VILLAGE OF LOMBARD
INTER-DEPARTMENTAL REVIEW GROUP REPORT
STAFF REPORT NUMBER TWO - AMENDED

TO: Lombard Plan Commission

HEARING DATE: February 19, 2006

FROM: Department of Community Development

PREPARED BY: Jennifer Backensto, AICP Planner II

TITLE

PC 06-27; 101-125 S. Main Street (DuPage Theatre & South Lot): The petitioner requests that the Village take the following actions on the subject property, located within the B5 Central Business District:

1. Approve a conditional use for a planned development with the following variations and deviations from the Zoning Ordinance:

    a. A deviation from Section 155.416 (G) to allow for an increase in the maximum building height from 45 feet to 48 feet;

    b. A variation from Section 155.416 (K), Section 155.508 (C) (6) (b) and Section 155.707 (A) (3) to allow for a reduction of the required transitional landscape yard from 10 feet to 5 feet;

    c. A variation from Section 155.416 (M) and Section 155.602 to allow for a reduction of the required number of off-street parking spaces for a theater from thirty-seven (37) to zero (0);

    d. A variation from Section 155.508 (C) (6) (a) to allow for a reduction of the required front yard for a planned development abutting the R2 Single-Family Residence District from thirty (30) feet to four (4) feet;

    e. A variation from Section 155.508 (C) (6) (b) and Section 155.707 (B) (3) to allow for the elimination of the required transitional landscape yard improvements;

    f. A variation from Section 155.709 (B) to eliminate the requirement to provide one (1) shade tree for every seventy-five (75) lineal feet of required perimeter lot landscaping;

2. Approve a conditional use for outdoor dining; and

3. The petitioner also requests Site Plan Approval authority to the Lombard Plan Commission.

GENERAL INFORMATION

Petitioner:	RSC & Associates 180 N. LaSalle Street, Ste. 2626 Chicago, IL 60601
Property Owner:	Village of Lombard 255 E. Wilson Ave Lombard, IL 60148
Relationship of Petitioner to Property Owner:	Proposed Project Developer

PROPERTY INFORMATION

Existing Land Use: Vacant theater and temporary commuter parking lot

Size of Property: Approximately 2.26 acres

Comprehensive Plan: Recommends Mixed Use Medium Density Residential & Commercial (Central Business District-Mixed Use Area)

Existing Zoning: B5 Central Business District

Surrounding Zoning and Land Use:

North: Union Pacific Railroad

South: B5PD Central Business District Planned Development; developed as Brust Funeral Home

East: R2 Single Family Residence District; developed as single-family homes

West: B5 Central Business District; developed as various commercial & residential uses

ANALYSIS

SUBMITTALS

This report is based on those documents filed on with the Department of Community Development and included as part of the initial report for PC 06-27. In addition, this report includes the following additional items:

1. Building Elevations, prepared by Daniel P. Coffey & Associates and dated January 3, 2007.
2. Floor Plans, prepared by Daniel P. Coffey & Associates and dated January 3, 2007.
3. Materials Board and Building Perspective, prepared by Daniel P. Coffey & Associates and dated November 20, 2007.

4. Plat of Survey, prepared by Gentile & Associates and dated December 18, 2007.
5. Samples of the limestone sills, balcony lights, and aluminum window trim/balcony material.
6. Preliminary Landscape Plan, prepared by David R. McCallum Associates and dated December 11, 2006.
7. Storm Sewer Calculations, prepared by Manhard Consulting and dated December 28, 2006.
8. Stormwater Site Plan Drawing, prepared by Manhard Consulting and dated February 7, 2007.
9. Information on proposed Harding Steel, Inc. car lifts.
10. Video presentation, prepared by the petitioner (this item is intended to be shown at the February 19, 2007 meeting).
11. Photographs and photo illustrations showing views from 136 & 140 S. Charlotte Street.

DESCRIPTION

The Plan Commission continued the public hearing for PC 06-27 in order to allow the petitioner to provide additional information regarding the development proposal and/or modify their plans accordingly. This report is based upon a review of the supplemental information provided by the petitioner and in consideration of the testimony made a part of the public hearing record at the November 20, 2006 Plan Commission meeting. Specifically, the report addresses the areas identified by the Plan Commission members, staff, and/or the public where additional information was requested.

