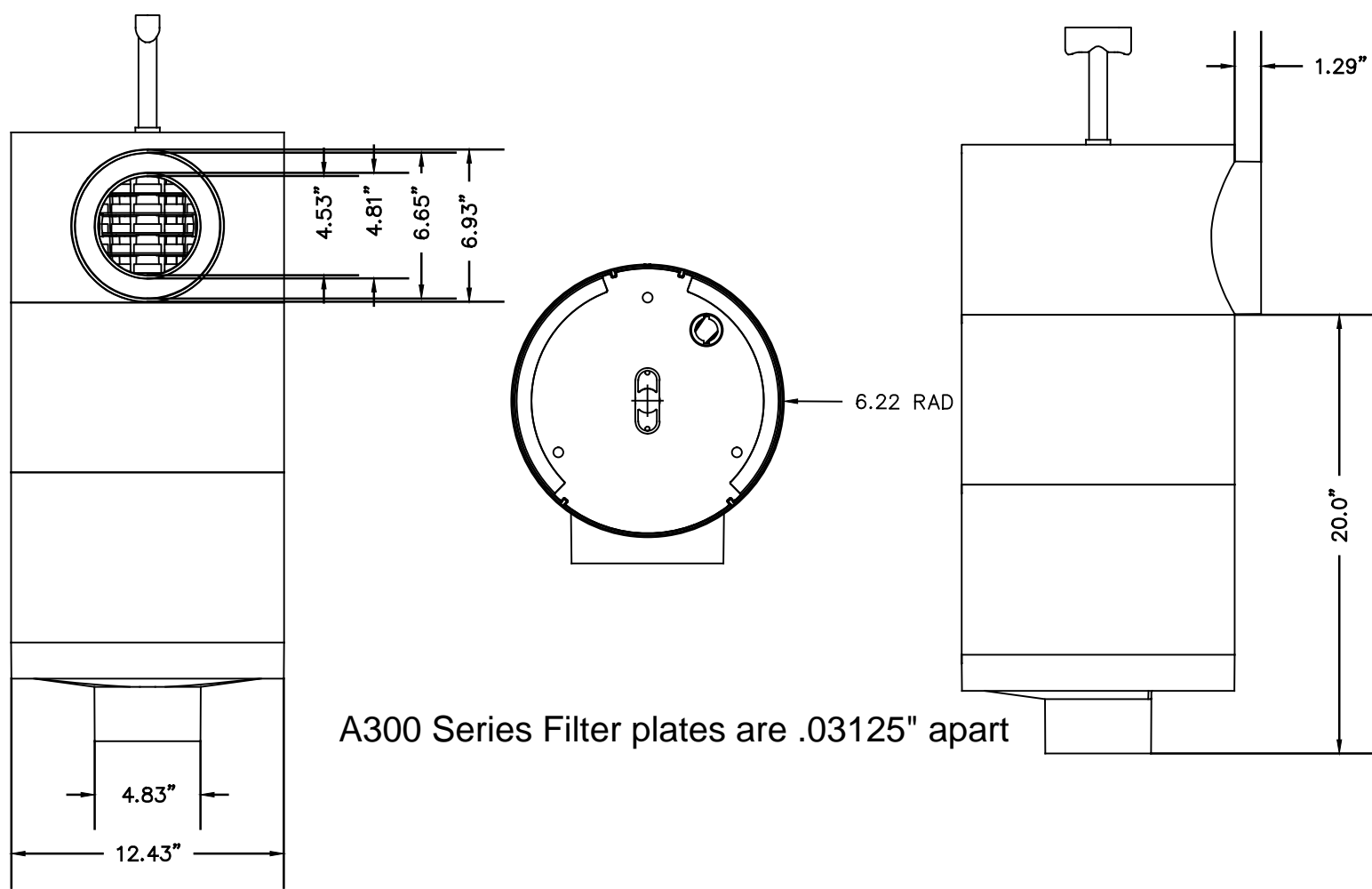
THE CONTROL PANEL SHALL BE DUPLEX ALTERNATING SYSTEM WITH A VCOM-DAX2PTRO PANEL.

SYSTEM SHALL BE DUPLEX W/ TWO (2) PUMPS ALTERNATING OPERATION WITH A FORCE MAIN CONTROL MANIFOLD

THE ORENCO PH 5015-12 1.0 HP EFFLUENT SINGLE PHASE PUMP SHALL BE USED FOR THE DISPERSAL TO THE SEPTIC FIELDS FROM DOSING TANK AND SHALL MEET OR EXCEED 61.7 GPM @ 60.6' TDH TO FILL ALL THE LATERALS AND MANIFOLD PIPING FOR PHASE #3 AND 61.7 GPM @ 52.9 TDH FOR PHASE #4.

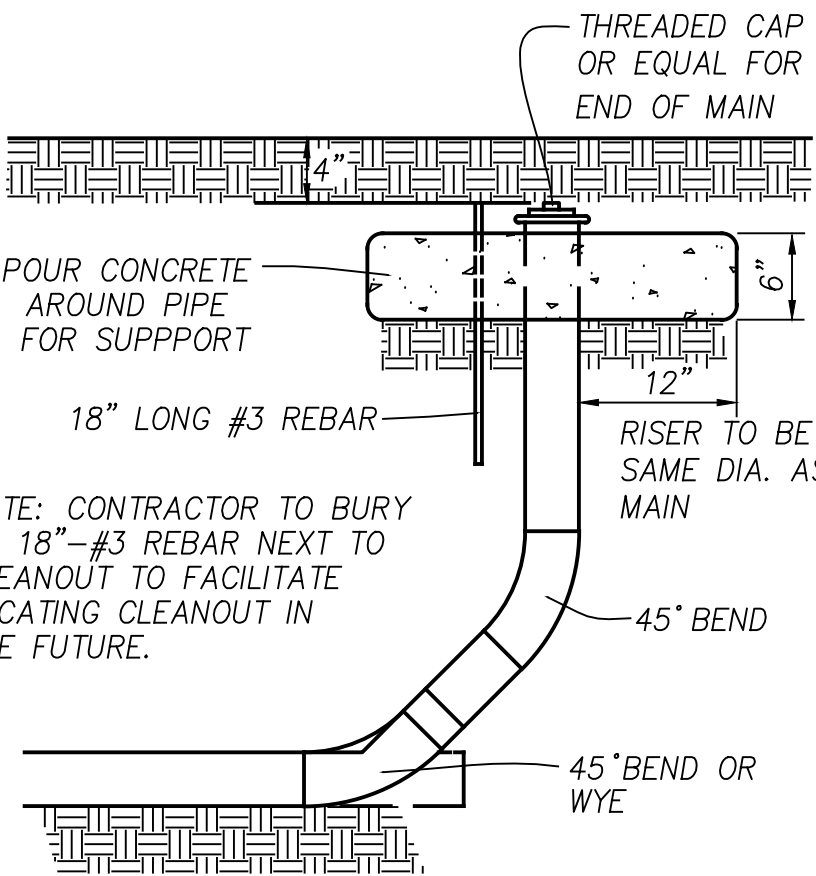


DRWN BY: WLC
DSGN BY: WLC
DATE: 3-10-09
REV DATE:
1-26-09 SITE REVISIONS
3-10-09 SITE REVISIONS
08-18-09 HEALTH DEPT / MDEQ
03-24-2015 TWP REVIEW



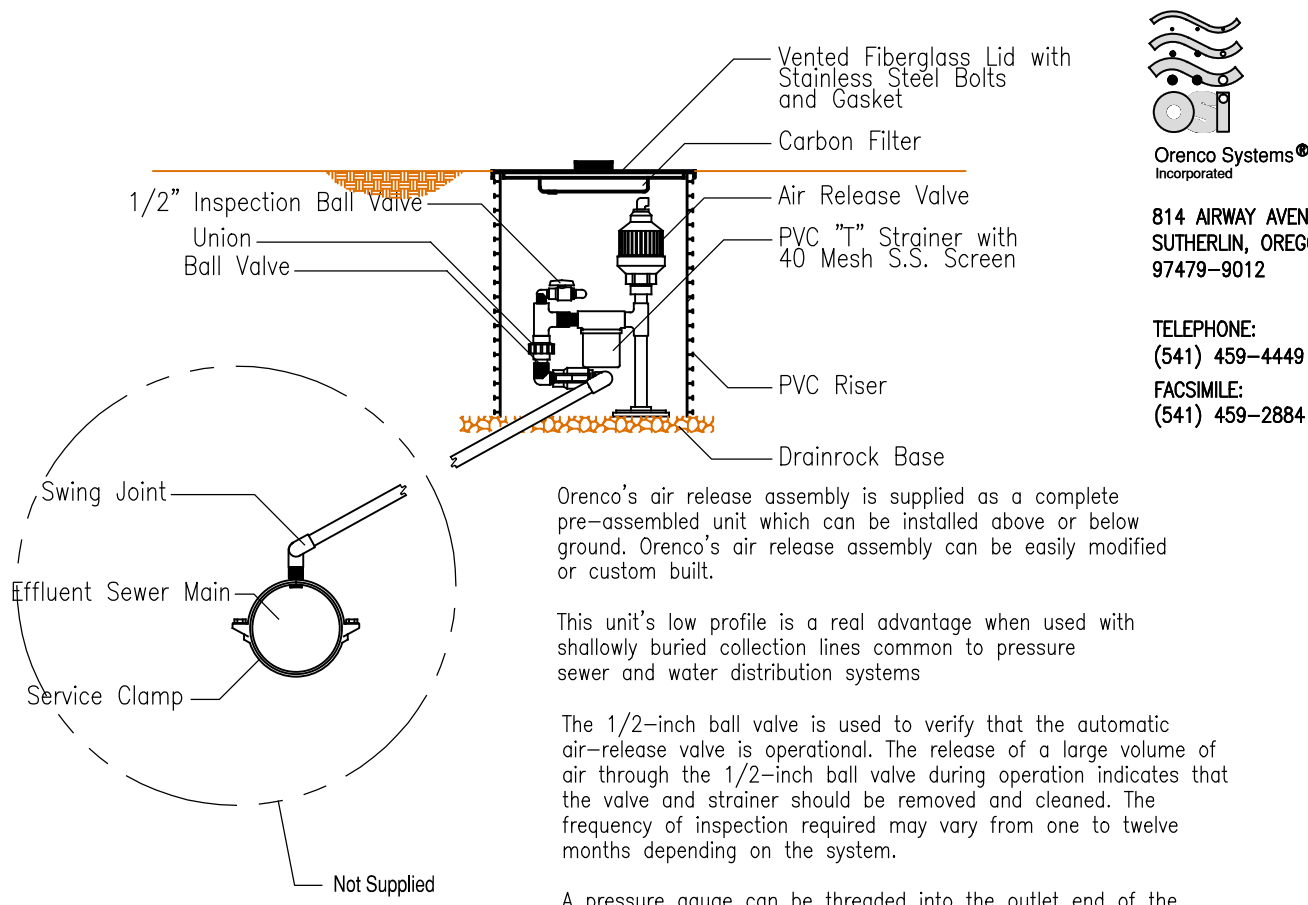
Zabel Environmental Technology
A300 - 12x28 - VC Detail

NO SCALE



CLEANOUT DETAIL

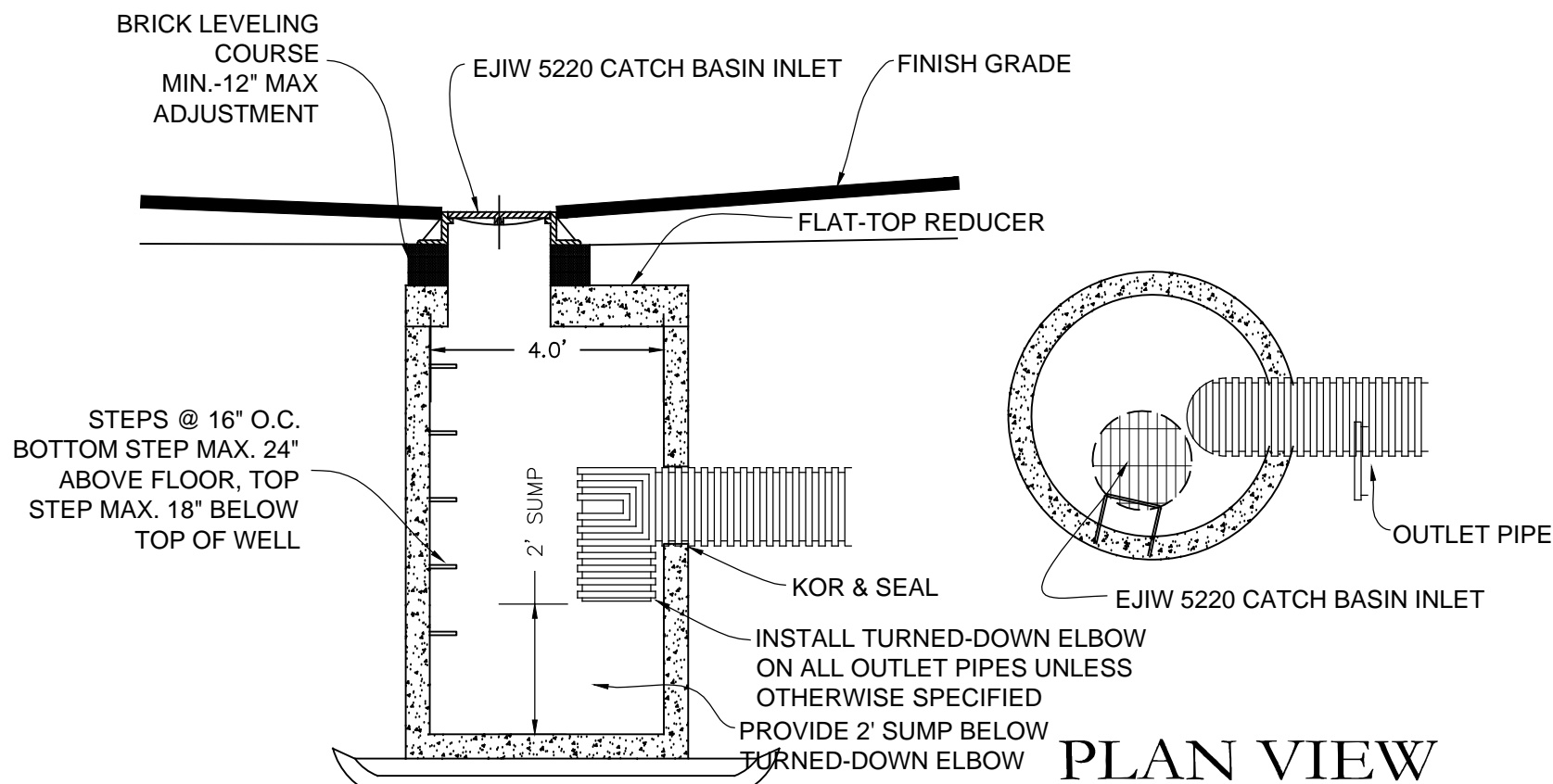
NO SCALE



AIR RELEASE ASSEMBLY

NO SCALE

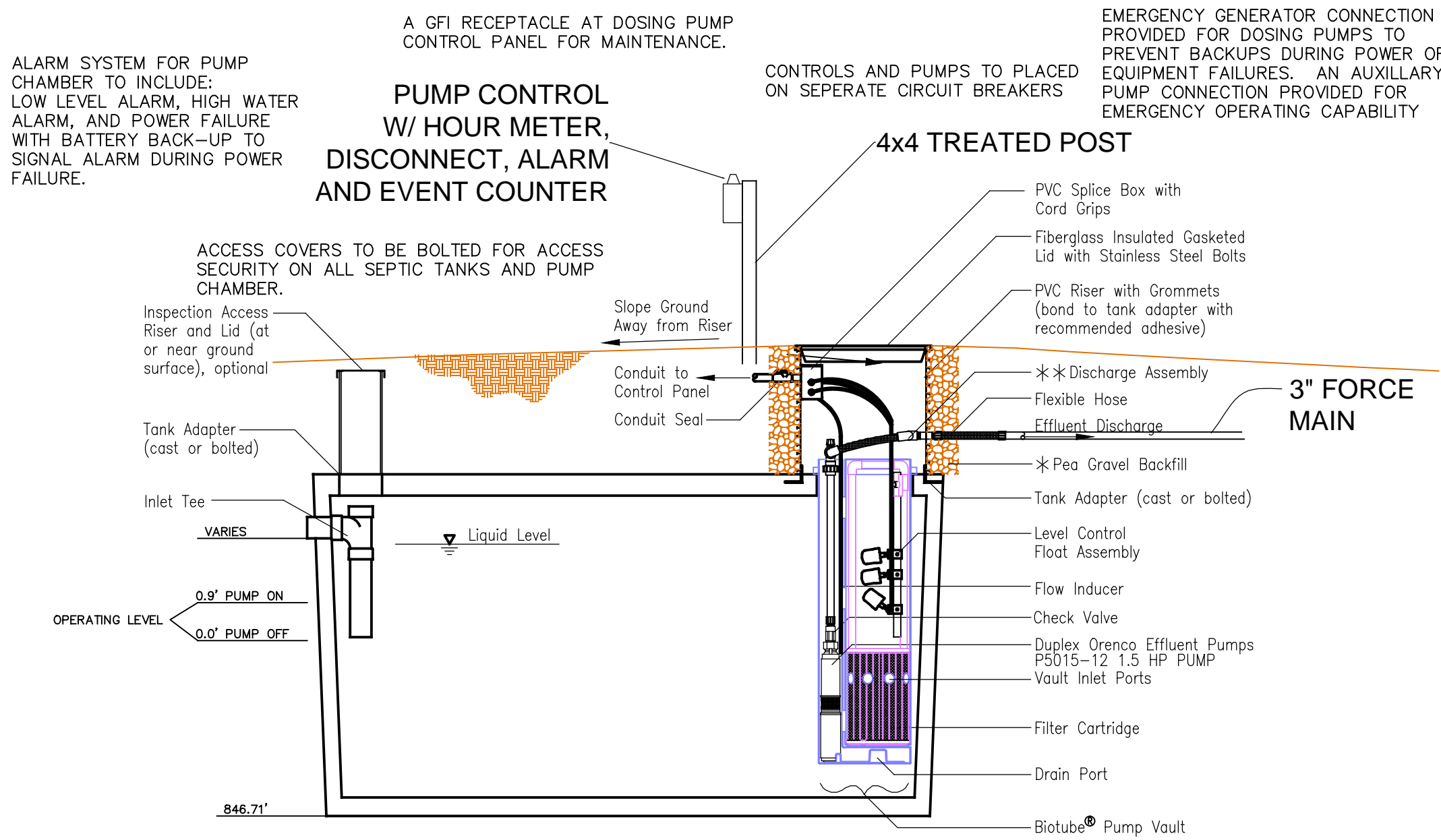
Orenco Systems®
Incorporated
814 AIRWAY AVENUE
SUTHERLIN, OREGON
97479-9012
TELEPHONE:
(541) 459-4449
FACSIMILE:
(541) 459-2884