Building Elevations

Changes on the new building perspective and elevations show:

- terra cotta and brick on the storefronts to match the original commercial building;
- removal of peaked roof elements and extension of red brick portions above storefronts;
- Indiana limestone sills;
- windows that reflect unit locations;
- added peak on the north elevation; and
- modifications to the northernmost peak on the west elevation.

No changes have been made to the storefronts along the north elevation, brick colors, mullions or signage locations. Those changes, which were suggested by the Plan Commissioners and communicated though staff, were intentionally omitted from the rendering. After further review of these issues, the petitioner felt that incorporating those changes would be detrimental to the retail component and respectfully disagreed with those suggestions. Staff is disappointed with the petitioner's decision as we believe those changes would improve the aesthetics of the building and improve its compatibility with the neighborhood. However, staff also recognizes that taste is a subjective matter.

Staff obtained permission from two adjacent property owners to take pictures from their backyards. These pictures were used to create composite images that give a rough idea of how the proposed development would appear from the adjacent properties. The images showing orange construction fencing represent 136 S. Charlotte, and the others represent 140 S. Charlotte (both included as part of the petitioner's submittal).

The materials board perspective still shows outdoor dining in front of the new Parkside Avenue storefronts, but there is less than 5 feet between the building and the property line. Any outdoor dining proposed on the public right-of-way would not be covered by the conditional use and would be subject to an annual administrative permit (no public hearing necessary).

The shared balconies on the north, east, and south elevations will be physically divided between the units, unless two adjoining units are combined.

The petitioner has attempted to show a 45-foot high building by including a partial through section on the building elevations, labeled "Unacceptable Alternate Mansard Roof Option." Staff advised the petitioner that this exhibit was not an adequate representation of a 45-foot high building. This alternative maintains a 9-foot high ceiling clearance within the residential units, but the roof height remains unchanged at 48 feet. To date, none of the submitted elevations have met the B5 District's 45-foot height requirement.

Video Presentation

At the July 2006 workshop session regarding the DuPage Theatre development proposal, the petitioner presented a three-dimensional video depiction of the proposed development. At the workshop session, the Plan Commissioners questioned the relative heights of the proposed structure as well as the adjacent buildings. The Commissioners noted that they wanted to ensure that any depictions of this nature accurately reflected the proposed conditions for the project. In response, the petitioner modified the presentation to attempt to address this issue. The presentation was modified to provide and updated view of the redevelopment plan as well as providing additional detail to the adjacent structures. The petitioner noted to staff the following issues relative to the presentation:

1. The proposed building heights were "eye-balled" without actual scaling of adjacent structures. The petitioner believes that the rendering is accurate within one to two feet.

2. The locations of the trees that are shown on the presentation were derived by using *Google Earth* aerial representations. They stated to staff that they believe that this approach provides a fairly reasonable depiction of the existing vegetation surrounding the subject site.

3. Staff notes that the depicted number of street parking spaces along East Parkside may not match the existing or proposed parking layout proposed at this location.

Stormwater

At the November 18, 2006 Plan Commission meeting the Plan Commissioners expressed a desire to see how stormwater detention would be addressed as part of the development. This request was also made by staff and requested by members of the public. In response, the petitioner has submitted a series of stormwater plans that have been reviewed by the Private Engineering Services Division and Bureau of Inspectional Services.

Stormwater Plan #1:
The petitioner's initial plan proposed a vault detention system to be provided below the proposed new retail portion of the building south of the theater. In review of this plan, staff noted that the conceptual plan is not feasible due to the fact that it would not satisfy the DuPage Countywide Stormwater and Floodplain Ordinance, Article 9, Section 15-114, Subsection 8c, which states that "all outlet works shall function without human intervention or outside power and shall operate with minimum maintenance." Pumping is not acceptable and the detention system must drain by gravity only.