SECTION VIEW

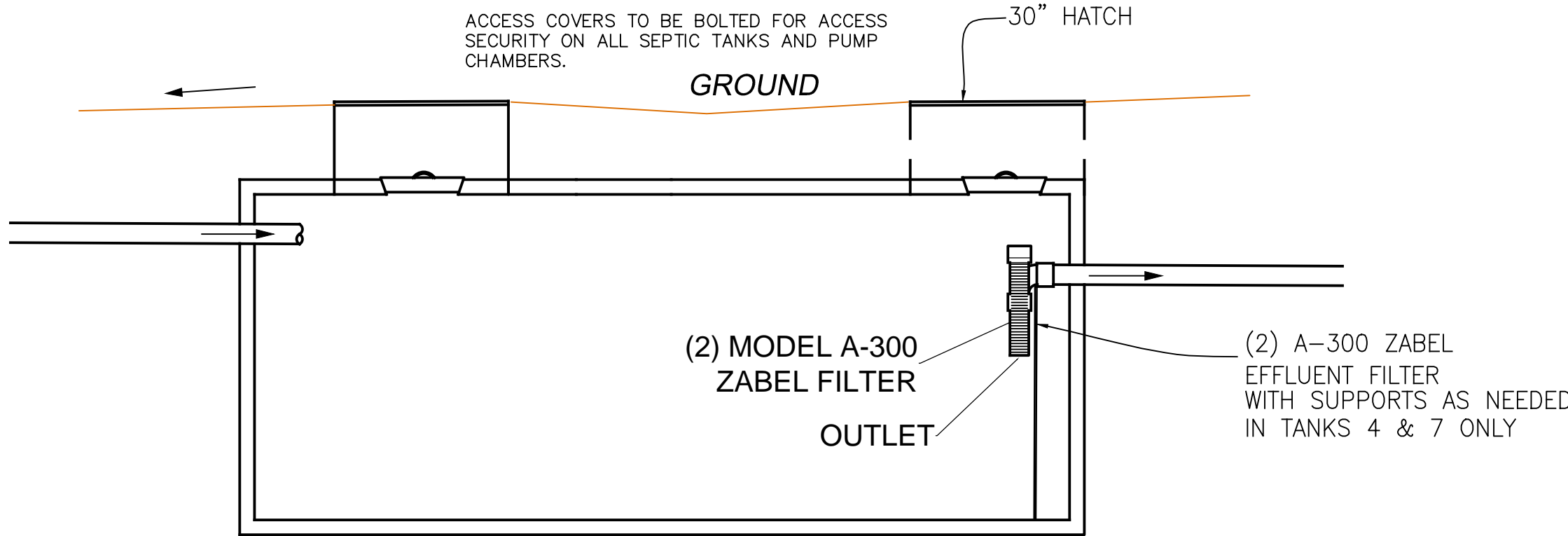
4' CATCH BASIN DETAIL

NO SCALE



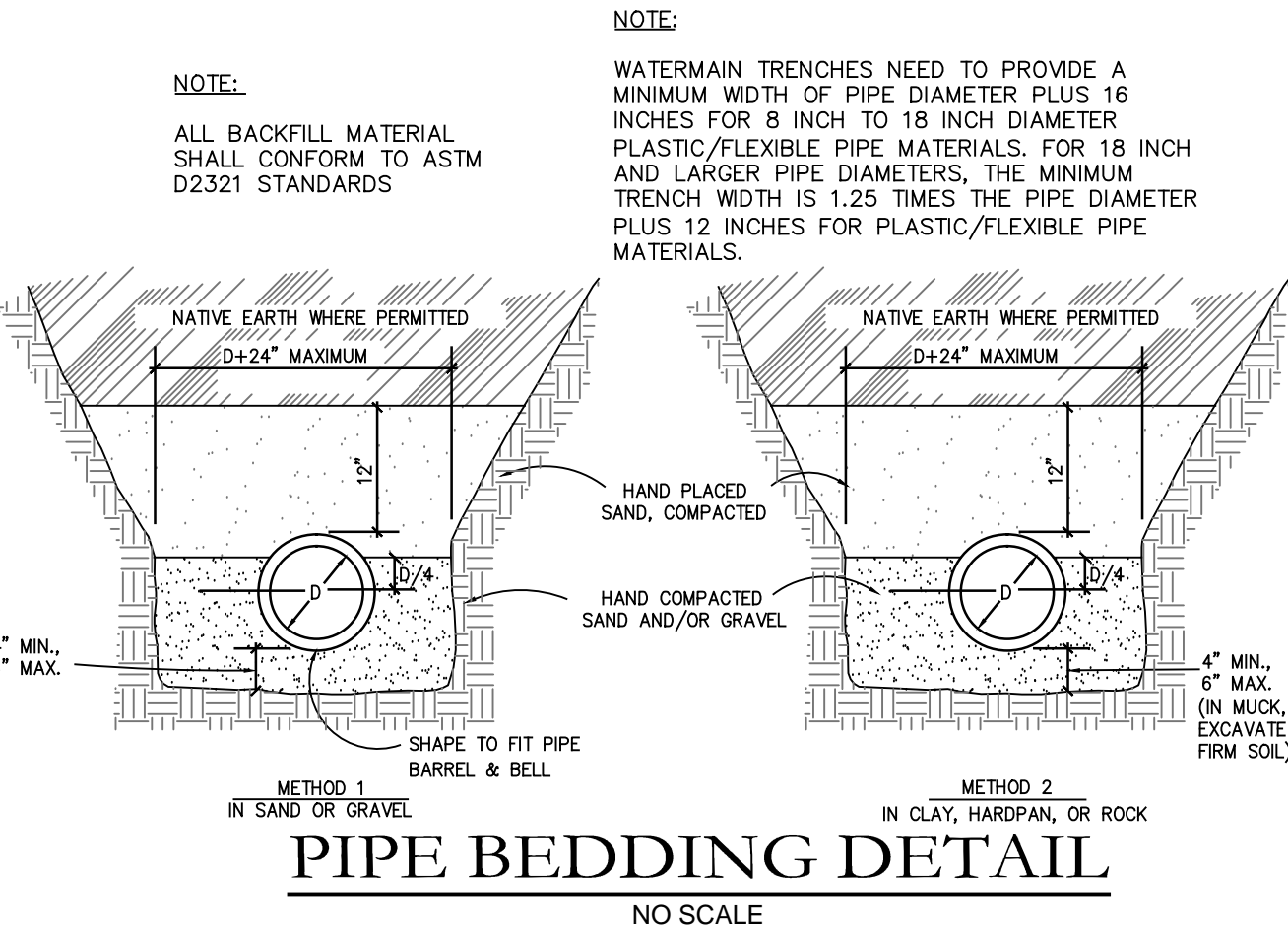
1600 GAL. DOSING TANK DETAIL
TANKS #5 & #8

NO SCALE



SEPTIC TANK #1 - #4, #6 & #7 DETAIL

NO SCALE

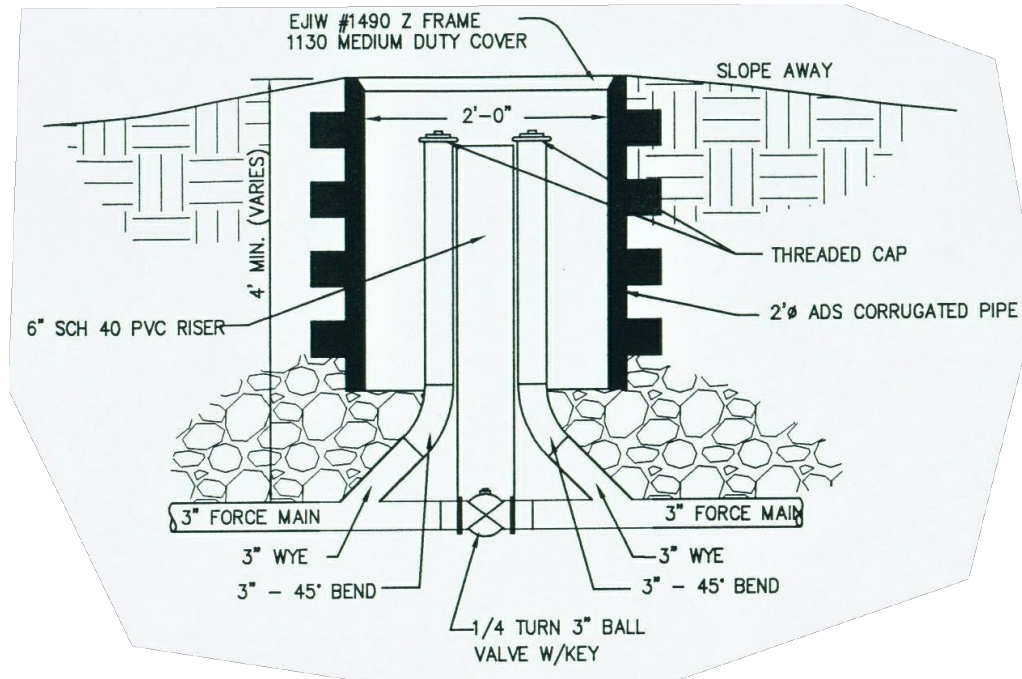


PIPE BEDDING DETAIL

NO SCALE

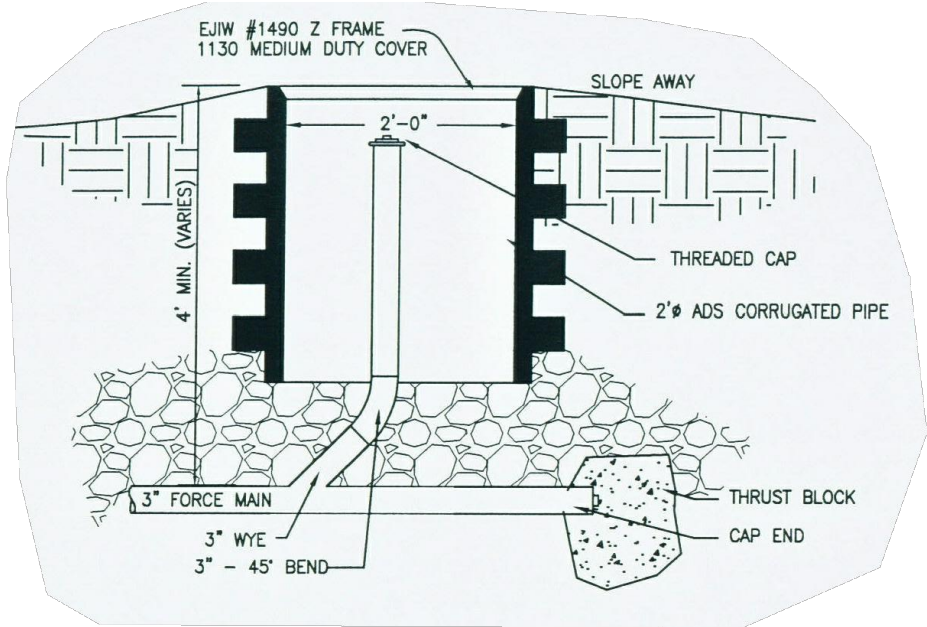
SEPTIC TANK DATA

TANK #	GROUND ELEV.	INVERT ELEV.	TANK BTM ELEV.	TANK SIZE:
TANK #1:	649.0	644.0	636.96	3350
TANK #2:	649.0	643.9	636.86	3350
TANK #3:	649.0	643.8	636.76	3350
TANK #4:	649.0	643.7	636.66	3350
TANK #5:	648.5	643.6	640.02	1600
TANK #6:	645.5	642.0	634.96	3350
TANK #7:	646.2	641.9	634.86	3350
TANK #8:	646.2	641.8	638.22	1600



MID LINE CLEAN OUT DETAIL

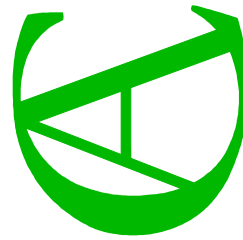
NO SCALE



END OF LINE CLEAN OUT DETAIL

NO SCALE

Andersen & Crain, Inc
Surveying, Engineering, Consulting, & Design
2636 Garfield Road N - Suite 30
Traverse City, MI 49686
Phone: (231) 947-7255 Fax: (231) 947-7275

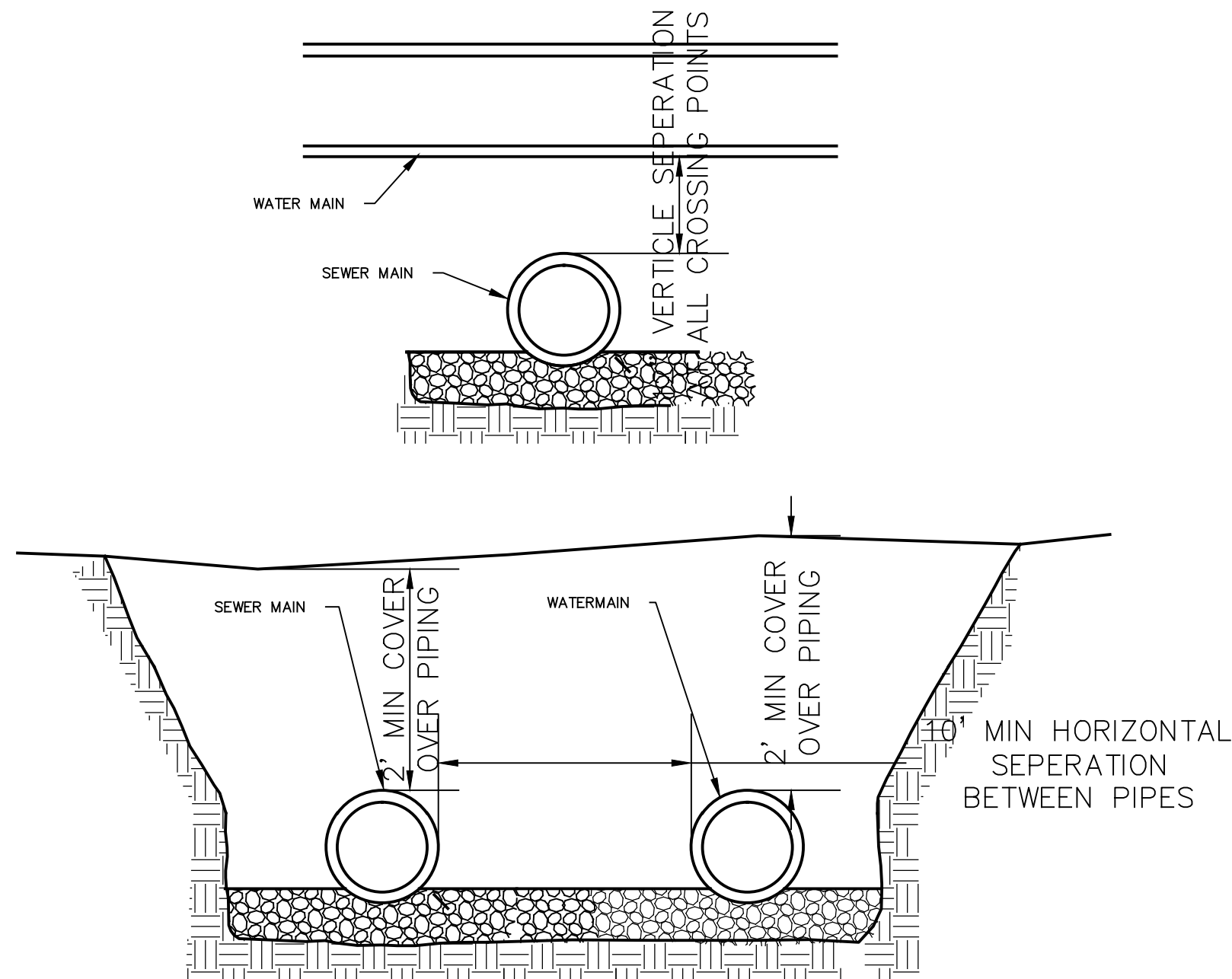


DRWN BY: WLC
DSGN BY: WLC
DATE: 3-10-09
REV DATE: 08-16-09 HEALTH DEPT / MDEQ
03-24-2015 TWP REVIEW

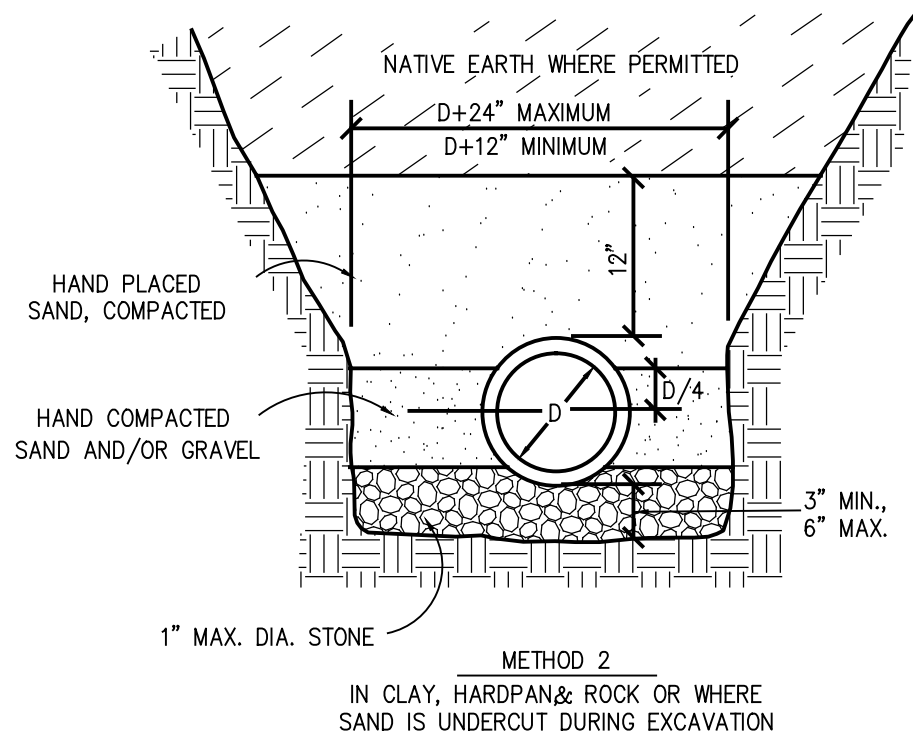
DRAINFIELD CONSTRUCTION DETAILS
TRAVERSE BAY RV PARK
SECTION 36, TOWN 28 NORTH, RANGE 10 WEST
ACME TWP, GRAND TRAVERSE COUNTY, MICHIGAN

JOB NUMBER:
218808

SHEET 9 OF 10



PIPE SEPERATION DETAILS
NO SCALE

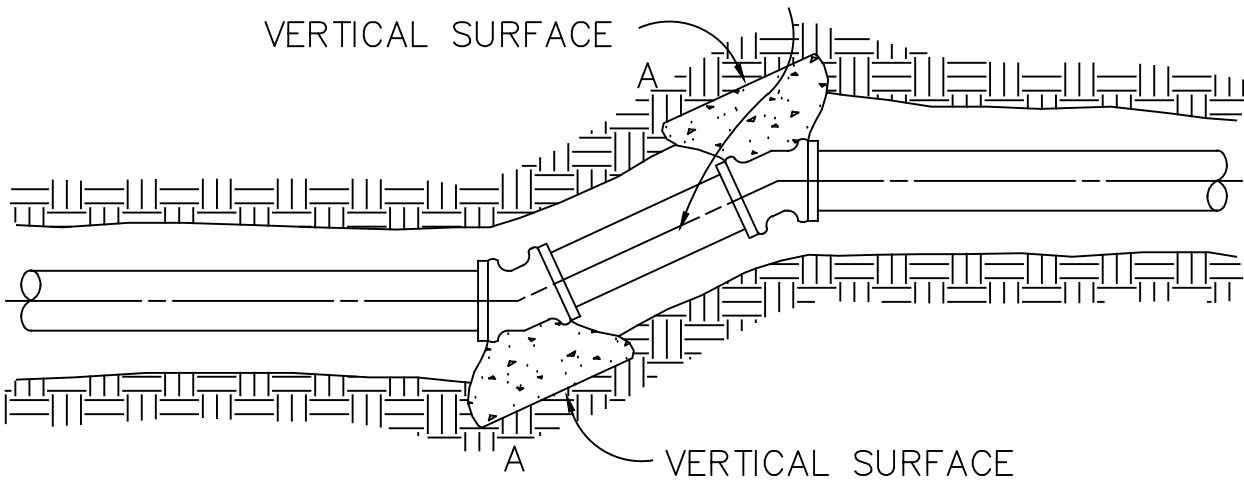


PIPE BEDDING DETAIL
(CLASS B) NO SCALE

DEGREE OF BEND IN ELBOW	PIPE SIZE	MIN. BEARING SURFACE ON UNDISTURBED SOIL FOR THRUST BLOCKS
		SURFACE A
45°	4"	1'-4"x 1'-0" = 1.3 SQ. FT.
45°	6"	1'-8"x 1'-4" = 2.2 SQ. FT.
45°	8"	2'-0"x 2'-0" = 4.0 SQ. FT.
45°	10"	2'-4"x 2'-4" = 5.4 SQ. FT.
45°	12"	2'-8"x 2'-8" = 7.1 SQ. FT.
45°	16"	3'-8"x 3'-8" = 13.5 SQ. FT.
22.5° OR 11.25°	2"	
22.5° OR 11.25°	4"	1'-0"x 0'-8" = 0.7 SQ. FT.
22.5° OR 11.25°	6"	1'-4"x 1'-0" = 1.3 SQ. FT.
22.5° OR 11.25°	8"	1'-8"x 1'-4" = 2.2 SQ. FT.
22.5° OR 11.25°	10"	1'-8"x 1'-8" = 2.8 SQ. FT.
22.5° OR 11.25°	12"	1'-10"x 1'-10" = 3.4 SQ. FT.
22.5° OR 11.25°	16"	2'-8"x 2'-8" = 7.1 SQ. FT.

ALL MECHANICAL JOINTS REQUIRE RETAINER GLANDS

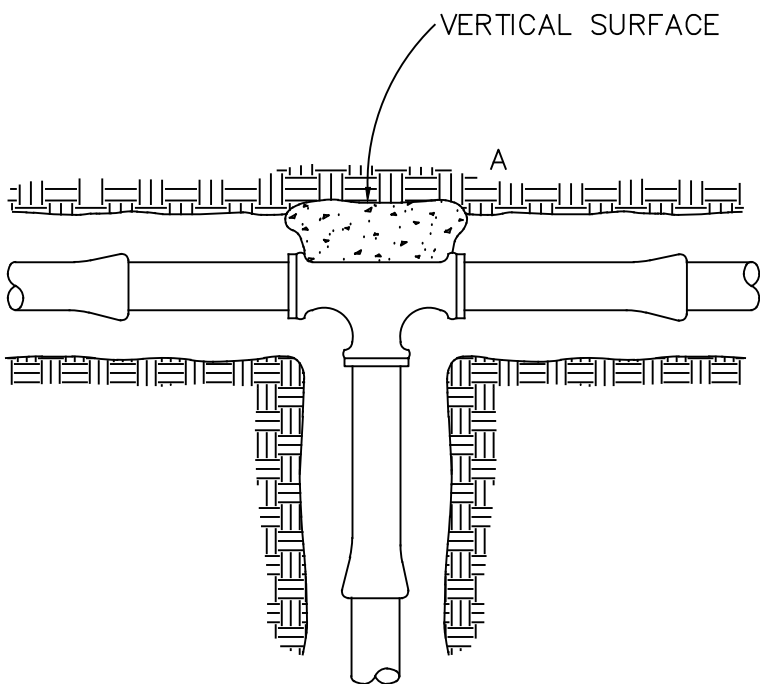
NOTE: IF THE DISTANCE BETWEEN THESE TWO FITTINGS IS 7 FEET OR LESS TIE BOLTS AND 3/4" CORTEN RODS MUST BE UTILIZED



TYPICAL OFFSET DETAIL
NO SCALE

PIPE SIZE	MIN. BEARING SURFACE ON UNDISTURBED SOIL FOR THRUST BLOCKS
	SURFACE B
4"	0'-6"x 0'-6" = 0.3 SQ.FT.
6"	0'-10"x 0'-8" = 0.6 SQ.FT.
8"	1'-0"x 0'-10" = 0.8 SQ.FT.
10"	1'-4"x 1'-4" = 1.8 SQ.FT.
12"	1'-8"x 1'-8" = 2.8 SQ.FT.
16"	2'-0"x 2'-0" = 4.0 SQ.FT.

ALL MECHANICAL JOINTS REQUIRE RETAINER GLANDS



PIPE SIZE	MIN. BEARING SURFACE ON UNDISTURBED SOIL FOR THRUST BLOCKS
	SURFACE A
4"	1'-6"x 1'-6" = 2.3 SQ. FT.
6"	1'-9"x 1'-9" = 3.1 SQ. FT.
8"	2'-4"x 2'-4" = 5.4 SQ. FT.
10"	2'-8"x 2'-8" = 7.1 SQ. FT.
12"	3'-0"x 3'-0" = 9.0 SQ. FT.
16"	4'-5"x 4'-5" = 19.5 SQ. FT.

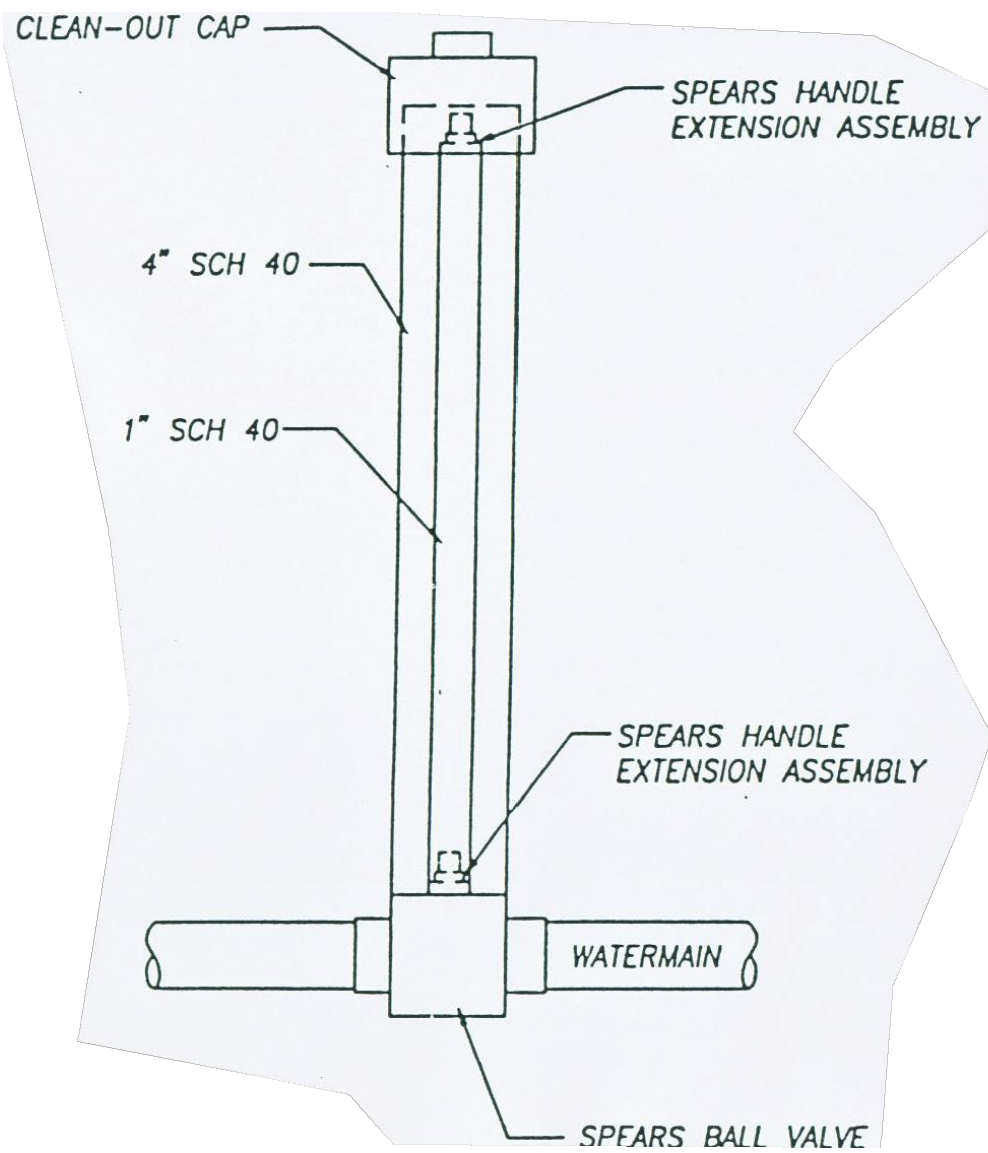
ALL MECHANICAL JOINTS REQUIRE RETAINER GLANDS

TYPICAL TEE CONNECTION DETAIL
NO SCALE

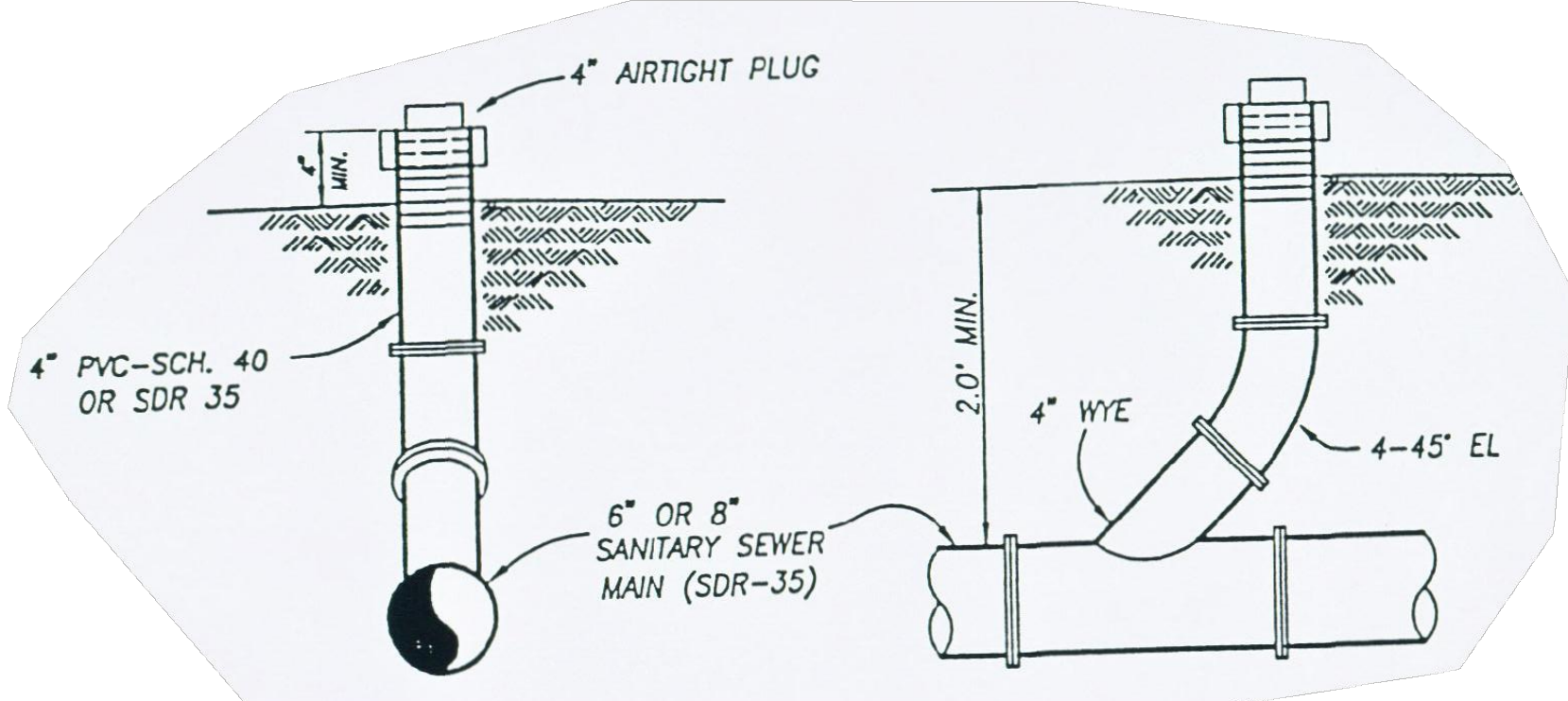


- Features**
- Photocell-Controlled 14 Watt Compact Fluorescent Twistbulb Light with Amber Lens That Provides 360 Degrees of Lighting
 - Lockable Weatherproof Doors Which Protect Breakers and Receptacles While In Use
 - 20A/125V GFI Receptacle
 - Hose and Cable Brackets
 - Heavy Resin Housing with a Two-Part Polyurethane Coating for a UV Resistant, Long Lasting Finish
 - Mechanical Lug Loop Feed Bus Bars for up to 350 MCM
 - "Hingeless" Base Providing Easy Access for Both Installation and Maintenance
 - Backlit Breaker Plate for Easy Receptacle Plug-In at Night
 - NEMA 3R Rating
 - Circuit Breaker Protection for All Receptacles
- Available Options**
- Digital Electronic Metering
 - Wireless Remote Metering for Electric and Water
 - Surge Protection Device (SPD) to Protect from Voltage Surges, Spikes or Lightning on the AC Power Line
 - Single or Dual Steel 1/4 Turn Ball Valves with 3/4" Hose Bibs and Stainless Steel Handles
 - Single or Dual Phone, Cable TV, High-Speed Internet Connections
 - Base Cap
 - Base Extension
 - LED Lighting
 - Clear, Blue, and Red Lenses
 - Direct Burial
 - Copper Bus Bar Stud Lugs
 - Built-In Meter Socket
- Dimensions**
- | POWERHOUSE | IN. | MM |
|------------|-------|--------|
| Height: | 44 | 1117.6 |
| Width: | 13.75 | 348.25 |
| Depth: | 13.75 | 348.25 |