In addition, this plan left unresolved questions regarding the following Ordinance requirements that should be addressed in order to assess feasibility:

- Article 9 Section 15-114, Subsection 8b states that "storage facilities shall be accessible and easily maintained."
- Article 9 Section 15-114, Subsection 8f states, in part, that "storage facilities shall provide an overflow structure and overflow path that can safely pass excess flows through the development site..."
- Article 10, Section 15-133, Subsection 4 states, in part, that "maximum flow depths on new parking lots shall not exceed one foot during the base flood condition and shall be designed for protection against physical damages. Flood hazard in parking areas below the base flood elevation shall be clearly posted." Therefore, the emergency overflow of the detention system must be within one foot above the lowest point of the parking area and signs would have to be posted.

Stormwater Plan #2:
In response to the above concerns, the petitioner then proposed a vault system to be located underneath the proposed east drive aisle. Upon review of this proposal, staff noted that the proposed vault would conflict with a water main also proposed to be located within the same area. This plan did not meet the detention requirements of Lombard or DuPage County and would have required variations from both entities.

Stormwater Plan #3:
The petitioner's latest stormwater plan would provide for underground storage as part of the building foundation beneath the new retail portion of the building along Main Street. The Private Engineering Services Division and Bureau of Inspectional Services have both reviewed the proposed concept plans and their comments are listed below. The petitioner's responses to these concerns, as well as staff's comments on these responses, are attached to this report as **Appendix A**.

Private Engineering Services Division comments
As presented on the submitted schematic, the stormwater detention system for the above captioned project would store the 100-year storm event in a 9-foot high concrete vault with a 6-foot storage area that would be located underneath the southwest corner of the building. The vault would drain via gravity through a water quality unit to a restrictor/overflow structure and finally into the Village stormwater system. The petitioner for this project represented that this vault would be incorporated into the structural foundation of the building. The Private Engineering Services Division has the following comments as this concept moves forward:

1. It is important to note that no other detention structure permitted by the Village is underneath a building or any other type of permanent structure. The use of the "outlot" for stormwater detention facilities is intended to provide the Village full, unimpeded access for inspection and, as necessary, maintenance of the structures. While this design meets the current Village Code requirements and could be constructed, staff is not supportive of such structures that are located underneath large, permanent structures. A review of this section of the Village Code is warranted to ensure that this type of system is not allowed in the future without all other possibilities exhausted and all up-front design issues resolved.

2. There are many unknowns in the overall design of such a basin/vault. Staff has only seen the conceptual layout of this plan, and to date, staff is not aware of any actual design for the structure itself. A critical issue will be the geotechnical information, which should be acquired and reviewed by the structural engineer prior to this concept moving forward.

3. Based on the findings of a geotechnical report, the construction costs could vary significantly. The petitioner shall identify if the vault is integral to the structure of the building. The petitioner shall also present how building settlement will affect the design.

4. Stringent requirements from the building department to ensure water proofing and safety will also result in extra costs for this structure. The petitioner shall provide an initial cost estimate for this stormwater plan, and balance the cost against the cost for the other stormwater mitigation plans previously discussed for this project, including off-site storage in a neighboring lot, etc.

5. The petitioner shall provide the intended life of such a structure with a detailed maintenance schedule that outlines the inspection and maintenance activities such as when the waterproofing would need to be amended or replaced, how cracking can be fixed, etc.

6. The building association will own and maintain this structure directly – provide language that will be included on a plat, which clearly designates the responsibility for funding for the inspections and maintenance of this system.

7. The vault shall have adequate access from outside of the building so that inspectors and maintenance and repair equipment do not have to enter the building.

8. Provide any additional insurance requirements that would be placed on the building association as a result of having this system under the building.

9. Provide the plan for overflow surcharging when the receiving Village storm sewer is at capacity.

10. Provide a list of sites within DuPage County where this concept has been used in the past and to what success.

11. The developer has met with the County (with no Village representative present) to obtain the County's support for this concept. The attached email from Clayton Heffter, the Stormwater Permitting Manager for DuPage County, outlines that the plan conceptually meets the Countywide Stormwater Ordinance; however, the Village has the final authority in approving the plan.