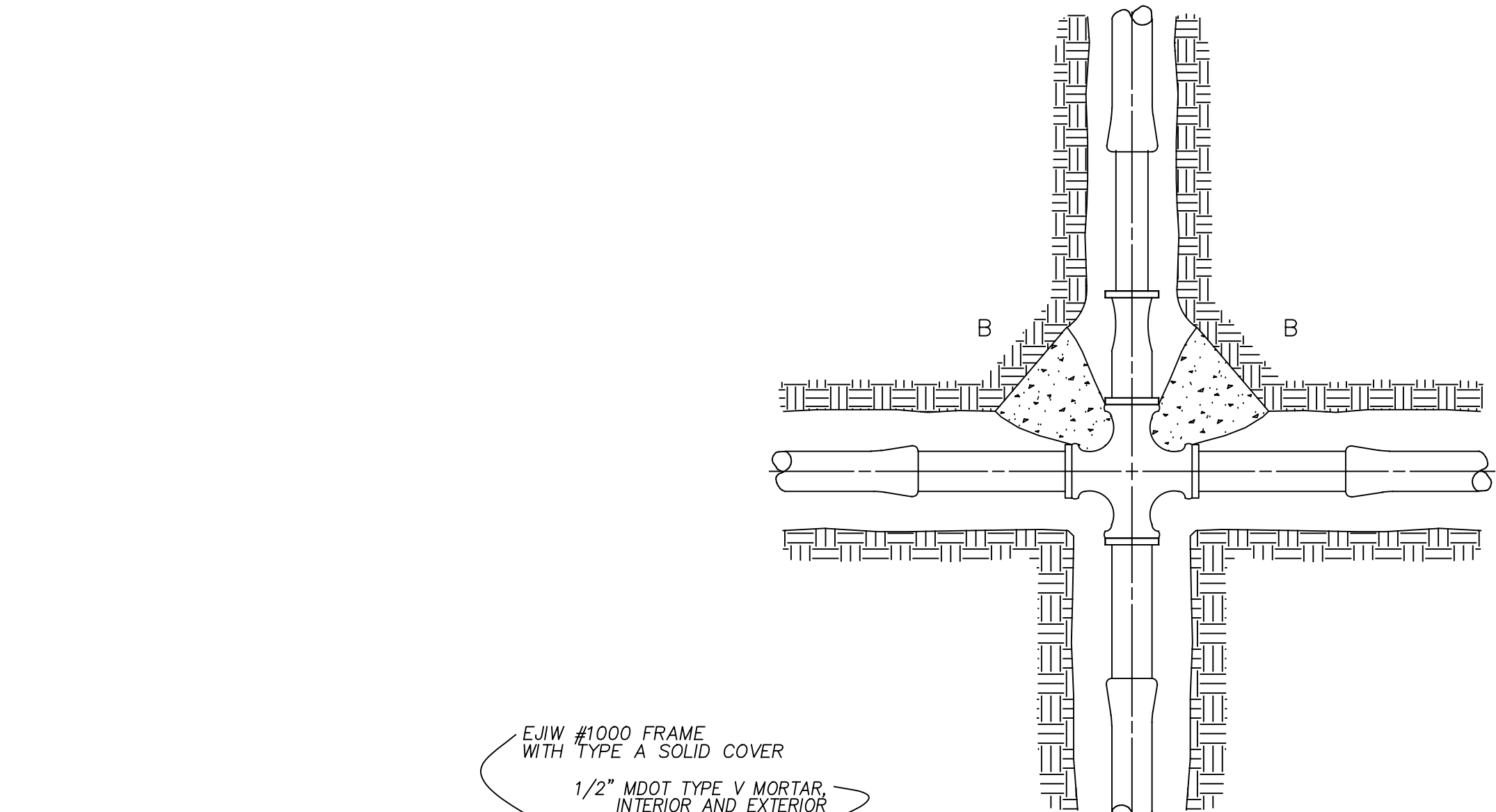
SITE PEDISTAL DETAIL
NO SCALE



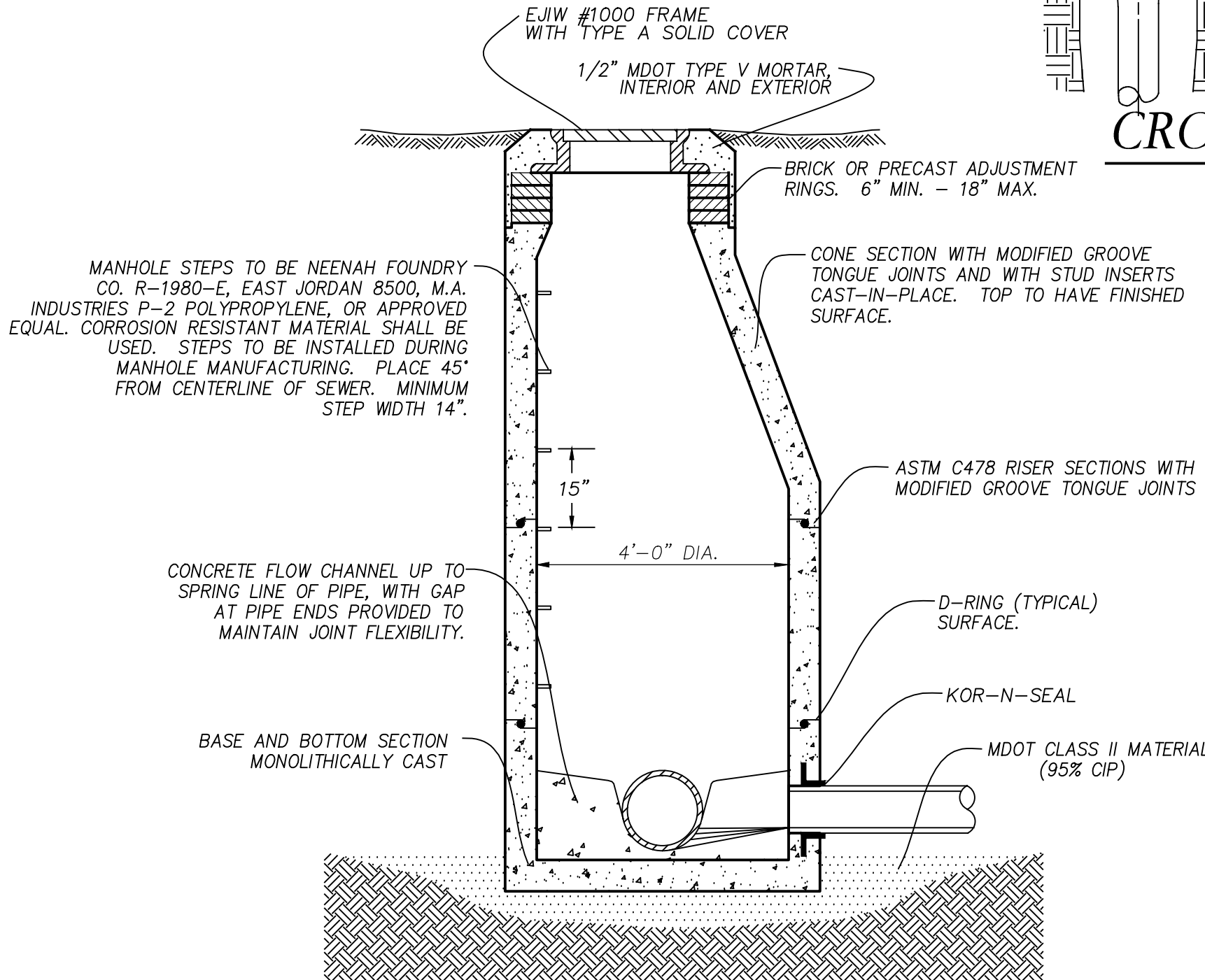
WATER VALVE DETAIL
NO SCALE



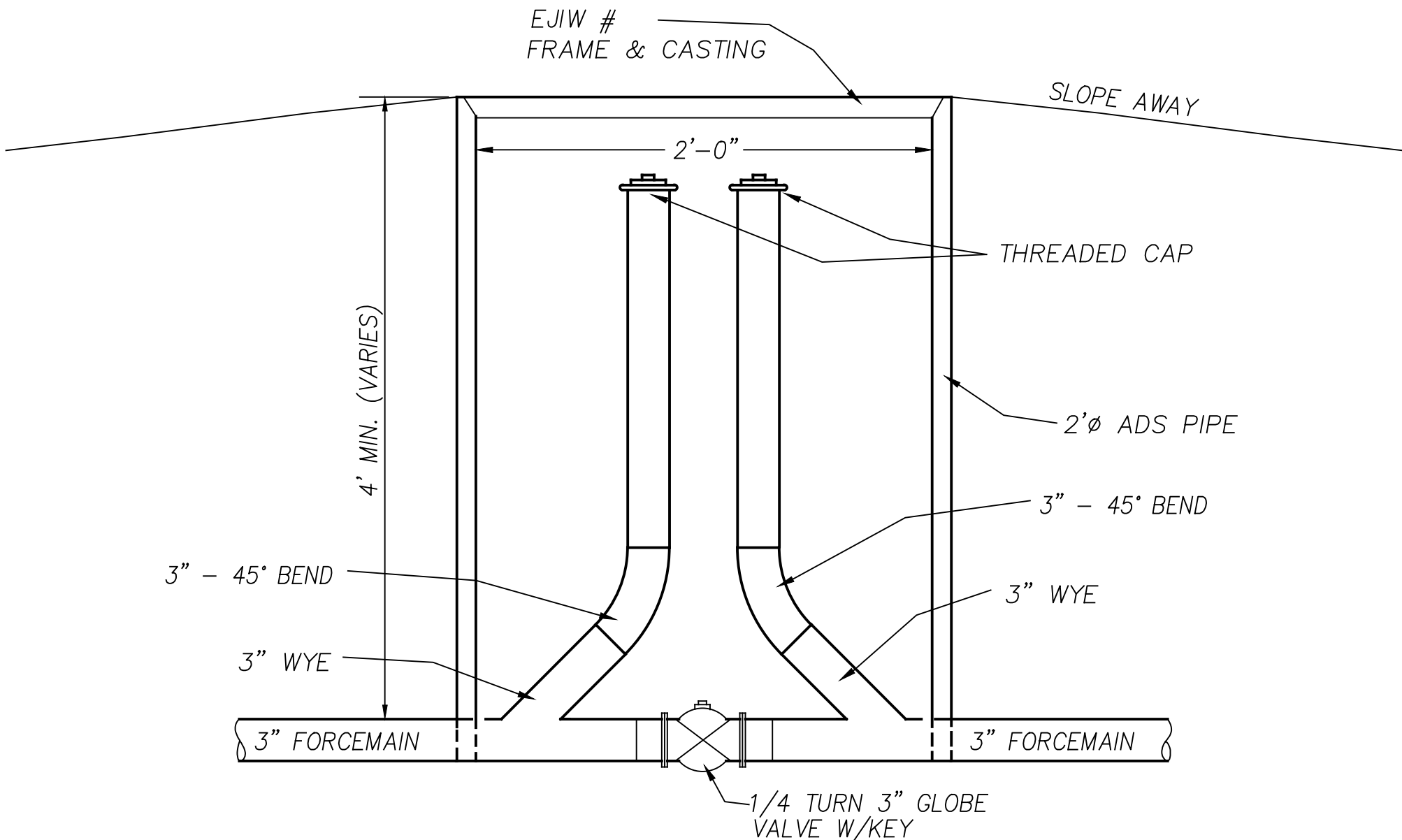
TYP SANITARY SEWER RISER DETAIL
NO SCALE



CROSS AND REDUCER DETAIL
NO SCALE

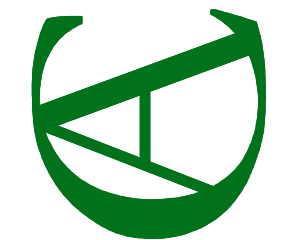


TYPICAL 4' DIA. MANHOLE
NO SCALE



CLEANOUT DETAIL
NO SCALE

Andersen & Crain, Inc.
Surveying, Engineering, Consulting, & Design
2636 Garfield Road N - Suite 30
Traverse City, MI 49686
Phone: (231) 947-7255 Fax: (231) 947-7275



DRWN BY: WLC
DSGN BY: WLC
DATE: 02-11-2015
REV DATE: 03-24-2015 TWP REVIEW

CONSTRUCTION DETAILS
TRAVERSE BAY RV RESORT
SECTION 36-TOWN 28 NORTH-RANGE 10 WEST
ACME TWP., GRAND TRAVERSE COUNTY, MICHIGAN

JOB NUMBER:
218808

SHEET 10 OF 10

Project: Traverse Bay RV Park
 Location: District #1
 Developed

1. Runoff Curve Number (CN)			
Cover description	CN	Soil Group	Area(Sq.Ft.)
Buildings	98	B	90,200
Open Space-Good (>75% grass)	61	B	93,748
Road	98	B	36,026

CN (weighted): 81.0
 Total Area: 219,974 Sq.Ft.

Project: Traverse Bay RV Park
 Location: District #2
 Developed

1. Runoff Curve Number (CN)			
Cover description	CN	Soil Group	Area(Sq.Ft.)
Buildings	98	B	26400.000
Open Space-Good (>75% grass)	61	B	75178.000
Road	98	B	10400.000

CN (weighted): 73.2
 Total Area: 111978 Sq.Ft.

Project: Traverse Bay RV Park
 Location: District #4
 Developed

1. Runoff Curve Number (CN)			
Cover description	CN	Soil Group	Area(Sq.Ft.)
Buildings	98	B	39600.000
Open Space-Good (>75% grass)	61	B	56094.000
Road	98	B	28288.000

CN (weighted): 81.3
 Total Area: 123982.000 Sq.Ft.

Project: Traverse Bay RV Park
 Location: District #5
 Developed

1. Runoff Curve Number (CN)			
Cover description	CN	Soil Group	Area(Sq.Ft.)
Buildings	98	B	17600.000
Open Space-Good (>75% grass)	61	B	59044.000
Road	98	B	19400.000

CN (weighted): 75.3
 Total Area: 96044.000 Sq.Ft.

Drainage District #1

Determine Slow Release w/ Orifice Equation

Calculate hole diameter for slow release for design outflow

Q =	0.130 cfs/acre
Q allowable =	0.1092 cfs
Height =	3.00 ft.
Area =	0.0131 sq. ft.
Diameter =	1.55 inches

Use 2-3/4" holes

Drainage District #2

Determine Slow Release w/ Orifice Equation

Calculate hole diameter for slow release for design outflow

Q =	0.130 cfs/acre
Q allowable =	0.1157 cfs
Height =	1.50 ft.
Area =	0.0196 sq. ft.
Diameter =	1.90 inches

Use 2-1" holes

Drainage District #3

Determine Slow Release w/ Orifice Equation

Calculate hole diameter for slow release for design outflow

Q =	0.130 cfs/acre
Q allowable =	0.1391 cfs
Height =	1.00 ft.
Area =	0.0288 sq. ft.
Diameter =	2.30 inches

Use 3-3/4" holes

Drainage District #4

Determine Slow Release w/ Orifice Equation

Calculate hole diameter for slow release for design outflow

Q =	0.130 cfs/acre
Q allowable =	0.1248 cfs
Height =	1.50 ft.
Area =	0.0211 sq. ft.
Diameter =	1.97 inches

Use 2-1" holes

Drainage District #5

Determine Slow Release w/ Orifice Equation

Calculate hole diameter for slow release for design outflow

Q =	0.130 cfs/acre
Q allowable =	0.377 cfs
Height =	2.50 ft.
Area =	0.0494 sq. ft.
Diameter =	3.01 inches

Use 3-1" holes



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 2636 Garfield Road N - Suite 30
 Traverse City, MI 49686
 Phone: (231) 947-7255 Fax: (231) 947-7275

Traverse Bay RV Park
Stormwater over flow calculations



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

February 12, 2015

Traverse Bay RV Resort
ATTN: David Scheppe
7915 Cairn Hwy
Elk Rapids, MI 49629

Dear Mr. Scheppe:

SUBJECT: Proposed Modification of Traverse Bay RV Resort, Campground Reference
No. 1877-28, Acme Township, Grand Traverse County

The Department of Environmental Quality (DEQ) received plans on January 15, 2015, and the application and fee payment on February 9, 2015, in accordance with 1978 PA 368, as amended (Act 368). The plans are for a proposed modification at the subject campground. Administrative Rule 325.1553 further requires the owner to submit a set of plans to the local health department. ✓

Act 368 specifically prohibits modification of a campground prior to DEQ permit issuance. Please allow Mr. David Graves, P.E., approximately four to six weeks for the initial plan review process and permit issuance. If you have specific questions regarding the project, please contact David at 517-284-6531; gravesd@michigan.gov; or DEQ, ODWMA, EHS, Campground Program, P.O. Box 30241, Lansing, MI 48909-7741.

If you have general questions related to the Campground Program, please contact me at 517-284-6520; rottierss@michigan.gov; or DEQ, ODWMA, EHS, Campground Program, P.O. Box 30241, Lansing, MI 48909-7741.

Sincerely,

Sarah Rottiers, REHS
Departmental Analyst
Environmental Health Prgms. Unit – Campground Program
Office of Drinking Water and Municipal Assistance

cc: Grand Traverse County Health Department
AcmeTownship, Clerk



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE

APPLICATION FOR CAMPGROUND CONSTRUCTION PERMIT

This information is required under authority of Part 125 of 1978 PA 368, as amended. Failure to obtain a construction permit is a misdemeanor.
(PLEASE PRINT IN BLACK OR BLUE INK.)

Campground Name Traverse Bay RV Resort		L / 877-28	
Street Address 5555 M-72	City Acme	ZIP Code MI	County Grand Traverse County
Phone Number (231) 938-5800	Fax Number	E-mail	Will campground have winter use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Municipal Location: <input type="checkbox"/> City <input type="checkbox"/> Village <input checked="" type="checkbox"/> Township			Section Number 36 Town 28N Range 10W
Name of Engineer or Person Preparing Plans JML Design Group, Ltd., C.F. Campbell		Phone, Fax, E-mail (231) 947-9019, email: jmlgdg@att.net	
Owner/Lessee's Name Scheppe Investments		Phone, Fax, E-mail (231) 590-1397	
Street Address 5555 M-72	City Acme	State MI	ZIP Code 49610

Note: A campground site is defined as modern if the site depends on flush toilets at a service building or if the site has a sewer connection. A campground site is defined as primitive if the site depends on privies. Campground sites with water and/or electrical connections can be considered primitive or modern.

PROPOSED CONSTRUCTION:	EXISTING	PROPOSED	TOTAL
Number of modern sites (or equivalent number of modern sites in group areas)			
Number of primitive sites (or equivalent number of primitive sites in group areas)			
Total number of sites	217	80	297
Number of sites with electrical connections	217	80	297
Number of sites with water connections	217	80	297
Number of unthreaded water outlets			
Number of sites with sewer connections	217	80	297
Number of service buildings	5		5
Number of sanitary stations			
Water Supply <input type="checkbox"/> Municipal <input checked="" type="checkbox"/> Private Well System	Number of Wells: 2	0	2
Wastewater Disposal <input type="checkbox"/> Municipal <input checked="" type="checkbox"/> Private On-Site System	Number of Systems: 1	1	2

SERVICE BUILDING(S)	EXISTING			PROPOSED			TOTAL		
Fixture Type	Male	Female	Unisex	Male	Female	Unisex	Male	Female	Unisex
Number of lavatories									
Number of toilets									
Number of urinals									
Number of showers									
Number of privies									

Please describe any other proposed construction:

Check appropriate box that applies: **THESE FEES ARE VALID October 2013 through September 2016**

☐ Permit to construct a new campground: **FEE \$715**

☐ Transfer of a construction permit (NO FEE)

☒ Permit to alter or expand campground facilities or sites: **FEE \$268**

☐ Renewal of a construction permit (NO FEE)

The undersigned deposes and affirms that the statements contained within this construction permit application are true.

Signature of applicant(s):

Date: 1/26/15

Date:

Submit 3 sets of plans and specification, this application, and a check for the appropriate fee amount (as indicated above) made payable to STATE OF MICHIGAN to:

COURIER ADDRESS (for UPS, FedEx, etc): MAILING ADDRESS (for US Mail only):

MDOT - ACCOUNTING SERVICE CENTER
425 WEST OTTAWA STREET
LANSING MI 48933

MDEQ - CASHIERS OFFICE
PO BOX 30657
LANSING MI 48909-8157

33000 45750 9508 ODWMA CG

CG 502082-21-1 02/09/15
33000 45750 9508

AY 2015 \$268

In addition, submit a copy of this application and one set of plans and specifications to the local health department. Additional information may be obtained at www.michigan.gov/deqwater or contact the DEQ at 517-284-6520 or by e-mail at DEQ Campgrounds@michigan.gov.

PLEASE MAKE A COPY FOR YOUR RECORDS

EQP 1716 (Rev. 9/2013)



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
CAMPGROUNDS & POOLS UNIT
WATER BUREAU



CABINS AND PARK MODELS IN CAMPGROUNDS

This document is intended to clarify how the Campgrounds & Pools Unit (CPU), Department of Environmental Quality (DEQ), regulates recreational units that cannot be driven or towed such as camping cabins, resort cabins, and park models.