12. A registered structural engineer shall provide a certification of compliance for the constructed vault.

13. The plan shows "PROPOSED ROW." After talking with the design engineer, this is meant to be the actual, existing ROW.

14. The plan lists 1.35 AF total volume of storage. Scaling from the plan and using the provided 6' height of water in the vault, the storage would be closer to 1.83 AF. After speaking to the design engineer, this difference is made up by the intent to slope the floor of the vault to the outlet, as well as account for potential columns that may pass through the vault, however, neither of these points are represented on the plan.

15. No vertical scale is provided on the plan and profile. It appears that the vault will be approximately 9' in height; please have the petitioner confirm the total height.

16. The north arrow is not correct.

17. Typo on the plan and profile Bottom = 691.4, not 791.4

18. Typo on west invert of existing manhole 963.71 is likely 693.71.

Bureau of Inspectional Services comments

The proposed location for the underground storm water detention is possible under the building code but several concerns will need to be addressed.

1. The piers supporting building load from above will need to be isolated from the bottom slab of the detention stormtrap. In addition the design should include a membrane-covered wall/sleeve around the piers to allow water to rise up on to the wall with no risk of water leaking between the slab/pier connection and undermining the foundations.

2. An access door large enough to provide entry to conduct regular inspection of the membrane must be provided.

3. The plan submitted points to the outside of the stormtrap wall to have a plastic liner/membrane installed. The liner will need to be installed on the inside of the structure as well as around the pier sleeves. The outside of the stormtrap will require typical below grade waterproofing to be installed.

4. Soil borings will be required as part of the soil engineer and structural engineers submittal. It should be noted that a large sand deposit was discovered running north to south approximately 50' east of the property. We have no record of how wide this deposit goes or if there is any active water flow through it. The engineer will need to investigate this before submitting any of the foundation designs.

5. The structural engineer's design will need to include epoxy coated rebar reinforcement at the stormtrap and concrete mix design consistent with a structure having salt water exposure since some of the water from parking areas will be discharging into the structure.

6. Water proofing will need to be installed on the underside of the floor above the stormtrap to prevent moisture transfer into any finished space above.

7. It should be noted that this type design will require maintenance at a higher cost than typical construction due to its location under the building and the sharing of foundations between the stormtrap and the building above.

Landscape Variations

The petitioner has prepared a preliminary landscape plan for the rooftop garden areas showing proposed plant materials.

At the November 20 meeting, some members of the Plan Commission expressed a preference for a homogenous transitional landscape plan. Staff has received comments from only one adjacent property owner who would be impacted by this requirement. That property owner stated that a cash payment would be preferable to a homogeneous plan in that it would allow them to install landscape improvements that are suited to their tastes and individual properties.

Staff also supports the concept of a cash payment that would be made to the Village within sixty days of the petitioner closing on the property. The Village can then disperse the funds to the adjacent residences accordingly. In this manner, transitional landscape improvements could be installed and beginning to grow as early as spring 2007. In 1999, Big Idea Productions was

required to make a $42 per linear foot payment to the owners of the adjacent residential properties. Adjusting this number for inflation brings it to $50.80 per linear foot, or $3,048 for most of the adjacent property owners ($50.80 x 60 feet).

Parking Variation

Staff continues to recommend denial of the requested parking variation as an off-site parking agreement should be reached by the petitioner. At their January 18, 2007 meeting, the Board of Trustees considered a lease agreement with the Elmhurst Memorial Healthcare outpatient facility across the street from the subject property. Their intent was to lease 40 spaces from the facility to meet the code requirements, but the terms of the lease were deemed unacceptable by the Board of Trustees.

The petitioner has provided information on the proposed vehicle lifts/stackers. The lifts would allow a resident to stack two cars within one traditional parking space, provided there is a clear ceiling height of at least nine feet. The most recent site plans show that up to 60 lower-level parking spaces could accommodate these lifts. Staff recommends that a condition of approval be added to ensure the ability for these lifts to be installed, stating that the parking garage lower level shall have a clear ceiling height of no less than nine feet and adequate electrical supplies shall be installed to allow for the operation of the lifts.

Traffic Study

The Plan Commission inquired as to whether or not the downtown traffic counts performed by KLOA in the summer of 2004 had occurred prior to the no-left-turn restrictions on Route 53. Upon review, it appears that the no left turn signs were installed during the winter of 2001-2002.

Lighting/Photometrics

External lighting is shown on the west elevation storefronts. This lighting will not be installed on the north elevation. For the residential portion of the building, a sample lighting fixture has been provided.

Signage

Staff recommends that a condition of approval be added that would prohibit internally illuminated box- or cabinet-style signage. As with numerous recent developments (including The Pointe at Lombard, Amcore Bank/Highlands of Lombard retail strip center, Walgreens, VLand-Highland/Roosevelt) staff believes that any future wall signs should be in scale and harmony with the design concept of the proposed project. Tenants should be encouraged to have their signage represent the unique and special qualities of their store through creative designs.

With respect to the marquee sign, the petitioner will be proposing a new marquee sign that generally replicates the existing theatre sign. However, they have expressed to staff that the new sign may also include a vertical identification sign element as well. However the final design of the sign has not been completed to date. Should the petition be approved, the petitioner will be

able to submit the new marquee sign plan at a later date for review and approval as part of a Site Plan Approval application.

Other Items

Attached as **Appendix B** is a spreadsheet showing the status of proposed, under construction, and recently built condominium and townhome projects within the Village.

FINDINGS AND RECOMMENDATIONS

Based on the above considerations, the Inter-Departmental Review Committee recommends that the Plan Commission make the following motion recommending **approval** of this petition:

Based on the submitted petition and the testimony presented, the requested conditional uses, deviations, and variations included as part of the petition comply with the standards required by the Lombard Zoning Ordinance and granting the public planned development is in the public interest; and, therefore, I move that the Plan Commission recommend to the Corporate Authorities **approval** of PC 06-27, subject to the following conditions:

1. The petitioner shall enter into a development agreement with the Village setting forth the terms and conditions for development on the subject property.

2. As part of the building permit submittal, the petitioner shall satisfactorily address the comments included as part of the Inter-Departmental Review Report.

3. The development shall be constructed in compliance with the plans submitted as part of this petition. Any modification to the petitioner's plans shall be considered a major change to the planned development.

4. In the event there are any conflicts between the building elevations and the interior building layout, the exterior building elevation shall control. If required by interior changes of layout, the aesthetic, compositional and material concepts illustrated in the approved elevation drawings will be adhered to.

5. No box- or cabinet-style wall signage shall be permitted.

6. No parking relief shall be granted.

7. The parking garage lower level shall have a clear ceiling height of no less than nine feet, with adequate electrical supply provided to serve each lower level parking space.

8. Lighting on the residential portion of the building shall be shielded so that all illumination is directed toward the building and away from adjacent properties. Lighting provided for the drive aisle shall not project higher than eight feet above

grade level. Parking structure lighting shall be directed downward and shall not cast a glare onto adjacent properties.

9. An 8-foot solid beige PVC or similar fence shall be installed along the eastern property line, subject to the approval of the Director of Community Development.

10. In lieu of transitional landscaping improvements, a cash payment of $50.80 per linear foot shall be paid to the Village within 60 days of the petitioner's acquisition of the property and prior to the issuance of any building permits. This cash payment shall be allocated amongst the adjacent property owners to the east of the subject property, based upon the length of the shared lot lines.

Furthermore, the Plan Commission recommends that site plan approval shall be granted for the subject property.

Inter-Departmental Review Group Report Approved By:

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David A. Hulseberg, AICP
Assistant Village Manager/Director of Community Development

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Appendix A

Petitioner's Responses to Stormwater Concerns
Submitted February 12, 2007

Initial staff comments shown in normal text.

Petitioner's responses shown in bold text.

Staff comments on petitioner's responses shown in italic text.