- Are cabins allowed in licensed campgrounds in Michigan? **YES**
- What types of cabins are allowed? **ALL TYPES**
- Are cabins allowed on a licensed campsite? **YES AND NO**
- Are park models allowed in licensed campgrounds in Michigan? **YES**

Camping Cabins

Rule 1 (1) (b) of the campground rules, defines a “camping cabin” as “a recreational unit that is a hard-sided tent or shelter,

- that is less than 400 square feet in area,
- that is on skids designed to facilitate relocation from time to time,
- and that does not have a direct connection to a source of water.”

A cabin that meets this definition may be placed on a licensed campsite. The number of campsites with camping cabins in any campground must be reported to the DEQ.

A camping cabin is allowed to have electrical outlets inside the structure. The campsite may have a water connection or water outlet outside, but not inside the camping cabin. Since water connections are not allowed inside a camping cabin, water using sanitary fixtures such as sinks, showers, or toilets are not allowed inside the cabin.

A camping cabin may be located on a modern site or on a primitive site. If users of the campsite depend on flush toilets in a service building, then it is “modern.” If users of the campsite depend on a privy, then it is “primitive.” This is not necessarily the camping industry definition of modern or primitive.

Since a camping cabin is a licensed campsite, local codes apply to the extent that they apply to the other licensed campsites. However, local codes may require building permits.

Resort Cabins

If a cabin does not meet any one of the parts of the definition of a camping cabin, then the CPU describes the cabin as a “resort cabin.” A resort cabin is:

- greater than 400 square feet in area, or
- is not on skids but is permanently attached to the ground, or
- has a water connection inside the cabin.

Resort cabins are allowed in campgrounds, but cannot be placed on a licensed campsite. If a resort cabin is placed on a licensed campsite, then that site would be removed from the campground license.

Since resort cabins often have water and sanitary fixtures inside, they have an impact on the campground water supply and wastewater disposal system. The campground water supply and wastewater disposal system must have capacity to handle the added load for each resort cabin.

If the cabin has the same fixtures as a typical RV, then the CPU will rate the water and sewer use for the resort cabin the same as a typical modern campsite. The number and location of resort cabins must be reported to the DEQ.

Since resort cabins are not campsites, then all local building and zoning codes apply and may be enforced by local officials. Resort cabins may require building permits under local codes.

Park Models

Another category of the nontraditional RV is the park model. The campground rules (Rule 1 (1) (d)) define a “park model recreational unit” as: “a recreational unit that is built on a single chassis mounted on wheels, that has a gross trailer area of not more than 400 square feet in the setup mode, and that is certified by the manufacturer as complying with the American National Standards Institute Standard A119.5.”

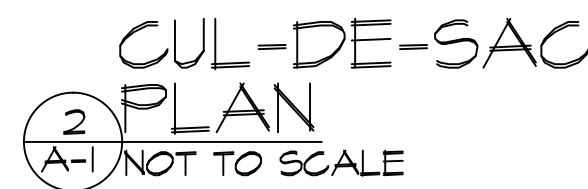
Because a park model is defined as a recreational unit, it may be placed on a licensed campsite.

Park models resemble a manufactured home, but are limited to 400 square feet in area. They are equipped with water using sanitary fixtures such as sinks, showers, and toilets. Because these fixtures more closely resemble the fixtures found in homes rather than those found in RVs, there are additional water and sewer demands for park models.

Rule 9 requires the water supply to be capable of supplying each park model at one gallon per minute. Rule 11 requires that the wastewater disposal system be capable of receiving 150 gallons per day for each park model.

Because park models are not equipped with wastewater holding tanks and typically have larger wastewater flows than other RVs, the CPU requires that a park model must be located on a site with a site sewer connection.

NOTE: The information in this document is intended to supplement the campground portions of the Public Health Code, 1978 PA 368, as amended, and the Campground Rules. These comments do not replace or supersede any portion of the Act and Rules. To download a copy of the Campground Act and Rules, please go to www.michigan.gov/deqwb.





ESCAPE Exterior

Most visitors find it impossible to believe that **ESCAPE** is a movable building. The architecture and design are beautiful including-as you can see above-one entire wall being almost entirely glass. The unique architectural details and cedar lap siding are standard. You can have **ESCAPE** with or without the porch. This is 21st Century living: Better not Bigger.

Nikki Lennox

From: Daniel Thorell <dthorell@gtchd.org>
Sent: Tuesday, April 07, 2015 8:47 AM
To: Nikki Lennox
Subject: Fwd: Traverse Bay RV Park

Follow Up Flag: Follow up
Flag Status: Flagged

Daniel R. Thorell, M.S., R.S.
Environmental Sanitarian
Grand Traverse County Health Department
Environmental Health Division
2650 LaFranier Rd
Traverse City, MI 49686

231.995.6021

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----- Forwarded message -----

From: Graves, David (DEQ) <GRAVESD@michigan.gov>
Date: Fri, Mar 20, 2015 at 2:17 PM
Subject: RE: Traverse Bay RV Park
To: Andersen & Crain <andersenandcrain@gmail.com>
Cc: "Daniel Thorell (dthorell@gtchd.org)" <dthorell@gtchd.org>

Bill:

Although I have not completed the final review of the construction permit application, I believe that the 12 site expansion is feasible with coordination with you the consultant, and the applicant. I hope that this information will enable you to get on the Township agenda.

Dave

David H. Graves, P.E.

Environmental Engineer

Campgrounds & Pools Unit

Department of Environmental Quality

Ph: 517-284-6531

www.michigan.gov/deqwater

From: Andersen & Crain [mailto:andersenandcrain@gmail.com]

Sent: Friday, March 20, 2015 9:09 AM

To: Graves, David (DEQ)

Subject: Traverse Bay RV Park

Dave,

Just checking in to see if you have received a copy of the submitted information for the 12-unit expansion to the park. We are trying to get onto the Acme Twp Planning Commission agenda and without a response from you we are unable to do so. We need a statement from you that the expansion is feasible and a permit will be issued by your office once the final design is agreed upon. If you have any questions, please call.

Thanks,

Bill Crain

Andersen & Crain, Inc

Surveying, Engineering & Design

2636 Garfield Road N, #30

Traverse City, MI 49686

ph: 231-947-7255; fax: 231-947-7275

cell: 231-632-4207



Memo

To: Planning Commission
From: Nikki Lennox
CC: John Iacoangeli
Date: 4/7/2015
Re: Traverse Bay RV Resort

On 03/23/2015 I spoke with Daniel Thorell of the Grand Traverse County Health Department. He states the reviewing agency for the septic system at the Traverse Bay RV Resort is the DEQ. The only involvement that the Grand Traverse County Health Department has in the process comes during the construction phase of the installation of a system. He is aware that application has been made to the DEQ, he has spoken to David Graves of the DEQ who states that the application is presently for connection of 12 sites to the existing system. The Grand Traverse County Health Department will do joint inspections with the DEQ for a new system and also does "flow monitoring".

planning review

Date: 04.02.2015

From: John Iacoangeli
To: **Karly Wentzloff, Chairperson**
ACME TOWNSHIP PLANNING COMMISSION
6042 Acme Road
Traverse City, MI 49690

Project: Traverse Bay RV Park – Phase III & IV Expansion
2015

Request: SUP and Site Plan Review

Applicant: JML Design Group Ltd. On behalf of Scheppe Investments, LLC
1874 Cass Hartman Ct. Suite B
Traverse City MI 49685

Parcel Address: 6500 Traverse Bay Drive
Williamsburg, MI 49690

Parcel Number: 28-01-236-012-06

General Description:

The Applicant is seeking a major amendment to the original Special Use Permit 99-03SUP approved in 1999 to add 80 new RV campground sites including 12 x 16' coach houses for storage at each RV site. Phase and "Park Model" pre-manufactured units at 399 sq. ft. to be owned with lots, but not for year round occupancy. The first portion of the expansion will include 12 units (#218 - #222 and #249-#255).

Chronology of Previous Approvals

1999 Permit 99-03SUP/Site Plan approval for RV Park

2004 Minor Change in Site Plan/SUP 99-3 for 2001 as-built plan and 2004 proposal to add 11 acres to North end of the property, and modification of the site layout.

2008 Major Amendment to Permit 99-03 SUP Proposed expansion to add phase III and IV including the addition of "cottage houses" to each RV site. Cottage Houses approved for storage only. Major amendment approved March 2009.

2011 01PMajor amendment to 99-03P, identical to 2008, expired due to non-use. Approved October 2011.

2013 Request for extension. Granted June 2013.

2014 June, 2014 - Extension expired.

Project Area



Agency Reviews to Date

Stormwater Review – Gosling Czubak; dated March 26, 2015

MDOT Review – Mary Lajko; March 2, 2015

Soil Erosion and Sedimentation Control – Gwendolyn Zagore; dated March 13, 2015

MESA – Brian Belcher; dated February 5, 2015

Cardno (JF New) – Adam Crowe; dated April 2, 2015

Health Department - Working with GTHD regarding calculations to verify septic is large enough for expansion of first 12 units.

Standards for Site Plan Review

Inconsistencies with the Standards are not in **bold** in the Findings.

Standards for Site Plan Review	
Standard	Finding
That the applicant may legally apply for site plan review.	The Applicant is the property owner.
That all required information has been provided.	Provided
That the proposed development conforms to all regulations of the zoning district in which it is located and all other applicable standards and requirements of this ordinance, including but not limited to all supplementary regulations.	The proposed use is a Special Use in the zoning district.
That the plan meets the requirements of Acme Township for fire and police protection, water supply, sewage disposal or treatment, storm, drainage, and other public facilities and services.	Reviews have been conducted by the County Health Department and Soil Erosion and Sedimentation Control. Enhanced soil erosion measures needed during construction.
That the plan meets the standards of other governmental agencies where applicable, and that the approval of these agencies has been obtained or is assured.	Agency letters and e-mails attached. GT Health Department review not submitted.
That natural resources will be preserved to a maximum feasible extent, and that areas to be left undisturbed during construction shall be so indicated on the site plan and at the site per se.	The eastern boundary of the site is adjacent to Yuba Creek tributary which is approximately 500 east of the site. There are several small wetlands within the project area that require enhanced protection.
That the proposed development property respects floodways and flood plains on or in the vicinity of the subject property.	Not applicable.
That the soil conditions are suitable for excavation and site preparation, and that organic, wet, or other soils which are not suitable for development will either be undisturbed, or modified in an acceptable manner.	The project area have soils with clay which inhibit or significantly reduce the infiltration of water. As a result, soil disturbance should be held to a minimum during construction and the site needs to be revegetated as soon as practical to minimize soil erosion and sedimentation issues.
That the proposed development will not cause soil erosion or sedimentation problems.	Permit issued by Grand Traverse County Soil Erosion and Sedimentation. However, soil disturbance should be held to a minimum during construction and the site needs to be revegetated as soon as practical to minimize soil erosion and sedimentation issues.

Standards for Site Plan Review	
Standard	Finding
That the drainage plan for the proposed development is adequate to handle anticipated storm water runoff, and will not cause undue runoff onto neighboring property or overloading of water courses in the area.	Infiltration basins are noted on the proposed site plan and the drainage and storm water has been reviewed by the Township Engineer.
That grading or filling will not destroy the character of the property or the surrounding area, and will not adversely affect the adjacent or neighboring properties.	Soil disturbance should be held to a minimum during construction and the site needs to be revegetated as soon as practical to minimize soil erosion and sedimentation issues.
That structures, landscaping, landfills or other land uses will not disrupt air drainage systems necessary for agricultural uses.	No impact on air drainage systems. Map attached.
That phases of development are in a logical sequence, so that any one phase will not depend upon a subsequent phase for adequate access, public utility services, drainage, or erosion control.	Phasing is planned. The initial phase is to build 12 units of the total 80 units.
That the plan provides for the proper expansion of existing facilities such as public streets, drainage systems, and water and sewage facilities.	The plan uses existing infrastructure.
That landscaping, fences or walls may be required when appropriate to meet the objectives of this Ordinance.	Landscaping provided.
That parking layout will not adversely affect the flow of traffic within the site, or to and from the adjacent streets.	The drive is an extension of the existing system.
That vehicular and pedestrian traffic within the site, and in relation to streets and sidewalks serving the site, shall be safe and convenient.	No sidewalks within the development.
That outdoor storage of garbage and refuse is contained, screened from view, and located so as not be a nuisance to the subject property or neighboring properties.	Need to verify how household (RV) is collected, stored and removed from site.
That the proposed site is in accord with the spirit and purpose of this Ordinance, and not inconsistent with, or contrary to, the objectives sought to be accomplished by this Ordinance and the principles of sound planning.	Consistent with the ordinance.

Adjacent Zoning and Existing Uses

The zoning classifications have not changed since the last application. They are as follows:

- North: A-1, Agricultural: John and Janice Marnett Farm
- South: A-1, Agricultural: owned by Jean Weatherholt; 35.42 acres; contains one non-homesteaded single family residence.
- East: A-1, Agricultural: Four parcels of land including the Merlin & Mary Lou Lautner residence on 1 acre; 26 acres of vacant land owned by Al & Georgia Sievers; 40 acres of vacant land owned by the GT Band Economic Development Corporation and 68 vacant acres owned by the Walter Wistrand Trust.
- West: A-1, Agricultural and R-3 Urban Residential; golf course at the Grand Traverse Resort & Spa

Preliminary Review Comments

The SUP and site plan review are focused on the expansion of Phase III and IV of the Traverse Bay RV Park. The following comments have been noted for Planning Commission review.

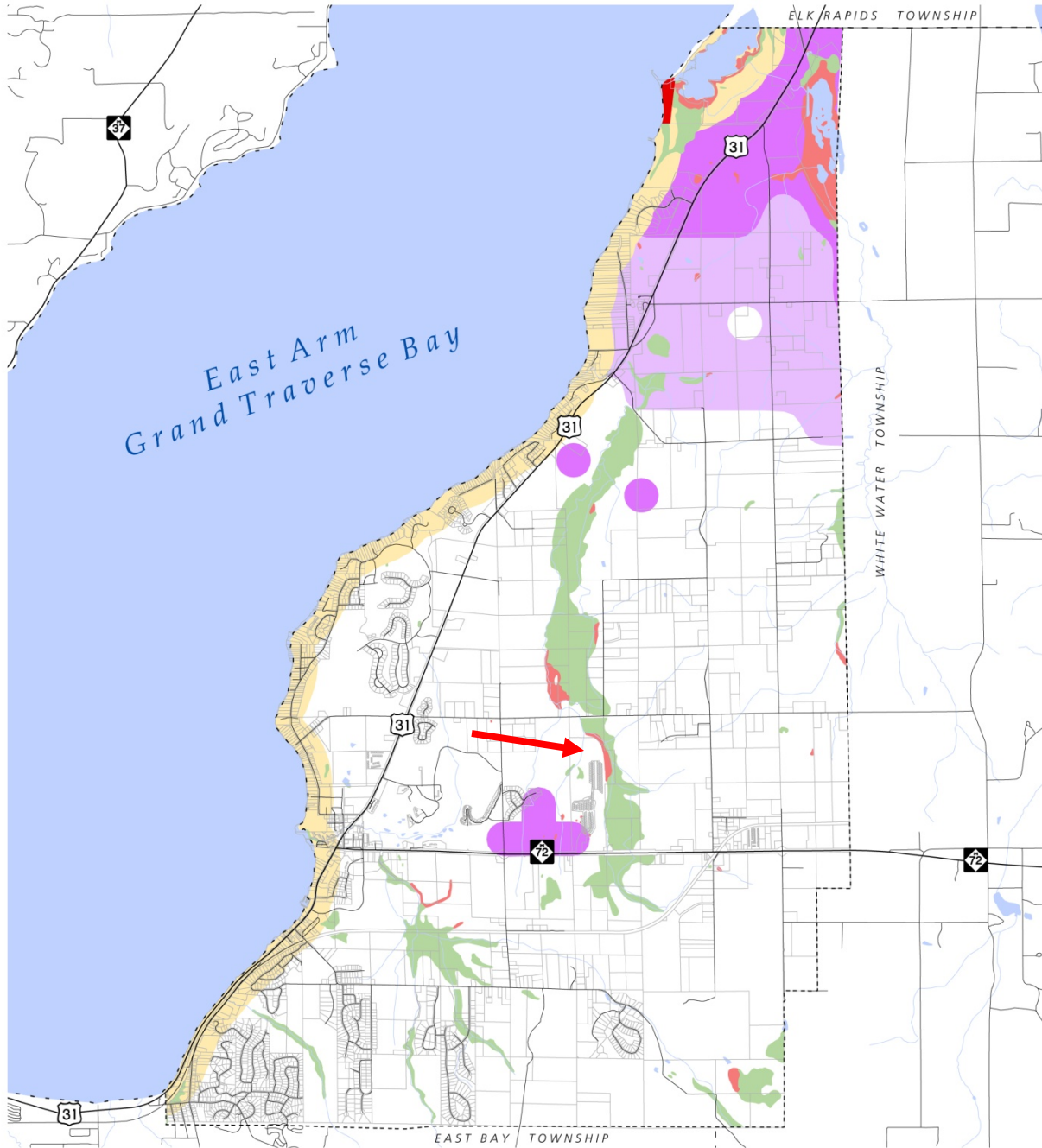
- A. Although Grand Traverse County has issued a reviewed letter regarding the project we are recommending that extra precautions be employed during construction to mitigate sedimentation into the Yuba Creek tributary area. Specially, we are recommending a filter fabric fence along the 656.0 contour line and 652.0 contour line behind RV lots #218-#222. This is in addition to the double row silt fence installed where proposed on the site plan.
- B. Applicant needs to disclose how they manage on-site household waste.
- C. Grand Traverse County Health Department review not filed.

Suggested Motion:

Approve the major amendment to 99-03SUP and the site plan submitted for the construction of a 80 additional RV sites with the following stipulations:

- 1) The Park Model buildings will not have permanent foundations and must have wheels.
- 2) The Coach Houses can be permanently affixed to the RV unit site.
- 3) Incorporate recommendations from Cardno review.
- 4) The approved site plan consists of seventeen (17) sheets with a date to be written in the lower right corner under the sheet title (i.e. 1-10) by the Chairperson of the Planning Commission.
 - (a) Sheet 1-10: Cover Sheet
 - (b) Sheet 2-10: Site Plan

- (c) Sheet 3-10: Drainage
 - (d) Sheet 4-10: Utility
 - (e) Sheet 5-10: Discovery Lane
 - (f) Sheet 6-10: Monaco Lane
 - (g) Sheet 7-10: Sunset Ridge
 - (h) Sheet 8-10: Septic Field Plan
 - (i) Sheet 9-10: Septic Field Details
 - (j) Sheet 10-10: Construction Details
 - (k) Sheet 11 C-01: Coach House
 - (l) Sheet 12 A-01: Coach House
 - (m) Sheet 13 A-02: Coach House
 - (n) Sheet 14 L-01 Coach House
 - (o) Sheet 15 A-01: Coach House
 - (p) Sheet 16 U-01 Park Model
 - (q) Sheet 17 A-01A Park Model
- 5) The approved site plan package be signed by the Chairperson of the Planning Commission and the Applicant, or their representative.
- 6) Prior to issuance of Land Use Permit final plans to be reviewed by Beckett & Raeder and Cardno to determine if recommendations were incorporated.



Acme Township

Natural and Sensitive Landscapes

Data Sources: Michigan Geographic Data Library, Michigan Department of Natural Resources, Michigan Natural Features Inventory, Grand Traverse County Equalization, Grand Traverse County GIS

- | | |
|-------------------|---|
| Parcel Boundary | DNR Coastal Zone Management Area |
| Township Boundary | High-Risk Area for Erosion |
| Major Road | High-Risk Area for Endangered Species |
| Minor Road | Moderate-Risk Area for Endangered Species |

Wetland Type:

- | |
|---------------------------|
| Emergent |
| Lowland, Shrub, or Wooded |





Data Sources: Michigan Geographic Data Library, Grand Traverse County Equalization

-  Airshed
 Township Boundary
 Major Road
 Minor Road

Updated: 11-25-13

Technical Memo – Storm water Calculation Review

To: John Iacoangeli - Beckett & Raeder, Inc.
Jay Zollinger, Supervisor – Acme Township

From: Robert Verschaeve, P.E.

Date: February 3, 2015
REV1: March 23, 2015
REV 2: March 26, 2015

RE: Traverse Bay RV Park, Phase III and IV Expansion
Stormwater Calculation Review

This review is being provided as requested by Acme Township and Beckett & Raeder, Inc. and is limited to storm water control for the referenced project. The proposed site is adjacent to wetlands and it is noted that soil erosion and sedimentation control measures are noted on the plans. This review does not address any of those measures and review and/or approval of those measures should come from the office that would issue a SESC permit.

The plans for the project that were submitted for review were prepared by Andersen and Crain, Inc. and are dated 12-16-08 with the latest revision date of 10-11-2010 noted for “SE Review”. Updated Overall Site Plan and Stormwater Control Plan both with revision dates of 03-17-2015 were provided. Revision comments in this memo are based on those drawings. Updated Stormwater Control Plan dated 03-26-2015 was submitted following up on comments from 03-17-2015.

The plans show a proposed 81 unit expansion of the existing Traverse Bay RV Resort. There are 55 units situated on either side of the main access road loop. This area is designated as phase 3 and is bordered on the east, north, and west sides by wetlands. Three water feature ponds are interior of the road loop and lots. The remaining 26 units are designated as phase 4 and are situated on the inside of a second loop road to the west of the first. The west property line borders the western edge of this road while the north property line borders the northern edge of this road. Wetlands border the south and east sides of this loop. The proposed septic field for this development is situated between the wetland and road on the northeast corner of this smaller loop road. Total site areas for these proposed phases of the development are not noted.

The proposed development is divided into five drainage districts. Phase 3 is serviced by districts 1 and 2. Part of district 3 lies in both phase 3 and 4. Phase 4 is serviced by districts 4 and 5. The runoff from each

district is directed to a retention basin designated for that district. Each retention basin discharges to the wetland via an “Emergency Overflow” structure with (3) 1” diameter holes in the pipe near the basin bottom. These holes allow a slow release of the detained storm water. The soil test holes noted on the plan generally show heavier sands and clay with water present at 42 inches below grade at test holes B and D. Given the soil conditions and proximity to wetlands, the detention basins appear to be appropriate storm water control measures.

In reviewing Section 3. Detention Systems of the Acme Township Storm water Control Ordinance, there appears to be several items on the proposed plans to note that need to be addressed as follows:

1. Design Criteria. This section notes a Treatment Volume and a Flood Control Volume to be handled by detention systems. The calculations provided on the plans appear to be what would be calculated for a retention or infiltration system. Calculations need to be updated per this section. [Calculations were updated to include the “Flood Control” volume requirement. The treatment volume and treatment release rate was not included.](#)

[Treatment volumes are noted on the plans for each district as the 1.5 year storm volume. Separate calculations have also been provided showing the treatment volume release rates for each district.](#)

A quick check of the flood control volume calculation for the entire contributing area to detention basin 1 shows a flood control volume of approximately 32,000 cft may be expected versus the 25,326 cft on the plan. Some adjustments to this basin, and likely others, may be needed after the volume calculations are updated.

[The “Flood Control” volume calculation for each district shows a “C”=.81 being used to determine the minimum storage volume per acre required for each district. However, it appears the flood control volume was only applied over the impervious area as opposed to the entire contributing area. The weighted “C” factor should be calculated for the entire contributing area of a district and then the flood control volume for that “C” factor applied to the entire contributing area as opposed to the impervious area. The storage volumes of the basins appear to have been increased from the previous submittal; however, revised calculations as noted above are needed to verify capacity.](#)

[Weighted “C” factors have been updated for each district. The plans match the separate calculations that have been provided.](#)

The storage volumes provided by the basins exceed the treatment and flood control volumes calculated.

Calculations are also needed for the release rates out of the basins. It is noted (3) 1" holes are proposed at each outlet per the Emergency Overflow detail. Calculations are needed showing that these orifices keep the discharge rates at or below the site's pre-development discharge rate and meet the requirements of the treatment and flood control release rates.

Separate calculations have been provided for the release rates of each basin outlet. Calculations show the release rates are limited to the maximum allowed for the treatment volume. One minor item is the hole sizes listed in the outlet hole table on the plan will need to be updated to match the calculations submitted.

2. Pre-Treatment Criteria. This section notes the requirements for sediment forebays in detention systems. No sediment forebays are shown on the plans. The plans need to be updated showing sediment forebays or equivalent upstream pre-treatment. Pre-treatment cells are noted at each basin except Basin #4. That cell should be identified on the plan.

Plans have been updated to show pre-treatment forebays at each basin.

3. Controls
 - a. Inlet Design. Item 2) of this section notes a forebay shall be provided at each inlet. See the comment regarding forebays above. See 2. above
 - b. Outlet Design. Calculations for the outlet from each detention basin need to be provided. See 1. above. Outlet calculations are needed. Invert elevations for the outlet pipes at the stone dissipaters from basins 1, 3, and 5 are not noted.

Outlet calculations have been provided.

The outlet invert from basin 4 is shown within the 25' wetland setback. Has a DEQ permit been applied for this? It appears the existing ground elevations at the outlets for basins 3 and 4 are higher than inlet inverts and the pipe may need to be extended further into the wetland at each location. Clarification need to be provided regarding the need for further extension, if a DEQ permit is applied for and if modifications to that permit are anticipated.

Plans have been updated showing the outlets at appropriate elevations at the wetland setbacks.

- c. Emergency Overflow. Calculations for the emergency overflows from each basin need to be provided. **Overflow calculations are needed showing that the outlet structure is sufficient.**
Calculations for the overflow structures have been provided.
4. Geometry. In general the standards of this section are met. There may need to be some adjustments made to the geometry of some of the basins with the updated calculations. Any proposed adjustments should also maintain the standards of this section. **Adjustments were made to the basins and are noted. The volumes noted on the table appear to match the volumes calculated from scaled basin contours.**
5. Public Safety. Detention Basin #1 is shown with a maximum depth of water of 6 feet. A minimum 5 foot wide safety ledge or fencing shall be provided around this basin to meet public safety requirements. Warning signs prohibiting swimming and skating shall also be posted for this basin. **It is noted a security fence is shown around Basin #1.**

The impervious areas used in the calculations shown on the plans were checked. There are discrepancies in the impervious area used for each RV site between the calculations and plans. The typical lot site layout plans on sheet C-1 of the plans call out 2,200 sft of impervious area per lot. The calculations for each district use 1,800 sft per lot. The areas shown on sheet 3 of 10 scale to approximately 1,950 sft per lot. The revised calculations and plans need to match. **The calculations on the plans have been updated to us 2,200 sft of impervious area per lot.**

The volumes of each basin shown were also calculated from areas scaled off the proposed contours. The scaled volumes of all the basins match the design volumes indicated on the "Detention Basin Table". These volumes don't necessarily match the volumes indicated as provided in the calculations for each drainage district though. Some adjustments to the basin volumes may be necessary based on the revised calculations. **The volumes calculated and listed in the table match. The elevations listed in the table for Basin #1 and #2 appear inconsistent with what is noted at each location on the plan. These should be updated to match.**
Elevations noted in the Detention Basin Table match plans.

In general the storm water controls proposed on the plans appear fairly typical of what might be seen on similar sites in Grand Traverse County. It appears that the items noted should be able to be satisfactorily addressed by the developer's engineer. Once the requested items are provided, it is anticipated the proposed storm water control plan can be approved.

The detailed calculations requested are generally more than would typically be shown on the actual drainage plan. We anticipate that upon a satisfactory review of the follow up calculations requested, the plans can be approved.

Plans and calculations submitted appear to be approvable. As mentioned in #1 above, the outlet hole table needs to be updated to match the calculations submitted. Incorporating this with any comments that may come out of the planning commission meeting would be acceptable.



GRAND TRAVERSE COUNTY
SOIL EROSION – SEDIMENTATION CONTROL DEPARTMENT
2650 LAFRANIER ROAD
TRAVERSE CITY, MICHIGAN 49686
(231) 995-6042

March 13, 2015

Acme Township
Nikki Lennox
6042 Acme Rd
PO Box 434
Williamsburg, MI 49610

RE: Preliminary Review for Traverse Bay RV Park, Parcel 28-01-236-012-06

To Whom It May Concern:

This office has reviewed the submitted plans prepared by Anderson & Crain, Inc. and submitted by JML Design Group, for the Traverse Bay RV Park located at 6500 Traverse Bay Dr. An on site inspection was completed on March 11, 2015 with Fred Campbell of JML Design Group.

According to the Grand Traverse County Soil Survey, the site consists mostly of Emmet sandy loams with slopes of 2 – 6%. These soils contain some clay content which can inhibit drainage. During construction and stabilization, best management practices will be necessary to prevent off site sedimentation from fine particles leaving the site.

Yuba Creek and its associated wetlands runs to the east of the site, less than 500 feet from the proposed construction. In addition, wetlands which serve as a tributary to the creek, bisect the proposed development. The developer needs to assure, either with a professional wetland consultant, or the MI DEQ that the wetland boundaries are accurate and that setbacks are properly observed.

This office does not administer storm water control, however, the basins must be designed and stabilized in such a way to prevent erosion from overflow.

A completed Soil Erosion and Sedimentation Control application will need to be filed with our office to begin construction. We require a complete set of plans, which depicts the distance to the creek, the actual area of disturbance, grading (cut and fill), soil erosion control measures, construction schedule and a maintenance plan. For Phase 3A, double silt fence, 36 inch wide with close post spacing is highly recommended. In addition, there should be a vegetated buffer strip between the toe of the fill slope and the silt fence. It is also highly recommended that the silt fence be backed, in the areas of steeper slope, with straw bales. Doing so further filters clay particles from the water which may escape the silt fence. The actual permit application needs to depict the fill slope and its length and finished grade.

If the appropriate SESC measures are properly installed and maintained, this office does not object to the proposed project.

If you have any questions or concerns regarding this decision please feel free to contact me at 231-995-6042.

Respectfully,

Gwendolyn Zagore
Grand Traverse County Soil Erosion Inspector

Cc: Karly Wentzloff, Planning Commission
Fred Campbell IMI Design Group

Bruce Remai, Director/Building Official

Subject: M-72 - Traverse Bay RV Park

From: Lajko, Mary (MDOT) (LajkoM@michigan.gov)

To: jmlgdg@att.net; nlennox@acmetownship.org;

Cc: WiestJ@michigan.gov;

Date: Monday, March 2, 2015 2:23 PM

Fred,

We have had an opportunity to review the plans for the proposed expansion of the Traverse Bay RV Park on M-72 in Section 36, Acme Township.

The proposed expansion is pushing the limits but doesn't quite meet the requirements of needing road work on M-72. No permits or additional comments will be needed from our department at this point.

Please be advised if there are to be further expansions in the future we would need to evaluate the need for a left turn lane in place of the existing passing flare along with the construction of an actual right turn lane into the RV Park versus the existing wide shoulder.

Please let me know if anything else is need for your upcoming township meeting.

Thank you,

Mary C. Lajko

Michigan Department of Transportation

Traverse City TSC

2084 US-31 S

Traverse City, MI 49685

Office - 231-941-1986

Cell - 231-668-1447



Design Group, Ltd.

— "Excellence is our Hallmark" —

225 E. 16th Street, Suite B • Traverse City, MI 49684 • Phone: (231) 947-9019 • Fax: (231) 947-8738

February 27, 2015

Ms. Mary Lajko
Michigan Department of Transportation
2084 US-31 South
Traverse City, Michigan 49685

Re: Traverse Bay RV Park

Dear Ms. Lajko:

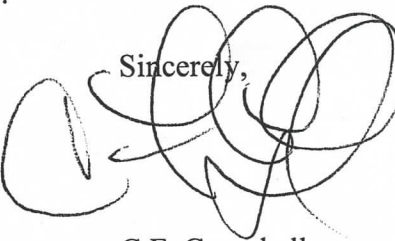
Per our recent telephone conversation, please note the following with regards to the above referenced project.

The existing RV park contains 217 sites. The proposed addition adds 80 additional sites. The Institute of Transportation Engineers (Code 416) indicates a factor of 0.27 trips per campsite (p.m. peak hour) for Recreational Vehicle parks. The existing park, therefore, contributes 59 trips to M-72, and the proposed addition will add an additional 22 trips.

The existing entrance configuration is to remain unchanged. The entrance exceeds the minimum recommended requirements. The developer is recommending that all traffic exiting the facility (especially motor coaches) make a right turn on M-72 and utilize the proposed round-about at Lautner road to travel eastbound on M-72 (in lieu of making an immediate left hand turn.

Acme Township is anxious to receive a response from you in this matter.

If there should be any questions, please contact me.

Sincerely,

C.F. Campbell

CFC/nr

FW: Traverse Bay RV Resort

Nikki Lennox <NLennox@acmetownship.org>

Thu 1/29/2015 9:46 AM

Inbox

To: John Iacoangeli <jri@bria2.com>; Karly Wentzloff <karly.wentzloff@gmail.com>;

FYI, I already forwarded this to Jeff.

Thanks.

Nikki

From: Graves, David (DEQ) [mailto:GRAVESD@michigan.gov]

Sent: Thursday, January 29, 2015 9:21 AM

To: Nikki Lennox

Cc: Hoeh, Jeremy (DEQ)

Subject: RE: Traverse Bay RV Resort

Nikki:

As long as the proposed unit meets the definition of a "Park model recreational unit" as stated in the campground Act and rules, it is approved for placement on a licensed campsite. The definition is provided below. A copy of the entire regulation is available [here](#). Please let me know if there are any other questions.

(d) "Park model recreational unit" means a recreational unit that is built on a single chassis mounted on wheels, that has a gross trailer area of not more than 400 square feet in the set-up mode, and that is certified by the manufacturer as complying with American National Standards Institute Standard A119.5.

Dave

David H. Graves, P.E.

Environmental Engineer

Campgrounds & Pools Unit

Department of Environmental Quality

Ph: 517-284-6531

www.michigan.gov/deqwater

From: Nikki Lennox [mailto:NLennox@acmetownship.org]

Sent: Thursday, January 29, 2015 9:04 AM

To: Graves, David (DEQ)

Subject: Traverse Bay RV Resort

David,

I have an application to go before our Planning Commission for an expansion of the Traverse Bay RV Resort located at 5555 M-72. They are also requesting to add "park model" units that are under 399 sq. ft. I believe you have received an application from them. Does this "park model" fit within the campground license regulations? I am requesting some preliminary information as they are coming to our Planning Commission Feb 9th. A Hearing is scheduled for March 9th 2015.

Thank you for your assistance.

Nikki Lennox

Zoning Administrator

Acme Township

6042 Acme Rd

Williamsburg, MI 49690

231-938-1350

nlennox@acmetownship.org



GRAND TRAVERSE METRO FIRE DEPARTMENT

FIRE PREVENTION BUREAU

897 Parsons Road ~ Traverse City, MI 49686
Phone: (231) 922-2077 Fax: (231) 922-4918 ~ Website: www.gtfire.org Email: Info@gtfire.org

SITE PLAN REVIEW RECORD

ID #3503 M#5765 P#0173

DATE: 2/5/15

PROJECT NAME: Traverse Bay RV Resort – 81 lot addition

PROJECT ADDRESS: 5555 E. M-72

TOWNSHIP: Acme

APPLICANT NAME: C.F. Campbell

APPLICANT COMPANY: JML Design Group Ltd.

APPLICANT ADDRESS: 225 E. 16th St. suite B

APPLICANT CITY: Traverse City STATE: MI ZIP: 49684

APPLICANT PHONE # 947-9019 FAX #

Reviewed By: Brian Belcher Assistant Chief/ Fire Marshal

This review is based solely on the materials submitted for review and does not encompass any outstanding information. Compliance with all applicable code provisions is required and is the responsibility of the permit holder. Items not listed on the review do not negate any requirements of the code nor the compliance with same. Inspection requests must be made a minimum of 48 hours prior to needed inspection. This plan review is based on the 2009 International Fire Code, as adopted.

RECEIVED

FEB 19 2015



GRAND TRAVERSE METRO FIRE DEPARTMENT

FIRE PREVENTION BUREAU

897 Parsons Road ~ Traverse City, MI 49686
Phone: (231) 947-3000 Fax: (231) 922-4918 ~ Website: www.gtmetrofire.org Email: Info@gtfire.org

SITE PLAN REVIEW

ID # 3503 M#5765 P#0173

DATE: 2/5/15

1. 505.1 Address identification.

New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches (101.6 mm) high with a minimum stroke width of 0.5 inch (12.7 mm). Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure.

- All lots shall be clearly posted with the site number/ address.

2. 505.2 Street or road signs.

Streets and roads shall be identified with approved signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an approved size, weather resistant and be maintained until replaced by permanent signs.

3. D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Conclusion: This project may proceed with the township approval process.