Private Engineering Services Division Comments

1) It is important to note that no other detention structure permitted by the Village is underneath a building or any other type of permanent structure. The use of the "outlot" for stormwater detention facilities is intended to provide the Village full, unimpeded access for inspection and, as necessary, maintenance of the structures. While this design meets the current Village Code requirements and could be constructed, staff is not supportive of such structures that are located underneath large, permanent structures. A review of this section of the Village Code is warranted to ensure that this type of system is not allowed in the future without all other possibilities exhausted and all up-front design issues resolved. As such, how is it envisioned that the Village will be able to access and/or inspect the proposed vault to ensure that it is operating properly?

Access to the underground detention vault will be provided by hatches or doors and ladders as well as some ceiling mounted inspection lights to provide easy access from outside of the building. These access locations will be located adjacent to the fire lane on the south side of the building. This will provide unrestricted access to the vault by the Village.

It should be noted that several detention options have been explored on this project. Specifically, providing underground detention in the fire lane with "fee-in-lieu" to satisfy the balance of the detention requirement was proposed. This was not deemed feasible due to the 30' watermain easement required around the building which precluded the placement of the underground detention.

A second option of providing off-site detention on the neighboring properties was also explored. RSC did meet with the owner of the adjacent property. However, no agreement was reached.

A third option of providing no detention on site with a "fee-in-lieu" contribution was also explored. However, given the historic flooding issues at the Main Street viaduct, we believe, along with staff, that it is prudent to provide some detention on-site to attenuate the flow below existing conditions.

2) There are many unknowns in the overall design of such a basin/vault. Staff has only seen the conceptual layout of this plan, and to date, staff is not aware of any actual design for the structure itself. A critical issue will be the geotechnical information, which should be acquired and reviewed by the structural engineer prior to this concept moving forward. Has there been any engineering design plans created that provide additional detail as far as how the vault system would be designed and/or integrated into the overall building design?

Initial staff comments shown in normal text.

Petitioner's responses shown in bold text.

Staff comments on petitioner's responses shown in italic text.

The structural system has not been engineered for this project. We will obtain soil borings once there is clear direction on how we will proceed with the stormwater issue.

This is a circular argument - basically it is difficult for direction to be provided to move forward with this concept without knowing the full extent of the design conditions.

3) Based on the findings of a geotechnical report, the construction costs could vary significantly. The petitioner shall identify if the vault is integral to the structure of the building. The petitioner shall also present how building settlement will affect the design. How will settlement affect the final design of the building?

The vault is designed the same as a basement. The building and vault structural design will be integrated. The live load of vault when filled and empty will be considered in overall design as well as lateral loads.

4) Stringent requirements from the Building Department to ensure water proofing and safety will also result in extra costs for this structure. The petitioner shall provide an initial cost estimate for this stormwater plan, and balance the cost against the cost for the other stormwater mitigation plans previously discussed for this project, including off-site storage in a neighboring lot. If it is determined that the final engineering costs for the project impact the ability to economically develop the project as proposed, how would you envision addressing the stormwater detention issue? What is the estimated cost for providing stormwater in this manner and does it fit into your pro forma?

RSC is working with Bovis Construction on determining the incremental building costs associated with the detention vault. If this method is determined to be cost-prohibitive, RSC in conjunction with Bovis, will explore additional "value engineering" concepts such as storing a portion of the detention on the roof (equal to required snow loading) and/or increasing the bounce on the detention to reduce the footprint size.

5) The petitioner shall provide the intended life of such a structure with a detailed maintenance schedule that outlines the inspection and maintenance activities such as when the waterproofing would need to be amended or replaced, how cracking can be fixed, etc. Can you provide estimates an/or details as to what this on-going responsibility may be?

The life expectancy of the detention structure would be no less than that of the building structure. Our architect and structural engineers will properly design and detail this foundation and basement structure.

Initial staff comments shown in normal text.

Petitioner's responses shown in bold text.

Staff comments on petitioner's responses shown in italic text.

Periodic inspections and maintenance will be performed by the condominium association's management company to verify system performance.

The above is not a detailed inspection and maintenance schedule.

6) The building association will own and maintain this structure directly – provide language that will be included on a plat, which clearly designates the responsibility for funding for the inspections and maintenance of this system. How do you plan to convey the maintenance/ownership responsibility to the future association and future property owners/tenants?