Nikki Lennox

From: Graves, David (DEQ) <GRAVESD@michigan.gov>
Sent: Thursday, January 29, 2015 9:21 AM
To: Nikki Lennox
Cc: Hoeh, Jeremy (DEQ)
Subject: RE: Traverse Bay RV Resort

Follow Up Flag: Follow up
Flag Status: Flagged

Nikki:

As long as the proposed unit meets the definition of a "Park model recreational unit" as stated in the campground Act and rules, it is approved for placement on a licensed campsite. The definition is provided below. A copy of the entire regulation is available [here](#). Please let me know if there are any other questions.

(d) "Park model recreational unit" means a recreational unit that is built on a single chassis mounted gross trailer area of not more than 400 square feet in the set-up mode, and that is certified by the manufacturer with American National Standards Institute Standard A119.5.

Dave

David H. Graves, P.E.
Environmental Engineer
Campgrounds & Pools Unit
Department of Environmental Quality
Ph: 517-284-6531
www.michigan.gov/deqwater

From: Nikki Lennox [mailto:NLennox@acmetownship.org]
Sent: Thursday, January 29, 2015 9:04 AM
To: Graves, David (DEQ)
Subject: Traverse Bay RV Resort

David,

I have an application to go before our Planning Commission for an expansion of the Traverse Bay RV Resort located at 5555 M-72. They are also requesting to add "park model" units that are under 399 sq. ft. I believe you have received an application from them. Does this "park model" fit within the campground license regulations? I am requesting some preliminary information as they are coming to our Planning Commission Feb 9th. A Hearing is scheduled for March 9th 2015.

Thank you for your assistance.

Nikki Lennox
Zoning Administrator
Acme Township
6042 Acme Rd
Williamsburg, MI 49690
231-938-1350

RE: Traverse Bay RV Park - Acme Township, MI

Graves, David (DEQ) <GRAVESD@michigan.gov>

Thu 2/19/2015 9:54 AM

Traverse Bay RV

To: John Iacoangeli <jri@bria2.com>;

Cc: Daniel Thorell (dthorell@gtchd.org) <dthorell@gtchd.org>; Hoeh, Jeremy (DEQ) <HOEHJ@michigan.gov>;

 1 attachment

Park Model Concept.pdf;

John:

We generally do not consider a screened area to be part of the gross trailer area. The unit in question meets the definition of a Park Model in the campground rules and is approved for placement on a licensed site.

Please let me know if there are any other questions.

Dave

David H. Graves, P.E.
Environmental Engineer
Campgrounds & Pools Unit
Department of Environmental Quality
Ph: 517-284-6531
www.michigan.gov/deqwater

From: John Iacoangeli [mailto:jri@bria2.com]
Sent: Tuesday, February 17, 2015 3:52 PM
To: Graves, David (DEQ)
Subject: Traverse Bay RV Park - Acme Township, MI

Hi David,

I am doing a site review for Acme Township for the Traverse Bay RV Park. The owners are proposing a "park model" concept which I have attached. The main portion of the unit 19.167 feet by 14 feet or 268.33 square feet. The screened in section adds another 163.38 square feet to the unit which puts it at 431 square feet - or over the requirement.

Do you count the outdoor screened in portion of the unit? I wanted to know before I provide the owner's designer with some initial comments.

Thanks
John

Proposed Traverse Bay RV Resort Storm water Control Plan Review

Document Information

Prepared for	Beckett and Raeder, Inc.
Project Name	Traverse Bay RV Resort Storm Water Control Plan Review
Project Number	j1536061.00
Project Manager	John Iacoangeli/ Beckett & Raeder Adam Crowe/ Cardno
Date	04/01/2015

Prepared for:

Beckett and Raeder, Inc.
535 West William, Suite 101, Ann Arbor, MI, 48103

Prepared by:



Cardno Inc.
11181 Marwill Ave. West Olive, MI, 49460

Table of Contents

Executive Summary	1
1 Storm Water Control Plan Review.....	1
1.1 Storm Water Treatment System Review	1
1.1.1 Overall Storm Water Treatment System	1
1.1.2 Suggested Revisions to the Overall Plan and Points of Concern.....	1
2 Site Plan Drawing Comments Narrative.....	2
2.1 Site Plan Drawings	2
2.1.1 Comments Narrative as Related to Plan Markup	2
2.1.2 Site Plan Call Outs	2

Executive Summary

Cardno Inc. was contracted on March 24, 2015 by Beckett and Raeder, Inc. to provide technical review and comment on the storm water detention and treatment plan associated with the Traverse Bay RV Resort in Acme Township, Grand Traverse County Michigan. The storm water calculations and technical data included on the proposed site plans have been reviewed by Robert Verschaeve P.E. at Gosling Czubak Engineering Sciences Inc under a separate report. This review report will focus on red flag issues as they pertain to environmental and ecological concerns for the site. Consideration will also be given to Township ordinance compliance, regional best management practices for environmentally sensitive areas and the protection of the natural resources within the Township.

1 Storm Water Control Plan Review

1.1 Storm Water Treatment System Review

1.1.1 Overall Storm Water Treatment System

The site consists of 5 separate storm water detention basins distributed along the margin of the proposed construction activities. Each of the basins have been evaluated to verify functionality as related to the predicted demand that will occur on the finished site by Gosling Czubak Engineering Sciences Inc through the use of Hydro Cad and other hydrodynamic modelling software (see: Technical Memo- storm water calculation review submitted by R. Verschaeve).

Each of the five basins include a fore bay and sufficient capacity to hold and pre-treat the first half inch of a 24 hour storm as mandated by the Michigan Department of Environmental Quality (MDEQ) and Acme Township. Each of the five basins has an enhanced slow release and overflow channel that will discharge directly into wetland habitats, or into adjacent upland habitats at a designed and predictable rate. No two basins are proposed to outlet into the same area within the wetland habitat allowing for natural infiltration to occur. The site complies with the mandated 25 foot setback of any structure from a wetland habitat except for the proposed culvert location under the proposed road that connects the east and west overlooks drives. This culvert is will be set within the wetland habitat and the surrounding road fill will partially fill as well as encroach upon the existing wetland.

Storm water hydrology will enter the system via storm sewer infrastructure developed on the build site as well as surface flow diverted through engineered swales along roads and slopes. Given the proximity of the basins to habitats that include a high water table, it can be expected that the lowest portions of the storm water basins will, at minimum, retain a saturated soil condition. Basin #1 has the lowest elevation on site and can be expected to remain inundated without mechanical augmentation until the driest part of the year in mid to late summer.

1.1.2 Suggested Revisions to the Overall Plan and Points of Concern

- Given that a hydric condition within the storm water basins can be expected throughout the year, native hydrophytic plant species could be propagated and supported therein. In the absence of a planned and maintained plant community, volunteers from the surrounding landscape will become established. In some cases these volunteers may include noxious or invasive weeds that thrive under disturbed site conditions. It is recommended that an appropriate native seed mix be specified as cover crop along the moisture gradient in the finished site.
- As a general understanding, plantings of any kind should be detailed in narrative and in graphic representation. The Township Native Plant Ordinance prohibits the introduction of certain flora to

local projects in favor of native species. Species selection and placement is subject to Township approval and should be detailed in the plan sets.

2 Site Plan Drawing Comments Narrative

2.1 Site Plan Drawings

2.1.1 Comments Narrative as Related to Plan Markup

Comments noted directly on the Pdf plan drawings are numbered one through eight. The callout boxes briefly detail the subject of concern and are further described in the narrative below. The items called out range from administrative items to constructability and erosion concerns.

2.1.2 Site Plan Call Outs

1. *What do these Black Circles indicate?*

The annotations on the plans in this area indicate that the berm is to be four feet high with plantings along the top. It can be assumed that the black circles indicate planting locations. The species, size and spacing of these proposed plantings should be detailed in the drawing or in the legend.

2. *Wetland impacts and set back variance is not called out here. Impact minimization could include a concrete box culvert to maintain a natural bottom, facilitating organism passage.*

This proposed activity includes permanent and temporary dredge or fill of wetland habitats. Encroachment within the mandated 25 foot setback of structures from wetland margins will also result. These items should be called out in the plan drawings. Additionally, a 36 inch corrugated metal pipe culvert is proposed at this location. These types of culverts present significant impedance to the passage of aquatic and semi aquatic organisms across the entire trophic spectrum. This results in habitat fragmentation. In an effort to minimize environmental cumulative impact, it is suggested that a concrete box culvert could be substituted to serve this crossing function. By maintaining a natural grade and substrate at the inlet and outlet invert and through the length of fill, hydraulic resistance and physical barriers are reduced or eliminated allowing a free biological exchange from one side of the fill to the other.

3. *Segments of this slope are as steep as 3:1. Enhanced erosion control measures are suggested including rapid establishment of stabilizing vegetation and erosion control blankets.*

No indication of erosion control measures are provided on the proposed plan drawing. This location in particular encompasses a long steep slope that could exhibit erosive characteristics.

4. *Additional comments on the Drainage and Grading notes can be found in the Cardno review narrative.*

- 1) Whereas the contractor may be ultimately responsible for implementing soil erosion BMPs, it should still be specified herein that the contractor will be following a county approved SESC plan.
- 2) This line indicates that all disturbed areas will be top soiled, seeded and mulch blanket applied as necessary. Sourcing for topsoil should be specified to insure the least

practicable amount of undesirable weeds and invasive species. Seed mixes should be specifically tailored to their application areas and indicated by location and species composition. In areas with high potential for erosion, mulch blankets may not be sufficient to hold applied plant materials in place. An exclusionary fence around live plantings should be strongly considered, and this would be a good place to indicate that.

3) Acknowledged

4) Acknowledged

5) This line indicates that the contractor will be responsible for establishing ground cover and repairing washouts for up to a year.

A long term monitoring and maintenance plan for establishment of ground cover and integrity of the system should be developed and discussed here.

6) Acknowledged

7) Acknowledged

8) This line indicates that grubbed root and woody material from the site will be discarded as directed by the owner.

All cleared and grubbed vegetative material should be properly disposed of by burning or removed from the site entirely and placed in Township approved land fill. Decaying plant matter could contribute to site eutrophication or persistence of undesirable weed species.

9) Acknowledged

10) This line indicates a minimum depth of fill over the proposed culverts. See 2.1.2(2) above.

5. *This is a large fill area approx. 1:5 slope with lots of bare ground. This needs enhanced SESC measures and rapid vegetation establishment. Overseeding with native cover and advised bare root or potted materials. (see recommendation narrative)*

This slope presents a lot of bare ground with an engineered swale near the toe. This is an erosion control concern and it is recommended that erosion control blankets and vegetation plantings be considered here.

6. *The last 65 feet or so of this grass swale appears to drop at a 7% grade into the fore bay. Enhanced erosion control could be warranted in the form of vegetated rip rap over geotex or at minimum rapid establishment of woody vegetation to decrease velocity. Scour could be a factor in heavy events.*

The entire swale should be considered for planting in appropriate hydrophytic species. This would reduce erosion and speed up plant establishment allowing the most adapted species to maintain integrity in perpetuity with little or no maintenance. The lower portion of the swale becomes quite steep. Some form of energy dissipation may be warranted in the form of rip rap over geotex, augmented with sedge planting, or a plunge pool in the fore bay or a combination of these.

7. *Seed mix specifications should be present in the plan set. We recommend a requirement of a mix specifically designed for native species adapted to this condition (see narrative)*

Seed mixes will establish most effectively, rapidly and permanently if they are customized to specific areas within the site. A swale mix, an above ordinary high water mix and a below ordinary high water mix should be developed with Township input regarding native species and specified in the final plan package.

-
8. *Overseeding of rip rap with selected grass, sedge and forb species facilitates bioremediation of first flush constituents. (see narrative)*

Rip rap areas are typically located where potentially high velocity flows occur. By over seeding these areas with appropriate species a positive effect on stone stability through root anchoring matrix and first flush bioremediation can be expected.

- LEGEND**
- PROPOSED LOT LINE
 - PROPOSED EASEMENT LINE
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - DRAINAGE DIRECTION ARROW
 - EXISTING TREE LINE
 - PROPOSED RETENTION BASIN
 - PROPOSED GRADES
 - EXISTING WETLAND LIMITS
 - SILT FENCE
 - PROPOSED UNIT NUMBER

0' 60' 120' 180'
SCALE: 1" = 60'

DRAINAGE AND GRADING NOTES

1. THE SOIL EROSION MEASURES SHOWN ARE THE MINIMUM CONTROLS TO BE USED ON THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES TO PROTECT THE DISTURBED AREAS AND ADJACENT PROPERTIES FROM ACCELERATED EROSION AND SEDIMENTATION RESULTING FROM PROJECT CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
2. ALL DISTURBED AREAS SHALL BE TOPSOILED, SEEDED, FERTILIZED AND MULCHED OR SOODED. MULCH BLANKET SHALL BE INSTALLED IN AREAS AS DESIGNATED AND SHALL BE INCIDENTAL TO OTHER ITEMS.
3. CONTRACTOR SHALL OBTAIN SOIL EROSION PERMIT PRIOR TO ANY CONSTRUCTION.
4. ALL RETENTION BASINS HAVE TO HAVE 3 ON 1 SIDE SLOPES.
5. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING GROUND COVER ON AREAS DISTURBED BY CONSTRUCTION AND SHALL REPAIR ALL WASHOUTS AND EROSION DURING THE GUARANTEE PERIOD OF ONE (1) YEAR UPON COMPLETION OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
6. THE PRESENCE OF OTHER THAN GRANULAR MATERIALS IN THE SUB-GRADE SOIL SHALL REQUIRE A FULL WIDTH, TWELVE INCH, GRANULAR SUB-BASE, MDOT CLASS II OR EQUIVALENT.
7. PREPARE SUB-GRADE WIDTH, DEPTH AND COMPACTION MUST BE REVIEWED AND/OR TESTED BY THE FIELD ENGINEER PRIOR TO PLACEMENT OF GRAVEL.
8. ALL TREES, STUMPS, BRUSH AND ROOTS THEREOF SHALL BE ENTIRELY REMOVED FROM THE GRADING LIMITS OF ALL ROADS IN THE PROPOSED PROJECT AND DISPOSED OF AS DIRECTED BY THE OWNER.
9. THE LEVEL OF THE FINISHED SUB-GRADE SHALL BE AT LEAST TWO-AND-ONE-HALF FEET ABOVE THE HIGH WATER TABLE.
10. CMP CULVERTS SHALL HAVE A MINIMUM OF ONE-FOOT COVER FROM TOP OF PIPE UNLESS OTHERWISE SHOWN ON THE PLAN. THE COVER ABOVE THE PIPE SHALL BE CLEAN AND FREE OF ALL DEBRIS.

4. Additional comments on the grading notes can be found in the Cardno review narrative

DETENTION BASIN TABLE

BASIN #	DRAINAGE AREA (SFT)	DESIGN RAINFALL (IN)	DESIGN VOL. REQUIRED (CFT)	CREST BASIN	TOP OF BASIN	BTM OF BASIN	DEPTH OF BASIN	DESIGN VOL. PROVIDED (CFT)
1	219,974 SFT	3.89 IN	39,007 CFT	644.0	644.5	641.0	3.0'	44,241 CFT
2	111,978 SFT	3.89 IN	13,622 CFT	646.0	646.5	643.5	2.5'	13,825 CFT
3	24,385 SFT	3.89 IN	2,893 CFT	643.5	644.0	642.5	1.0'	2,957 CFT
4	123,982 SFT	3.89 IN	21,179 CFT	645.0	645.5	642.0	3.0'	21,890 CFT
5	96,044 SFT	3.89 IN	12,824 CFT	647.5	648.0	645.0	2.5'	13,675 CFT

STORAGE VOLUME CALCULATED FROM ELEVATION BELOW THE EMERGENCY OVERFLOW ELEVATION
SAMPLE DRAINAGE CALCULATIONS:

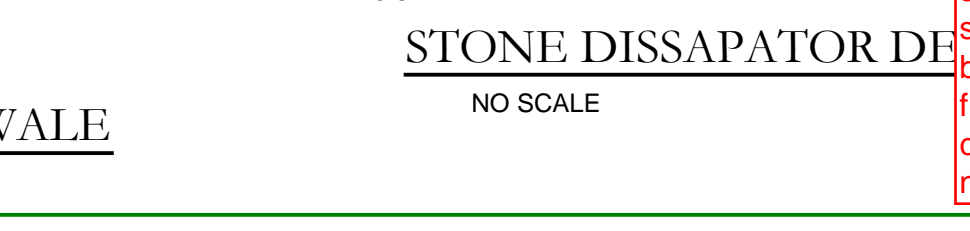
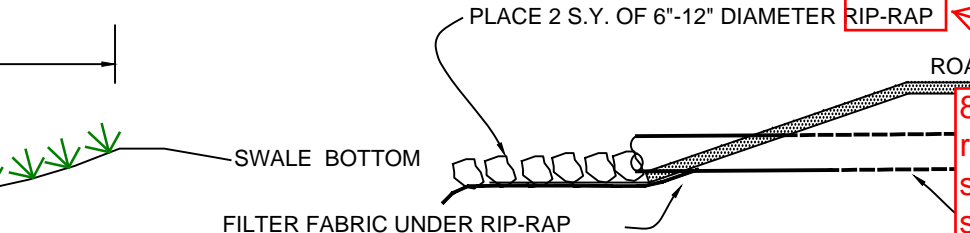
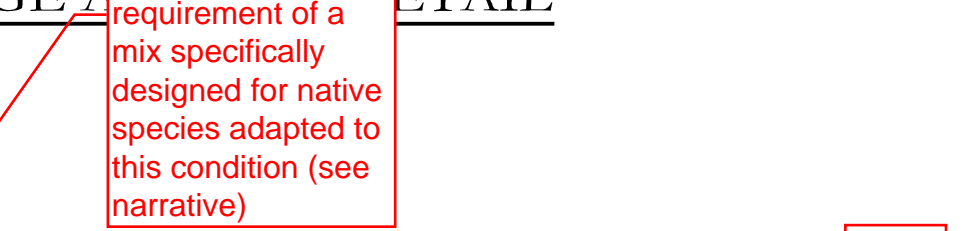
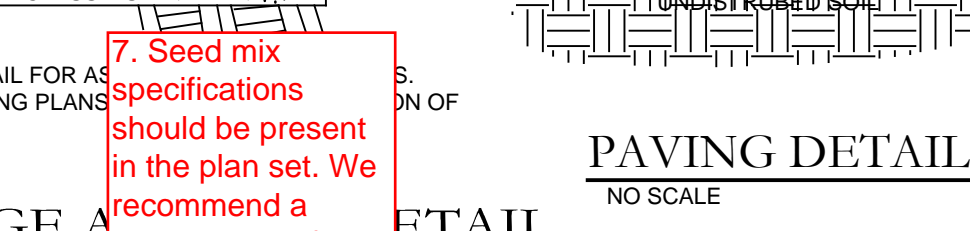
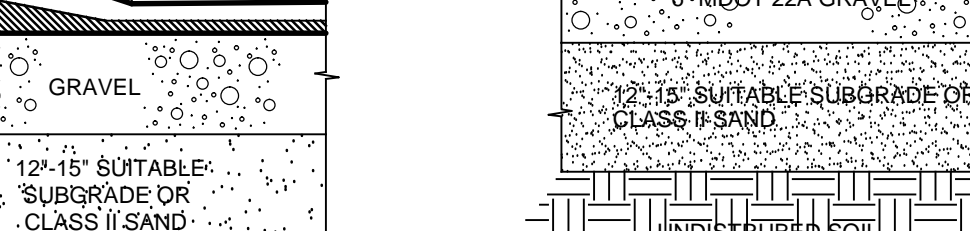
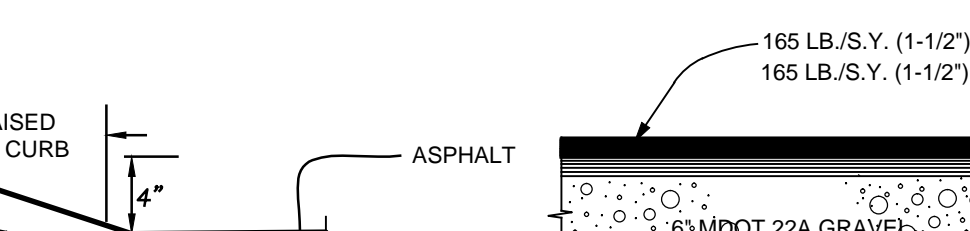
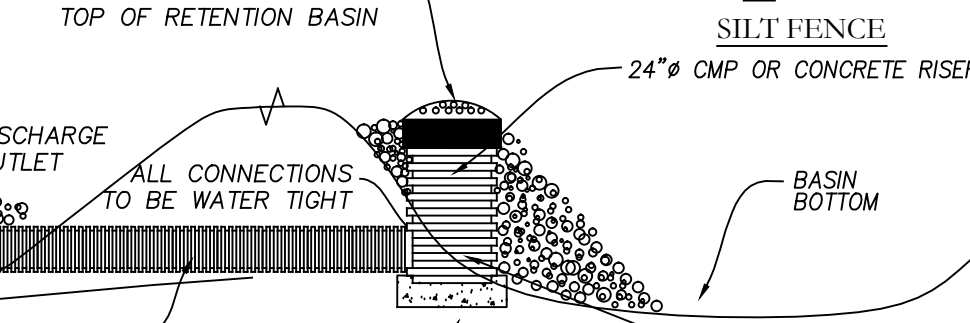
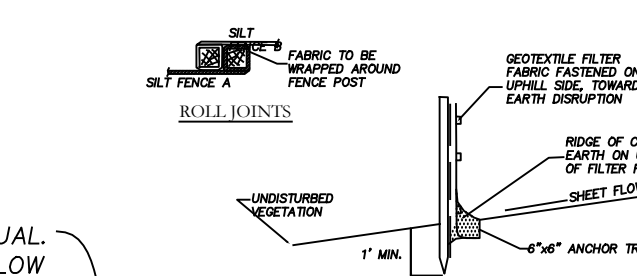
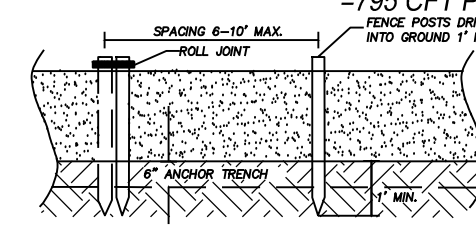
DISTRICT #1: (OVERLOOK EAST @ 41 RV SITES)
LENGTH OF ROAD: 1387 LIN FT
IMPERVIOUS AREA: 1,387 FT X 26' WIDE ROAD = 36,026 SFT
PROPOSED HOMES: 41 SITES X 2,200 SFT/SITE = 90,200 SFT
TOTAL DISTRICT AREA: 219,974 SFT
25 YEAR STORM VOLUME: 39,007 CFT
1.5 YEAR STORM VOLUME: 126,226 SFT X 2.06 IN = 21,669 CFT
FLOOD CONTROL VOLUME: "C" = 62 => 5,883 CFT/AC = 28,699 CFT
PRE-TREATMENT FOREBAY VOLUME: => 5% OF FLOOD CONTROL
=> 5% OF 28,699 CFT = 1,435 CFT REQ'D
= 1,510 CFT PROV'D

DISTRICT #2: (OVERLOOK EAST @ 12 RV SITES)
LENGTH OF ROAD: 400 LIN FT
IMPERVIOUS AREA: 400 FT X 26' WIDE ROAD = 10,400 SFT
PROPOSED HOMES: 12 RV SITES X 2,200 SFT/SITE = 26,400 SFT
TOTAL DISTRICT AREA: 111,978 SFT
25 YEAR STORM VOLUME: 13,622 CFT
1.5 YEAR STORM VOLUME: 36,800 SFT X 2.06 IN = 6,318 CFT
FLOOD CONTROL VOLUME: "C" = 43 => 3,150 CFT/AC = 8,098 CFT
PRE-TREATMENT FOREBAY VOLUME: => 5% OF FLOOD CONTROL
=> 5% OF 8,098 CFT = 405 CFT REQ'D
= 475 CFT PROV'D

DISTRICT #3: (OVERLOOK EAST & 2 RV SITES)
LENGTH OF ROAD: 125 LIN FT
IMPERVIOUS AREA: 125 FT X 26' WIDE ROAD = 3,250 SFT
PROPOSED HOMES: 2 SITES X 2,200 SFT/HOME = 4,400 SFT
TOTAL DISTRICT AREA: 24,385 SFT
25 YEAR STORM VOLUME: 2,893 CFT
1.5 YEAR STORM VOLUME: 7,650 SFT X 2.06 IN = 1,314 CFT
FLOOD CONTROL VOLUME: "C" = 42 => 3,077 CFT/AC = 1,723 CFT
PRE-TREATMENT FOREBAY VOLUME: => 5% OF FLOOD CONTROL
=> 5% OF 1,723 CFT = 87 CFT REQ'D
= 106 CFT PROV'D

DISTRICT #4: (OVERLOOK WEST & 18 RV SITES)
LENGTH OF ROAD: 1,088 LIN FT
IMPERVIOUS AREA: 1,088 FT X 26' WIDE ROAD = 28,288 SFT
PROPOSED HOMES: 18 SITES X 2,200 SFT/HOME = 39,600 SFT
TOTAL DISTRICT AREA: 123,982 SFT
25 YEAR STORM VOLUME: 21,179 CFT
1.5 YEAR STORM VOLUME: 67,888 SFT X 2.06 IN = 11,654 CFT
FLOOD CONTROL VOLUME: "C" = 60 => 5,500 CFT/AC = 15,654 CFT
PRE-TREATMENT FOREBAY VOLUME: => 5% OF FLOOD CONTROL
=> 5% OF 15,654 CFT = 783 CFT REQ'D
= 795 CFT PROV'D

DISTRICT #5: (OVERLOOK WEST @ 8 RV SITES)
LENGTH OF ROAD: 750 LIN FT
IMPERVIOUS AREA: 750 FT X 26' WIDE ROAD = 19,400 SFT
PROPOSED HOMES: 8 RV SITES X 2,200 SFT/SITE = 17,600 SFT
TOTAL DISTRICT AREA: 96,044 SFT
25 YEAR STORM VOLUME: 12,824 CFT
1.5 YEAR STORM VOLUME: 37,000 SFT X 2.06 IN = 6,352 CFT
FLOOD CONTROL VOLUME: "C" = 48 => 3,776 CFT/AC = 8,326 CFT
PRE-TREATMENT FOREBAY VOLUME: => 5% OF FLOOD CONTROL
=> 5% OF 8,326 CFT = 417 CFT REQ'D
= 445 CFT PROV'D



1. What do these Black Circles indicate?

2. Wetland impacts and set back variance is not called out here. Impact minimization could include a concrete box culvert to maintain a natural bottom, facilitating organism passage.

5. This is a large fill area approx 1:5 slope with lots of bare ground. This needs enhanced SEESC measures and rapid vegetation establishment. Overseeding with native cover and advised bare root or potted materials. (see recommendation narrative)

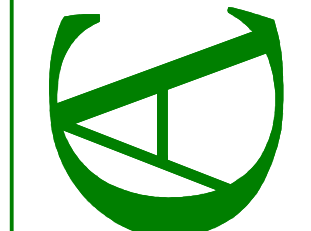
6. The last 65 feet or so of this grass swale appears to drop at a 7% grade into the forebay. Enhanced erosion control could be warranted in the form of vegetated rip rap over geotext or at minimum rapid establishment of woody vegetation to decrease velocity. Scour could be a factor in heavy events.

3. Segments of this slope are as steep as 3:1. Enhanced erosion control measures are suggested including rapid establishment of stabilizing vegetation and erosion control blankets

7. Seed mix specifications should be present in the plan set. We recommend a requirement of a mix specifically designed for native species adapted to this condition (see narrative)

8. Overseeding of rip rap with selected grass, sedge and forb species facilitates bioremediation of first flush constituents. (see narrative)

Andersen & Crain, Inc.
Surveying, Engineering, Consulting, & Design
2636 Garfield Road N - Suite 30
Traverse City, MI 49686
Phone: (231) 947-7255 Fax: (231) 947-7275



DRWN BY: CLC
DSGN BY: WLC
DATE: 12-16-08
REV DATE:
1-26-09 SITE REVISIONS
03-10-09 SITE REVISIONS
03-17-2015 TWP REVIEW
03-23-2015 TWP REVIEW
03-26-2015 TWP REVIEW

PROPOSED STORMWATER CONTROL PLAN
TRAVERSE BAY RV RESORT
SECTION 36-TOWN 28 NORTH-RANGE 10 WEST
ACME TWP, GRAND TRAVERSE COUNTY, MICHIGAN

NUMBER:
218808
SHEET 3 OF 10

Haggard's
PLUMBING and HEATING
"Business of Quality and Service"
"Charlevoix-the-Beautiful"
haggardsinc@hotmail.com

Date: Mar. 31th, 2015

To: Nikki Lennox
Zoning Administrator
6042 Acme Rd.
Williamsburg, MI 49690

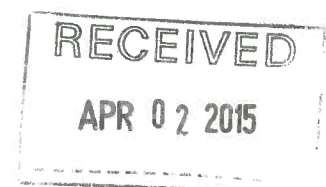
RE: Parcel Number #28-01-236-012-06

To Whom it May Concern,

Upon reviewing the above Notice of Public Hearing of the Zoning Board of Appeals, I would like to express my support with the above case's requests. Haggard's Plumbing & Heating is not at all opposed to the changes of the property and/or the request to the Zoning Board. If a property owner is fortunate enough to have the ability and the resources in this time of economical struggles to either build and/or improve their existing property, we would like to see their request granted. It would prove positive for the local, county, state and country to do all we can to improve and promote growth in any way possible.

Sincerely,

Haggard's Plumbing & Heating



Nikki Lennox

From: Karly Wentzloff <karly.wentzloff@gmail.com>
Sent: Friday, February 13, 2015 12:02 PM
To: Nikki Lennox
Subject: Fwd: Yuba Creek

Could you please forward this to the PC and include it as correspondence in our next packet.



----- Forwarded message -----

From: Robert Garvey <bobgarvey@me.com>
Date: Thu, Feb 12, 2015 at 4:57 PM
Subject: Yuba Creek
To: karly.wentzloff@gmail.com

Hello Karly ;

Hope all is well with you in the new year.

I am writing to you as Chair of the Planning Commission.

I wanted to express my concerns relating to mobile home development on M 72 adjacent to the Yuba Creek. I have no negative comments relating to the expansion itself . My concerns relate primarily to the close proximity of impervious surfaces and septic fields to the Creek. As you know, two branches wind their way through this property.

I appreciated your comments at the last Planning Commission meeting expressing concern with this issue after our experience with the VGT development as it relates to the Acme Creek. We are so fortunate to have two designated cold water trout streams self contained within our township.

As you may know , our family owns a 40 acre farm just north of this project . The Yuba Creek runs across our entire East property line. What goes into the Creek at this proposed site reaches our property a few minutes later. Our stretch of the Creek is still viable as a brook trout stream, meaning the water is cold enough and oxygenated enough to maintain a healthy trout habitat. We maintain a sand trap [permitted by the DEQ] in an effort to reestablish a natural gravel bottom . Development and roads adjacent to the creeks cause sand to wash into the streams ruining the natural gravel spawning habitat that you see further up stream in both the Yuba and Acme Creeks . The sand trap slowly accumulates sand which we remove when it fills up.

My concern and my request with regard to this project is straight forward. Would the Planning Commission PLEASE consider, as a prerequisite to allowing the project to move forward, an impact study ? I would suggest that the Planning Commission select the best qualified person to do the study and ask the proponent of the development pay for it . This seems a reasonable request .

We are a relatively small community . We simply don't have the expertise to make informed decisions relative to the impact of significant cumulative development adjacent to our Creeks . That's what experts are for. If mistakes are made at this stage the effects will live on long after we are gone . So , our decisions have consequences. Again, I have no problem with the concept of expanding the business, I just want reassurance that it is going to be done right with the least amount of harm to this important resource .

I remember my neighbor [now deceased] , Bill Hicks , standing up at a Board meeting when the "Town Center" was first being discussed . He introduced himself as someone who knew Fred Meijer personally . Actually , Mr Hicks was instrumental in locating the existing Meijer store in Town. His statement was to the effect that he had no problem with a "town center" in Acme but " I'll be damned if I will go along with a project that threatens the Acme Creek " . He was reassured that the project would not have a deleterious effect on the Acme Creek. Bill's home is located 5 or 6 houses North of the mouth of the Acme Creek where it enters the Bay . He was also an avid fisherman.

I feel the same way about this project. I have no problem with the expansion but there is no reason not to get it right as far as impact to the creek is concerned. Having a meaningful impact study before approval will give all of us the comfort of an informed decision as it relates to the Yuba Creek.

Please give me, as a downstream resident and taxpayer, assurances that before this plan is approved that someone with expertise , someone who is not beholdng to the business owner, will look at the plans and give the community assurances that there are no unreasonable threats in the design .

If there is a higher responsibility for our Township officials than protecting the watersheds I don't know what it would be .

Hopefully what I am asking for has already been made a condition of the project , if so can you let me know that ?

Thank you for taking the time to read this and please share my concerns with the other members of the Commission.

Sincerely, Bob Garvey

Acme Township
Section 6.6 Ordinance Revisions
 US-31 / M-72 Business District

Section 6.6.5.2 – Building Placement, Density and Parking

The following **highlighted** text has been changed as noted.

Building Placement		SFN	MHN	CS	C	CF
<u>Built-to Line (BTL) Distance from Property Line</u>						
Front		30'	30'	30'	20'	20'
Side Street, corner lot		30'	30'	NA	20'	20'
<u>Setback</u>						
Side		10'	10'	10'	3'	5'
Rear		30'	30'	35'	25'	5'
Building front facade as a % of Lot Width (Min.)		NA	NA	NA	65%	75%
Side Street Facade as a % of Lot Depth (Min.)		NA	NA	NA	30%	50%

Section 6.6.6.3 Site Lighting

Wall pack lighting shall only be used on the rear or side of the building to illuminate exits and loading facilities.

Front facade illumination lighting may be used only over the customer entry.

Parking lot lighting pole height (including luminaire) shall not exceed the height of the building or 27 feet whichever is less.

Section 6.6.6.5 Water Quality and Storm Water

All projects shall adhere to the Acme Township Stormwater Ordinance, as well as, incorporating low impact development (LID) water quality technologies. Low impact development water quality technologies shall include, but are not limited to, rain gardens, rooftop gardens, vegetated swales, cisterns, permeable pavers, porous pavement, and filtered stormwater structures will be required on site as a component of the overall stormwater plan. The Planning Commission has the authority to determine the type of LID that will be used as part of the approval process.

Section 6.6.6.6 Façade Components and Materials (All Buildings Except Residential-Only Buildings)

Façade Ornamentation

All visible elevations shall include decorative features such as cornices, pilasters, and friezes. Building recesses and protrusions will be required on larger buildings to break long uninterrupted building walls.

Façade Massing

Front façades 60 feet wide or wider shall incorporate wall offsets of at least two feet in depth (projections or recesses) a minimum of every 40 feet. Each required offset shall have a minimum width of 20 feet.

Roofs

When flat roofs are used, parapet walls with three-dimensional cornice treatments shall be used to conceal the roof

Asymmetric or dynamic roof forms allude to motion, provide variety and flexibility in nonresidential building design, and allow for unique buildings. Asymmetric or dynamic roof forms shall be permitted on nonresidential buildings as an alternative to Flat Roofs.

All roof-based mechanical equipment, as well as vents, pipes, antennas, satellite dishes, and other roof penetrations (with the exception of chimneys), shall be located on the rear elevations or screened with a parapet wall having a three-dimensional cornice treatment so as to have a minimal visual impact as seen from public street, existing single family uses, and land zoned for residential and agricultural uses.

Customer Entrances

Each side of a building facing a public street shall include at least one customer entrance, except that no building shall be required to provide entrances on more than two sides of the structure that face public streets.

Buildings shall have clearly defined, highly visible customer entrances that include no less than three of the following design features:

- a) Canopies/porticos above the entrance;
- b) Roof overhangs above the entrance;
- c) Entry recesses/projections;
- d) Arcades that are physically integrated with the entrance;
- e) Raised corniced parapets above the entrance;
- f) Gabled roof forms or arches above the entrance;
- g) Outdoor plaza adjacent to the entrance having seating and a minimum depth of 20 feet;
- h) Display windows that are directly adjacent to the entrance; or
- i) Architectural details, such as tile work and moldings, that is integrated into the building structure and design and is above and/or directly adjacent to the entrance.

Building Materials

Use of durable and traditional building materials shall be used. Fluted concrete masonry units and scored concrete masonry unit block, although not considered traditional building materials may be used but shall not exceed 25% of the surface square footage of any portion of the building exposed to a public right-of-way, or customer access or parking area.

Materials such as exterior insulation finish system (EIFS), concrete panels, and panel brick are not considered durable and traditional building materials and will not be used.