Responsibility for all property maintenance will be held by the condominium association and is funded by association fees as will be defined by the condominium declaration.

7) The vault shall have adequate access from outside of the building so that inspectors and maintenance and repair equipment do not have to enter the building. How do you envision this to be achieved?

Outside access will be provided by a door or a hatch that will be accessible by village inspectors. (see item 1)

8) What additional insurance requirements would be placed on the building association as a result of having this system under the building?

No extraordinary insurance requirements are expected.

9) Provide the plan for overflow surcharging when the receiving Village storm sewer is at capacity. How will this be achieved?

A second overflow pipe capable of passing 2.0 cfs is proposed. In addition, a second inlet structure is proposed in the curb at Parkside and Main. This inlet will act as a third overflow at an elevation 1' below the theatre F.F.

10) Provide a list of sites where this concept has been used in the past in DuPage County and to what success. How comparable are these sites to the DuPage Theatre project and how do these projects meet the provisions of the current DuPage County Stormwater and Floodplain Ordinance as well as the respective municipal code?

Initial staff comments shown in normal text.

Petitioner's responses shown in bold text.

Staff comments on petitioner's responses shown in italic text.

The new parking structure at Edward Hospital has approximately 8 acre feet of storage capacity in a basement detention structure. Intech, the civil engineer, said the project was audited by DuPage County after completion and was accepted without exception.

Daniel P. Coffey and Associates, LTD. has experience in designing (with civil and structural engineering consultants) a detention vault recently as part of a mixed use development. The Sherman Plaza Project (located at Sherman Avenue and Davis Street in downtown Evanston), was completed in spring of 2006, consists of condominiums, retail and parking facilities. This project included a 9,000 square foot detention vault located inside the building directly below parking and retail tenant space.

We have been informed and are confirming the following locations:

1. **The Shops at One Orchard Place, Skokie under the retail structure.**

2. **Cook County Jail.**

3. **Oak Brook Terrace project**

As soon as we receive additional information regarding the above projects we will forward to your attention.

The above lists only one and maybe two projects in DuPage County.

11) The developer has met with the County (with no Village representative present) to obtain the County's support for this concept. Clayton Heffter, the Stormwater Permitting Manager for DuPage County, outlines that the plan conceptually meets the Countywide Stormwater Ordinance; however, the Village has the final authority in approving the plan. Will the plan meet both code provisions and not require any additional relief?

The current plan provides the required detention volume, gravity outlet, emergency overflow pipe, unrestricted access to the village via a manhole outside the building, and an outlet via a vertical subdivision. Based on this analysis, it is our opinion that the plan meets the code provisions and will not require any additional relief.

12) A registered structural engineer shall provide a certification of compliance for the constructed vault. Is this doable?

A structural engineer will design and seal the plans for the vault. What additional certification is being requested?

Initial staff comments shown in normal text.

Petitioner's responses shown in bold text.

Staff comments on petitioner's responses shown in italic text.

Certification shall state that the vault was constructed per plan.

13) Address/correct the following plan comments:

a) The plan shows "PROPOSED ROW." After talking with the design engineer, this is meant to be the actual, existing ROW.
b) The plan lists 1.35 AF total volume of storage. Scaling from the plan and using the provided 6' height of water in the vault, the storage would be closer to 1.83 AF. After speaking to the design engineer, this difference is made up by the intent to slope the floor of the vault to the outlet, as well as account for potential columns that may pass through the vault, however, neither of these points are represented on the plan.
c) No vertical scale is provided on the plan and profile. It appears that the vault will be approximately 9' in height, please have the petitioner confirm the total height.
d) The north arrow is not correct.
e) Typo on the plan and profile Bottom = 691.4, not 791.4
f) Typo on west invert of existing manhole 963.71 is likely 693.71.

a) The "PROPOSED ROW" actually delineates the ROW which was recently dedicated.
b) The project is currently in preliminary engineering. As such, it is our office policy to provide conservative detention calculations to demonstrate that the volume can be met.
c) The vault is to be approximately 9' in height.
d) The north arrow will be revised on future submittals.
e) The bottom of the vault is intended to be 691.4.
f) The typo will be corrected on future submittals.

Building Comments

1) The piers supporting the building load from above will need to be isolated from the bottom slab of the detention stormtrap. In addition the design should include a membrane covered wall/sleeve around the piers to allow water to rise up on to the wall with no risk of water leaking between the slab/pier connection and undermining the foundations. How can/will this be achieved?

The building support columns (piers) will be waterproofed with the same material as the walls and bottom slab of the vault if required. It is not anticipated that the columns and slab will be moving independently from each other. When the design calls for a control or expansion joint a typical water stop or other device may be required.

Initial staff comments shown in normal text.

Petitioner's responses shown in bold text.

Staff comments on petitioner's responses shown in italic text.

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2) An access door large enough to provide entry to conduct regular inspection of the membrane must be provided. As the association will have the primary responsibility to address this issue, how will the Village ensure that the association satisfactorily addresses this issue?

The association can be required to provide the Village with an inspection report every 5 years. Since the products used will not be subject to UV, will rarely see any large volume of water, and will have adequate ventilation, it is anticipated that deterioration of the membrane or other products will be insignificant.

3) The plan submitted points to the outside of the stormtrap wall to have a plastic liner/membrane installed. The liner will need to be installed on the inside of the structure as well as around the pier sleeves. The outside of the stormtrap will require typical below grade waterproofing to be installed. How does this requirement impact your plan?

Walls will be water proofed inside vault and outside if required. Columns will be waterproofed inside the vault.

4) Soil borings will be required as part of the soil engineer and structural engineers submittal. It should be noted that a large sand deposit was discovered running North to South approximately 50' east of the property. We have no record of how wide this deposit goes or if there is any active water flow through it. The engineer will need to investigate this before submitting any of the foundation designs. How does this uncertainty affect the project? If it is determined that unsuitable soils exist below the proposed vault area, what is the next course of action?

Soil boring locations and depths will be determined by the approved stormwater detention system. If unsuitable soil conditions are found in the soil borings or certain unforeseen soil conditions were found during construction, we would consult with soil and structural engineers to find an appropriate solution. Any information that the Village can provide regarding adverse soils condition in and around the DuPage Theater site would be greatly appreciated.

5) The structural engineer's design will need to include epoxy coated rebar reinforcement at the stormtrap and concrete mix design consistent with a structure having salt water exposure since some of the water from parking areas will be discharging into the structure. Provide information as to how this will be achieved.

Epoxy coated rebar will be specified for columns, slab and walls of the vault where this is advised by PCA's design criteria to meet the appropriate ASTM testing methods and any applicable codes.

Initial staff comments shown in normal text.

Petitioner's responses shown in bold text.

Staff comments on petitioner's responses shown in italic text.

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6) Water proofing will need to be installed on the underside of the floor above the stormtrap to prevent moisture transfer into any finished space above. How does this affect the project?

There is no reason that waterproofing should be required on the underside of the floor slab above the vault as no water will ever get to that elevation unless the street is flooded to that same elevation. Ventilation should eliminate any need for a vapor barrier.

7) This type design will require maintenance at a higher cost than typical construction due to its location under the building and the sharing of foundations between the stormtrap and the building above. Has this additional cost been included within the project proforma and is the project still economically viable as proposed?

We disagree that this will require more maintenance than any alternatives other than fee-in-lieu. The cost of this system will likely be less than other alternatives.

8) Will there be a notice on the deed that this stormwater system is being used since it is not customary?

The condominium declaration and survey will define the area, the purpose it serves, and any other requirements the association will have regarding it.

Public Works Engineering Comments

1. The staff report should be incorporated into the Board's approval, as is typical, so that we can formally rely on these issues to be addressed in the permit application.

2. Their comment about the columns and vault slab experiencing the same settlement is doubtful since they will have different loads, but we can work that out the deisgn with the structural engineer.

3. In addition to the structural engineer's seal on the plans and specs, we expect the structural engineer to provide a certification of compliance that the vault had been constructed in according to the design. Such a construction certification from the structural engineer would be a specific requirement of the Board's approval.

Appendix B